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**CERTIFICATION THROUGH THE LENSES OF ENVIRONMENTAL
PROTECTION: LESSONS FROM THE SEARCH OF INTERNATIONAL
CONSERVATION OF FORESTS**

Master Dissertation

Advisor: Associate Professor Dr. Alberto do Amaral Júnior

UNIVERSITY OF SÃO PAULO

LAW SCHOOL

São Paulo - SP

2021

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Master Dissertation presented to the Examining
Committee of the Law Post-Graduate Program of the
University of São Paulo Law School in the International
Law concentration area, under the supervision of
Associate Professor Dr. Alberto do Amaral Júnior

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LAW SCHOOL**

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2021

ACKNOWLEDGEMENTS

To my parents, Heitor and Marilena, who always stimulated me to continue studying and to go ahead in my life.

To professor Alberto do Amaral Júnior, whose orientation was valuable and who helped me during the writing of this dissertation in many conversations.

To professor Vera Thorstensen, who accepted me on the Center for Global Trade and Investment (CGTI). The continuous research developed at the center allowed the maturation of my dissertation's topic.

To the research team of the Center for Global Trade and Investment (CGTI), for the qualified research environment and instigating discussions.

To CAPES for granting the scholarship that contributed to the conclusion of the present dissertation.

To my colleagues from the University of Luxembourg, for the friendship and hospitality in a foreign country.

To Hélène Ruiz Fabri and Burkhard Hess, who accepted me on the Max Planck Institute for International, European and Regulatory Procedural Law and who opened the door to me to the wonderful library of the institute and to fruitful debates in the department meetings.

To Lily Martinet, Alain Zamaria, Alessandra Donati, Edouard Fromageau and Edoardo Stoppioni, eternal masters, who will give continuity to the good European tradition in public international law and in international trade law.

To Max Planck's friends, for the friendship and the conversations during the difficult moments of the pandemic.

ABSTRACT

The present dissertation is inserted in the broad scenario of international trade in which tariffs are low and non-tariff barriers to trade, also known as regulatory barriers, constitute the main obstacles to free trade. Among the regulatory barriers to trade currently debated, technical regulations, private standards and conformity assessment procedures, the last ones will be analyzed. Against the background of the paradigm of sustainable development, certification, the most common form of conformity assessment, allows the evaluation of the conformity with technical regulations and private standards in order to determine environment and consumption requirements of the product examined. Environmental requirements fall on wood and its derivatives that are tradable environmental goods that undergo forest certification, the focus of this dissertation. Forest certification is initially conceived as an alternative to the limited enforcement of international environmental treaties on forest issues and to the inability to conclude them in the area of international forest protection. After, shortcomings of forest certification are identified, namely the overlapping requirements presented by forest certifiers and the different degrees of environmental and social protection that they seek to achieve. The last shortcoming constitutes the research problem of this dissertation. In face of this problem, the question that drives this research is the following: can environmental certification demonstrate conformity with environmental standards and technical regulations and establish a common high level of forest protection to be attained? The hypothesis to be tested is as follows: environmental certification on the forest sector is operative worldwide, but created according to the interests of the civil society and multinational industrial corporations. The objective of this dissertation is to analyze the extent to which forest certification is guided by the economic, environmental, social and good governance pillars of sustainable development and is free from the economic bias towards unsustainable forest exploitation and utilization. The methodology implemented in this dissertation is bibliographical, descriptive and exploratory. This methodology allowed the understanding of the birth of forest certifiers that operated on the international level, of their conflicts during the certification wars and of the remaining competition between the two certifiers that continued internationally operative, Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC). These phenomena were analyzed through the lenses of non-state market driven governance and of the regulator-intermediary-target framework. The dissertation then moved to the analysis of certification regulation on the multilateral trade system and on the regional European Union (EU) level, of forests in hard law and soft law and of forest certification. Lastly, the effectiveness of forest certification was analyzed based on the parameters of accreditation and mutual recognition. This dissertation concludes that, in terms of level of environmental protection derived from forest certification, the FLEGT Action Plan is a promising regulatory initiative that dialogues with forest certification standards through their incorporation in EU sustainable public procurement policies and that an analysis that combines FSC and PEFC regulation, its underpinning standards and the parameters of accreditation and mutual recognition allows the identification of the level of forest protection that the two international forest certifiers achieve. Lastly, research agendas are proposed based on the results obtained.

Key words: Certification. Sustainability. Forest. Effectiveness.

RESUMO

A presente dissertação está inserida no amplo cenário do comércio internacional em que as tarifas são baixas e as barreiras não-tarifárias ao comércio, também conhecidas como barreiras regulatórias, constituem os principais obstáculos ao livre comércio. Dentre as barreiras regulatórias ao comércio atualmente debatidas, regulamentos técnicos, padrões privados e procedimentos de avaliação de conformidade, os últimos serão analisados. Diante do pano de fundo do paradigma do desenvolvimento sustentável, a certificação, a forma mais comum de avaliação da conformidade, permite a avaliação da conformidade com regulamentos técnicos e padrões privados com o intuito de determinar requisitos ambientais e de consumo do produto examinado. Os requisitos ambientais repousam sobre a madeira e seus produtos derivados que são bens ambientais comercializáveis que passam pela certificação florestal, o foco desta dissertação. A certificação florestal é inicialmente concebida como uma alternativa para a aplicação limitada de tratados internacionais ambientais em questões florestais e à impossibilidade de concluí-los na área de proteção florestal internacional. Em seguida, deficiências da certificação florestal são identificadas, a saber os requisitos sobrepostos apresentados por certificadores florestais e os diferentes graus de proteção ambiental e social que eles buscam atingir. A última deficiência constitui o problema de pesquisa desta dissertação. Face a este problema, a pergunta que move esta pesquisa é a seguinte: pode a certificação florestal demonstrar a conformidade com normas técnicas e padrões privados ambientais e estabelecer um nível elevado comum de proteção florestal a ser atingido? A hipótese a ser testada é a seguinte: a certificação ambiental no setor florestal é operativa no mundo todo, mas criada de acordo com os interesses da sociedade civil e de corporações industriais multinacionais. O objetivo desta dissertação é analisar a extensão em que a certificação florestal é guiada pelos pilares econômico, ambiental, social e de boa governança do desenvolvimento sustentável e está livre do viés econômico em direção à exploração e à utilização insustentáveis das florestas. A metodologia implementada nesta dissertação é bibliográfica, descritiva e exploratória. Esta metodologia permitiu o entendimento do nascimento das certificadoras florestais que operavam no nível internacional, de seus conflitos durante as guerras de certificação e da concorrência remanescente entre as duas certificadoras que continuaram operantes internacionalmente, Forest Stewardship Council (FSC) e Programme for the Endorsement of Forest Certification (PEFC). Estes fenômenos foram analisados pelas lentes da governança não-estatal dirigida pelo mercado e da estrutura regulador-intermediário-alvo. Em seguida, foram analisadas na dissertação a regulação da certificação no sistema multilateral de comércio e no nível regional da União Europeia (UE), a regulação de florestas no hard law e no soft law e a regulação da certificação florestal. Por fim, a efetividade da certificação florestal foi analisada com base nos parâmetros da acreditação e do reconhecimento mútuo. A dissertação conclui que, em termos de nível de proteção ambiental derivado da certificação florestal, o Plano de Ação FLEGT é uma promissora iniciativa regulatória que dialoga com normas técnicas de certificação florestal por meio da incorporação delas em políticas de compras públicas sustentáveis europeias e que uma análise que combine a regulação das certificadoras FSC e PEFC, suas normas técnicas subjacentes e os parâmetros da acreditação e do reconhecimento mútuo permite a identificação do nível de proteção florestal que as duas certificadoras internacionais atingem. Por fim, agendas de pesquisa são propostas com base nos resultados obtidos.

Palavras-chave: Certificação. Sustentabilidade. Floresta. Efetividade.

RÉSUMÉ

La présente thèse s'insère dans le scénario général du commerce international dans lequel les tarifs sont bas et les barrières non tarifaires au commerce, également appelées barrières réglementaires, constituent les principaux obstacles au libre-échange. Parmi les barrières réglementaires au commerce actuellement débattues, règlements techniques, normes privées et procédures d'évaluation de la conformité, les dernières seront analysées. Dans le contexte du paradigme du développement durable, la certification, la forme la plus courante d'évaluation de la conformité, permet d'évaluer la conformité aux réglementations techniques et aux normes privées afin de déterminer les exigences environnementales et de consommation du produit examiné. Les exigences environnementales portent sur le bois et ses dérivés qui sont des biens environnementaux commercialisables soumis à une certification forestière, objet de cette thèse. La certification forestière est initialement conçue comme une alternative à l'application limitée des traités environnementaux internationaux sur les questions forestières et à l'incapacité de les conclure dans le domaine de la protection internationale des forêts. Ensuite, les lacunes de la certification forestière sont identifiées, à savoir le chevauchement des exigences présentées par les certificateurs forestiers et les différents degrés de protection environnementale et sociale qu'ils cherchent à atteindre. La dernière lacune constitue le problème de recherche de cette thèse. Face à cette problématique, la question qui anime cette recherche est la suivante : la certification environnementale peut-elle démontrer la conformité aux normes environnementales et aux réglementations techniques et établir un niveau commun élevé de protection des forêts à atteindre ? L'hypothèse à tester est la suivante : la certification environnementale sur le secteur forestier est opérante dans le monde entier, mais créée en fonction des intérêts de la société civile et des multinationales industrielles. L'objectif de cette thèse est d'analyser dans quelle mesure la certification forestière est guidée par les piliers économique, environnemental, social et de bonne gouvernance du développement durable et est exempte de biais économique en faveur d'une exploitation et d'une utilisation forestières non durables. La méthodologie mise en œuvre dans ce mémoire est bibliographique, descriptive et exploratoire. Cette méthodologie a permis de comprendre la naissance des certificateurs forestiers qui opéraient au niveau international, de leurs conflits pendant les guerres de certification et de la compétition restante entre les deux certificateurs qui continuaient à opérer au niveau international, Forest Stewardship Council (FSC) et Programme for the Endorsement of Forest Certification (PEFC). Ces phénomènes ont été analysés à travers le prisme de la gouvernance non étatique axée sur le marché et du cadre régulateur-intermédiaire-cible. La thèse est ensuite passée à l'analyse de la réglementation de la certification sur le système commercial multilatéral et au niveau régional de l'Union européenne (UE), des forêts en hard law et soft law et de la certification forestière. Enfin, l'efficacité de la certification forestière a été analysée sur la base des paramètres d'accréditation et de reconnaissance mutuelle. Cette thèse conclut que, en termes de niveau de protection de l'environnement dérivé de la certification forestière, le plan d'action FLEGT est une initiative réglementaire prometteuse qui dialogue avec les normes de certification forestière à travers leur incorporation dans les politiques de marchés publics durables de l'UE et qu'une analyse qui combine la réglementation de FSC et de PEFC, ses normes sous-jacentes et les paramètres d'accréditation et de reconnaissance mutuelle permet d'identifier le niveau de protection des forêts atteint par les deux certificateurs forestiers internationaux. Enfin, des agendas de recherche sont proposés sur la base des résultats obtenus.

Mots-clés : Certification. Durabilité. Forêt. Efficacité.

LIST OF ABBREVIATIONS AND ACRONYMS

AC – Accreditation Committee
AF&PA – American Forest & Paper Association
AFRAC – African Accreditation Cooperation
APAC – Asia Pacific Accreditation Cooperation
ARAC – Arab Accreditation Cooperation
ASI – Assurance Services International
CAB – Conformity assessment body
CE – Conformité Européene
CEN – European Committee for Standardization
CENELEC – European Committee for Electrotechnical Standardization
CEO – Chief Executive Officer
CERFLOR – Brazilian Program of Forest Certification
CERTFOR – Chilean System of Certification of Sustainable Forest Management
CGTI – Center for Global Trade and Investment
CITES – Convention on International Trade in Endangered Species
CoC – Chain of custody
Coiba – Coordination of indigenous organizations in the Amazon basin
Codex – Codex Alimentarius Commission
CPF – Collaborative Partnership on Forests
CSA – Canadian Standards Association
CSD – UN Commission on Sustainable Development
CSR – Corporate social responsibility
C&I – Criteria and Indicators
DRD – Declaration on the Right to Development
DSB – Dispute Settlement Body
DVGW - Deutsch Vereinigung des Gas und Wasserfaches eV
EA – European Accreditation
ECJ – European Court of Justice
ECOSOC – Economic and Social Council
EEA – European Economic Area
EEC – European Economic Community
EFTA – European Free Trade Association
ELH – Eco-Lighthouse
EMAS – Eco-Management Auditing Scheme
EMS – Environmental Management System
ETP – Eastern Tropical Pacific
ETSI – European Telecommunications Standards Institute
EU – European Union
EUTR – EU Timber Regulation
FAO – Food and Agriculture Organization
FLEG – Forest Law Enforcement and Governance
FLEGT – Forest Law Enforcement, Governance and Trade Action Plan
FMU – Forest management unit
FRA – Global Forest Resource Assessment
FSC – Forest Stewardship Council
FSC AC – Forest Stewardship Council Asociación Civil
GATT – General Agreement on Tariffs and Trade
GFG – Global Forest Goal

GlobalGAP – Global Good Agricultural Practices
GM – Genetically modified
GMC – Grupo Mercado Comum
GMP – Good manufacturing practice
IAAC – InterAmerican Accreditation Cooperation
IAF – International Accreditation Forum
IAF MLA – International Accreditation Forum Multilateral Recognition Arrangement
IEC – International Electrotechnical Committee
IFF – Intergovernmental Forum on Forests
IFIR – International Forest Industry Roundtable
ILAC – International Laboratory Accreditation Cooperation
ILO – International Labor Organization
INPE – National Institute of Space Research
IPF – Intergovernmental Panel on Forests
IPPC – International Plant Protection Convention
ISEAL – International Social and Environmental Accreditation and Labelling Alliance
ISO – International Organization for Standardization
ITTA – International Tropical Timber Agreement
ITTC – International Tropical Timber Council
ITTO – International Tropical Timber Organization
LEI – Lembaga Ekolabel Indonesia
MCPFE – Ministerial Conference on the Protection of Forests in Europe
MDG – Millenium Development Goal
MFN – Most-favored-nation principle
MLA – Multilateral recognition arrangement
MRA – Mutual recognition agreement
MTCC – Malaysian Timber Certification Council
NAFTA – North America Free Trade Agreement
NGO – Non-governmental organization
NIEO – New International Economic Order
NOVIB – Nederlandse Organisatie voor Internationale Bijstand
NSMD – Non-state market driven governance
OD – ASI Operations Director
ODA – Official Development Assistance
OECD – Organization for Economic Cooperation and Development
OIE – International Office of Epizootics
PAFC – Pan African Forest Certification Scheme
PEFC – Programme for the Endorsement of Forest Certification
PM – ASI Program Manager
PPM – Process and production method
QMS – Quality management system
RAN – Rainforest Action Network
R&D – Research and Development
RIL – Reduced-impact logging
RIT – Regulator-intermediary-target
RTA – Regional trade agreement
SADCA – Southern African Development Community Accreditation
SHEC – Safety, health, environment and consumers
SDG – Sustainable Development Goal
SFB – Sustainable Forestry Board

SFI – Sustainable Forestry Initiative
SFM – Sustainable Forest Management
SLIMF – Small and Low Intensity Managed Forests
SME – Small and medium enterprise
SPS – Sanitary and Phytosanitary Measures
TBT – Technical Barriers to Trade
UN – United Nations
UN-REDD – UN Collaborative Program on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
UNCED – United Nations Conference on Environment and Development
UNECE – United Nations Economic Commission for Europe
UNFCCC – United Nations Framework Convention on Climate Change
UNFF – United Nations Forum on Forests
UNFSS – United Nations Forum on Sustainability Standards
UNSPF – United Nations Strategic Plan for Forests
VPA – Voluntary partnership agreement
WBCSD – World Business Council for Sustainable Development
WRM – World Rainforest Movement
WTO – World Trade Organization
WWF – World Wide Fund

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1. Introduction

Current international trade faces a situation in which, after the implementation of the WTO treaties and the decisions of the Dispute Settlement Body (DSB), tariffs are low. Non-tariff barriers to trade, also known as regulatory barriers, constitute the main obstacles to free trade. Technical regulations, private standards and conformity assessment procedures that purportedly protect essential social values as consumer safety, health and environment are examples of these barriers. Among them, conformity assessment procedures are the ones to be analyzed.

The performance of a conformity assessment of a product, service or system aims to evaluate the conformity with technical regulations and private standards in order to determine safety, health, environment and consumption requisites of the item examined. Each of these requisites is more closely and intrinsically found in a specific economic sector. Safety conformity assessment falls mainly on electric goods, electronic goods, medical devices and machinery. Health requisites are mainly addressed on the evaluation of processed food products, pharmaceuticals and chemicals. Environmental requisites fall on environmental goods that are traded as timber, pulp and biofuels. Lastly, consumption requisites are applied across a huge number of sectors in order to inform the consumer in an accurate manner of the features of the item evaluated.

The importance of a study on conformity assessment derives from identifiable reasons. On the regulatory realm, certifiers have specialized knowledge of regulatory norms and the ways in which they can be implemented and conformity assessment allows verified compliance that confirms quality and safety of a product or the fulfillment of environmental criteria. On the economic realm, the performance of conformity assessment generates the elimination of duplicity of procedures, which allows the reduction of costs and the increase of the speed of the commercial exchange.

The current economic scenario becomes more complex with the insertion of multinational industrial enterprises and of the civil society, actors of international relations to be analyzed in this dissertation. The presence of these actors, which perform essential roles in the shaping of international rules, be them binding or not, is widely recognized in the literature and has been identified as a key factor that leads to a blur in the division between public international law and private international law and gives rise to transnational law. This academic construction comprises a variety of international regulatory frameworks and allows the identification of paths of global

governance in a world without a centralized government. The paths to be analyzed in this dissertation are the non-State market driven governance, in which advancements were made with the aim of overcoming limitations that persist in inter-State fora, and the regulatory-intermediary-target model, in which intermediaries stand at the center of the conceptualization of regulatory governance. A certifier is an example of an intermediary, whose targets can be consumers who, when buying products, rely on private standards certified by independent auditors.

In clearer and more concrete terms, as a consequence of the limited enforcement of international environmental treaties and the inability to conclude them in areas in which regulation is indispensable as international forest protection, the one to be explored in this dissertation, alternatives were searched and achieved as conformity assessment procedures with their underlying private standards to evaluate compliance with environmental standards and the attribution of an environmental private standard to a product. These alternatives have as features being guided by more supportive and distributive paradigms, having their foundations based on their own and even innovative ways of organizing production and being socially more integrative than the conventional ones and more harmonized with nature (LOUREIRO, 2012, p. 529).

The contribution of forests to an embracing environmental protection and their presence on international economic transactions can be found on data and numbers. The value of forests can be found on its features as a reservoir of fibre, fuel, wood and non-wood forest products susceptible to economic exploration, as a food source, as a habitat with a variety of wildlife, as a principal reservoir of biodiversity and as carbon sinks. Forests also offer essential services for the development of pharmaceuticals, and for watershed protection, climate regulation and biodiversity conservation (EIKERMANN, 2015, p. 14). In the economic realm, forests are areas for agriculture and act as suppliers of necessary raw materials for industrialization.

The low enforcement of international environmental treaties that indirectly regulate forestry issues and their absence in key areas are due to legal and political reasons that will be explained on the following chapter, but can have its consequences initially verified on data and numbers. Estimated data from the Brazilian National Institute of Space Research (INPE) reveals that, in the Amazonian forest, from August 2019 to July 2020 there was a loss of 1,1 million of acres of forests, an increase of 9,5% in comparison to the previous year. A parcel of these lost forests derives from illegal deforestation that has not been up to now punished. A concerning data was the

increasing frequency of great blocks of deforestation (higher than 1000 acres), which contributed nearly to 8% of the whole area of the lost forest, a clear signal of the absence of governance in some Amazonian regions, despite the advanced monitoring systems available to public authorities.

Nefarious consequences are also found on the practice of illegal logging. This activity has clandestine nature and consists on the harvest of timber in breach of national laws. The profits derived from the activity are allocated in similar illegal ones as corruption and organized crime. They are also connected to the funding of violent conflicts in forests as long as the prolongation of these conflicts creates favorable conditions to the activity. On the economic sphere, illegal logging and its linked trade impair the competitiveness of portions of the forest industry that operate in conformity with domestic and international rules. In these circumstances, these industries have limited conditions to perform operations that stimulate sustainable forest management and sustainable development in a broad sense. On the environmental sphere, illegal logging provokes a huge loss of biodiversity, can favor the prohibited exploitation of wildlife, can contribute to the continuity of deforestation and can turn forests more vulnerable to fires. Sustainable forest management is then weakened and the previously described negative impacts that last throughout time fall on life conditions of forest-dependent people.

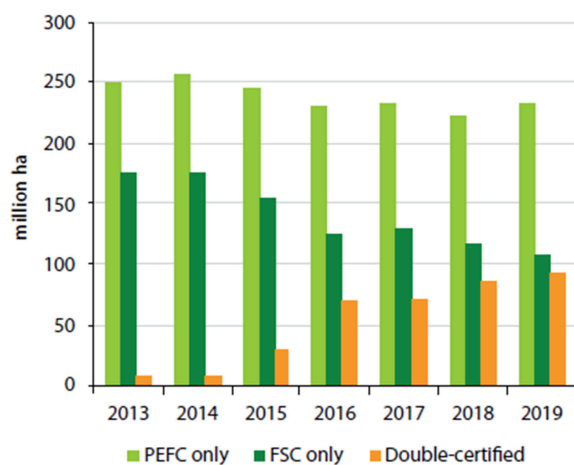
Among the two aforementioned alternatives, the emphasis of this dissertation will fall on the creation of forest certification, its performance and the effects that arise from it, while its underpinning standards will be described and analyzed in circumstances in which forest certification is in practice. The complementarity between standards and certification will also be analyzed in the sense that certification guarantees that a standard is adopted and respected. This alternative, however, has shortcomings as forest certifiers present overlapping requirements and different degrees of environmental and social protection, issue that constitutes the research problem of this dissertation. Sub-problems that were identified as a consequence of this broader research problem to be analyzed in the following chapters are the confusion of consumers, who are unable to choose a product with a label that attests a high level of environmental protection or indicates the most sustainably managed forests and may lead to a conclusion that the whole of forest certification standards is equivalent, the unbalanced and disproportional support of multinational industry corporations behind the most worldwide known and active forest certifiers whose interest in the support lies

in the maximization of their profits at the expenses of an adequate level of environmental protection and the limited reach of available agents and tools to evaluate the social and environmental performance of certifiers. In this broader context, this dissertation will be limited to the analysis of forest certification in which multinational industrial corporations and the civil society appear as key stakeholders.

Forest certification can promote an in-depth environmental protection in a wide area of forests. Forest certification is performed on the broad forest area of 525 million ha as of mid-2019 when considering forests portions that underwent double-certification by FSC and PEFC, the current two biggest worldwide forest certifiers whose regulation will be compared and analyzed, and of 434,5 million ha after removing double-certification according to data released by the two aforementioned certifiers and recognized in the last issue of the annual market review on forest products published by UNECE and FAO. These numbers reveal an increase by 1,4% that corresponds to 6 million ha of the area of certified forests over the world between mid-2018 and mid-2019. . Moreover, the corresponding previous annual market review on forest products (2019, p. 13) reveals that the amount of double-certified forest under the FSC and PEFC programmes increased from 71 million ha in mid-2017 to 86 million ha in mid-2018, primarily influenced by changes in Brazil, Canada, the Russian Federation and Sweden. The graphic below illustrates, from the period between 2013 and 2019, the previously explained numerical increase in the total net area of certified forest globally and the recent steady growth in double-certification.

Certified forest areas from 2013 to 2019.

FSC and PEFC certified forest area, 2013-2019



Source: FAO/UNECE, 2020, p. 10.

The practice of forests certification reveals forest conservation in a variety of ways. The results of a forest certification allow the identification of real and measurable effects on environmental indicators as low-impact logging, biodiversity preservation, pesticide use and fire monitoring and on social indicators as protection of indigenous people and their legal, customary and traditional rights relative to forest land, compliance with fundamental ILO conventions and the guarantee of workers' rights along with adequate health and safety conditions.

This dissertation is moved by the following question: can environmental certification demonstrate compliance with environmental standards and technical regulations and establish a common high level of forest protection to be attained? The hypothesis to be tested comprises the aforementioned actors of international relations and is as follows: environmental certification on the forest sector is operative worldwide, but created according to the interests of the civil society, multinational corporations and industrial sectors.

The general objective of this dissertation consists on the analysis throughout the chapters of the extent to which forest certification is guided by the economic, environmental, social and good governance pillars of sustainable development and is free from the economic bias towards unsustainable forest exploitation and utilization based on an updated literature review of the topic of forest certification. A wider picture on the topic will then be presented, which will facilitate further research on it. The focus will fall initially on the interaction of four forest certifiers, FSC, PEFC, SFI and CSA that were protagonists of certification wars during the 1990s and the 2000s. Afterwards, the analysis will be centered on FSC and PEFC, the two certifiers that remained operational at the international level, which will have their regulation and respective effectiveness examined. The analysis will be done by the identification of global governance paths trodden by the international relations actors' to be analyzed and by forest certifiers, to be followed by the mapping of forest regulation at the international and regional levels and by the mapping of forest certification regulation as an orientation to FSC and PEFC, the two forest certifiers that remained operative at the international level. Lastly, the effectiveness of the regulation found will be ascertained according to the parameters of accreditation and mutual recognition agreements. Along the chapters, information and critical analyzes will be provided that can stimulate improvements on the Brazilian system of conformity assessment and reveal opportunities to its improvement.

The interest on this controversial issue arose during the reading of John Jackson's seminal book *The World Trading System*, which provides on the first chapter standards as an achievement of the Uruguay Round to which more attention will be needed and as a topic that can lead to future research on the practice of international trade. An additional stimulus to deepen the studies on the subject came from the researches conducted by the Center for Global Trade and Investment Studies (CGTI) led by Professor Vera Thorstensen. The motivation for conducting the present research resides in clarifying the extent to which forest certification, an alternative regulatory instrument, can lead to a high level of environmental protection in forests and to the fight against deforestation and forest fires that have been continuously denounced in the national and international media.

As to the basic methodology, this study applies the inductive method. In an inductive plan, the test of the concept of sustainable development will take place in face of possibilities of forest certification and their underlying standards. The subjects that integrate the scope of this research are States, international organizations, multinational industrial companies, non-governmental organizations and the human being as a consumer.

As to the methodological objectives, this research is featured as exploratory, descriptive and explanatory. In exploratory terms, the aim is, after the gathering of information, to provide a deeper understanding of the paths of conformity assessment and forest certification at the international and regional levels. This exploration will allow a clearer understanding about forest certification governance, regulation and effectiveness. In descriptive terms, this study describes the core features of certification with an emphasis on the forest sector and the interests of the aforementioned international relations actors behind forest international certifiers. This description provides the inputs to a comparison of FSC and PEFC benchmarks and to the evaluation of forest certification effectiveness. Lastly, in explanatory terms, this research aims to explain the reasons behind the consolidation of forest certification as an international environmental regulatory tool and the different degrees of environmental protection and forest conservation that each international forest certifier seeks to achieve.

As to the methodological procedures, the research is featured as bibliographical and documental. The present work proposes a comprehensive literature review that encompasses book chapters and articles in peer-reviewed academic journals on the theme written by national and international authors. The documents analyzed comprise

primary and secondary sources. The first ones are the sustainable development goals and their corresponding targets and indicators; regulations of conformity assessment at the multilateral, European and national levels; the few regulations of forests in hard law and soft law and the guidelines of the chosen forest certifiers that take the form of standards, principles, performance measures, criteria and indicators. The second ones are certifiers' newsletters, public information and technical reports of the four aforementioned forest certifiers and NGO reviews not published in academic journals.

The present study is divided in three main parts. In the first one, I explain the concept of sustainable developed along with its thickening in the course of time. I then analyze the insertion of the dimension of good governance on it, a broad concept that encompasses the strict concept of non-state market driven governance (NSMD), the theoretical framework of the dissertation. NSMD allows the verification of the reaction of multinational industrial companies and civil society to certification schemes. The analysis of these reactions will be limited to the certification wars between FSC and its competitors that happened mainly during the 1990s. In the end of the chapter, the analysis will fall on the actions and reactions of certifiers, multinational corporations and the civil society that will be inserted on the regulator-intermediary-target framework. This analysis allows the broadening of the regulatory analysis between rule-takers and rule-makers and the identification of the reasons behind actions taken.

In the second part, the focus falls on legal instruments that regulate forest certification, which are inside a complex legal background. After the necessary introductory explanation of private standards inside certification procedures, of the regulation of certification on the multilateral trade system and of the forms of conformity assessment, the few existing broad environmental certifications are analyzed. It is then possible to analyze the regulation of forests in legal tools and in certification guides and how they intertwine. This analysis reflects the research problem posed as it makes evident the limitations and gaps existing on the regulation of the forest subsystem and reveals the need of forest certification. In the analysis of forest certification, attention turns to FSC and PEFC, the two main international forest certifiers, whose regulation's analysis aims to identify each one's strengths and weaknesses and to demonstrate the eventual need of accommodation of each of them in face of its competitor.

In the third part, I deal with the degree of the effectiveness of international forest certification towards the solution of problems to which they were created. The

parameters chosen to analyze the effectiveness of a conformity assessment procedure and for the identification of its failures are the accreditation of these procedures and mutual recognition agreements on conformity assessment. These parameters are widely applicable to certification procedures and contrast with specific variables that can influence the effectiveness of a certification as a country's development level and a commercial sector. After the conceptual clarification of these parameters, their assessment on the field of forest certification will be analyzed.

2. Governance of forest certification: from the failed Rio-92 to the new hope of certification

The chapter starts with an analysis of the concept of sustainable development, its thickening throughout time and the explanation of its dimensions. The chapter then moves to the analysis of the insertion on it of the dimension of good governance by current legal theory. Good governance constitutes a broad concept that encompasses actions of States, multinational corporations and stakeholders on an issue towards transparency, accountability, access to information and participation. In the background of this concept, the theoretical framework of this dissertation falls on the strict concept of non-state market-driven governance (NSMD) that allows the identification of the reaction of multinational companies and the civil society to market incentives and opportunities. Certification schemes constitute a form of environmental and social governance that may influence the cost-benefit rationale of companies that seek to maximize utility and draws the attention of the civil society as a potential venue to raise environmental protection. The analysis of the reactions of the civil society and multinational companies to certification schemes will be temporally limited to the certification wars fought mainly in the 1990s between FSC and its main competitors. Despite the comprehensive analysis of the certification wars, this dissertation does not aim to exhaust the topic. Lastly, the actions and reactions of certifiers, multinational corporations and the civil society will be analyzed according to the regulator-intermediary-target framework in order to broaden the regulatory analysis between rule-takers and rule-makers and to identify the reasons behind actions and reactions taken.

2.1. The thickening of the concept of sustainable development

In international economic relations, development was an ideal aspired by underdeveloped and developing countries. In the 1960s, from the idea that economic progress would bring social progress, development was sought through the attempt to create, within the UN system, rules favorable to poor countries and peoples who were part of the European empires and the recognition of a collective right that would give rise to a new international order. The resolution adopted by the UN General Assembly on the declaration of the establishment of a new international economy order (resolution 3201) reflected voices seeking a more just international economic order. The UN General Assembly in particular was instrumental in the adoption of many resolutions outlining the contours of a New International Economic Order (NIEO), but since the

General Assembly lacks the legal power to issue binding instruments, much of this remained on the level of the ideal and had a hard time becoming reality (KLABBERS, 2017, p. 312-313). The theme of development gains prominence again in the following decades in important international documents such as the 1986 UN declaration recognizing the right to development as an inalienable human right and the Rio Declaration of 1992 that, in principle 25, states that peace, development and environmental protection are interdependent and indivisible.

The action of international actors in the international economic system has revealed, however, that the paths for the development of underdeveloped countries are blocked. Readings of the third world approach to international law, despite not the theoretical framework followed in this dissertation, reveal that the right to development debate emerged at a time of the eclipse of developing countries' redistributist claims under the NIEO and the ascendance of neoliberalism and Reaganomics and acquired a polarized North-South character, evidenced by a division between western and non-western States at the drafting and adoption of the Declaration on the Right to Development (DRD) in 1986 (RAJAGOPAL, 2003, p. 220). The DRD, however, petered out as a political challenge in the late 1980s due to, in the economic realm, the rise of neoclassical economic paradigms through neoliberalism and the Reagan's administration hard line policy on opposing economic and social rights (RAJAGOPAL, 2003, p. 222). Some time later, within the WTO, the international organization that integrates the background of this research, no meaningful negotiation similar to a trade round was completed. The Doha round, officially designated as the Doha agenda for development, has come to a deadlock after successive attempts to restart it (JACKSON, 2013, p. 32). The civil society has also manifested itself through protests and criticism to the WTO, understood as an elitist and unrepresentative body that went beyond its free trade promotion mandate and is influencing in an illegitimate manner democratic decisions of States.

Despite the failure of the political project that sought to introduce a right to development on the international legal order, the idea of sustainable development survived over time and incorporated some aspects of the political project previously analyzed. This idea appeared for the first time on the report of the World Commission on Environment and Development known as Brundtland report that attributed an emphasis to its intertemporal dimension. The idea of sustainable development, exposed by the Brundtland Commission, creates in reality an agreement between generations by

which the use of cultural and natural resources in the present must not compromise the meeting of the needs of future generations (AMARAL JÚNIOR, 2011, p. 66). Resides in this agreement the foundation of intergenerational justice that offers to future generations the same quality and access to natural resources besides the options currently available (AMARAL JÚNIOR, 2011, p. 66).

Later in time, the concept of sustainable development was definitely recognized in hard law and soft law. The instruments in which this recognition is mostly clear are the Rio Declaration on Environment and Development, the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity. This concept reveals that, despite the global economy is growing rapidly, there are at the same time a global environmental crisis that threatens the lives of billions of people and an increasing unequal distribution of income within and between countries. As an intellectual construction, sustainable development seeks to extract meaning from interactions of three complex systems: the global economy, world society and the terrestrial environment. With the passage of time, the concept of sustainable development began to have a more practical approach with a lesser focus on the needs of generations future and greater in the link between their economic, social and environmental dimensions. The better elaboration and thickening of concepts are important to the definition of specific actions and to the better elaboration of debates about rights in the legal field (NUSDEO, 2018, p. 62-63). Valuable insights for analyzing institutional change in international trade can then be found in the concept of sustainable development. This perspective of the sustainable development that gained form through the private standards of sustainability applicable to certification will be analyzed in this dissertation.

2.1.1. The insertion of the dimension of good governance

Current legal theory adds to the economic, environmental and social pillars of sustainable development the dimension of good governance. In general terms, common themes discussing good governance are integration, stakeholder participation, accountability, enforceability and transparency (MAGUIRE, 2010, p. 55). Good governance for sustainable development includes transparency, accountability, access to information, participation, an end to tax havens and efforts to stamp out corruption (SACHS, 2015, p. 489). The literature also highlights that sustainable regulatory arrangements are inserted in a scenario in which modern information and

communication technology allows global, fluid and fast information exchange. This fosters the development of hypes: information or misinformation on the web can result in media coverage, consumer boycott or pressure on governments to take action (HAVINGA; CASEY; VAN WAARDEN, 2015, p. 6).

Global governance, however, has different meanings according to different perspectives of study. Rodrik (2018, p. 30) systematizes that global governance can mean new intergovernmental forums, such as the Group of 20 and the Financial Stability Forum (that is currently the Financial Stability Board); the emergence of transnational networks of regulators setting common rules from sanitary to capital adequacy standards; private governance regimes such as fair trade and corporate social responsibilities; the development of accountable global administrative processes that depend on local debate, is informed by global comparisons and works in a space of public reasons and greater power for international nongovernmental organizations.

Governance can also be decomposed in constituent parts that correspond to functions performed by a variety of actors beyond the State. These agents of global governance known in the literature as global governors are authorities who exercise power across borders for purposes of affecting policy (AVANT; FINNEMORE; SELL, 2010, p. 2). Global governors thus perform functions as creation of issues, setting of agendas, establishment and implementation of rules or programs and evaluation and/or adjudication of outcomes (AVANT; FINNEMORE; SELL, 2010, p. 2). The governed demonstrate recognition of governors and deference towards them for different reasons, being the one to be analyzed the recognition by consumers of certification labels and schemes. Governance, moreover, is not a solo act and governors can rarely accomplish ends alone, which leads them to divide labor, delegate, compete and cooperate with one another in many ways to produce the outcomes we observe (AVANT; FINNEMORE; SELL, 2010, p. 2). If their ability to achieve outcomes depends on their interactions and on their relations with other governors, understanding the conditions under which governors compete or cooperate can help explain outcome effectiveness (AVANT; FINNEMORE; SELL, 2010, p. 2-3).

The meanings provided by Rodrik and the functions identified by Avant, Finnemore and Sell reveal the paths in which States and core actors of international relations as multinational corporations and the civil society are inserted and act. Governments must carry out many core functions to enable societies to prosper as the provision of social services such as health care and education; the provision of

infrastructure such as roads, ports, and power; the protection of individuals from crime and violence; the promotion of basic science and new technologies; and the implementation of regulations to protect the environment (SACHS, 2015, p. 3-4). Good governance, however, does not encompass only governments. The world's multinational companies are often the most powerful actors and human wellbeing depends on these powerful companies obeying the law, respecting the natural environment, and helping the communities in which they operate, especially to help eradicate extreme poverty (SACHS, 2015, p. 4). Good governance means, therefore, that both the public sector (government) and the private sector (business) operate according to the rule of law, with accountability, transparency, responsiveness to the needs of stakeholders and with the active engagement of the public on critical issues such as land use, pollution, and the fairness and honesty of political and business practices (SACHS, 2015, p. 42).

The normative side of sustainable development, thus, encompasses four essential objectives of a good society: economic wealth, social inclusion and cohesion, environmental protection and good governance by the main social actors as governments and businesses. These objectives reflect respectively four complex interacting systems: a global economy that now spans every part of the world, social interactions of trust, ethics, inequality, and social support networks in communities, the changes to complex Earth systems such as climate and ecosystems and the problems of governance, including the performance of governments and businesses (Sachs, 2015, p. 8). A purposeful nature in the sense of presenting ideas to deal with the dangers that humanity faces is inherent to this side of sustainable development.

In addition to the normative perspective, sustainable development constitutes an analytical field of study that seeks to analyze multifaceted and discontinuous interactions of human beings and the environment. The analytical part of sustainable development aims to explain and predict the complex and nonlinear interactions of human and natural systems (SACHS, 2015, p. 6-7). In clearer terms, this part aims to understand the interlinkages of the economy, society, environment and politics (SACHS, 2015, p. 42). These interlinkages will be analyzed below through the identification of synergies between the sustainable development goals (SDGs).

2.1.2. Sustainable development goals as the lodestar for future development

In order to achieve sustainable development in a crowded, unequal, and degraded planet, the Sustainable Development Goals (SDGs) must be the compass, the lodestar, for the future development of the planet during the period 2015 to mid-century (SACHS, 2015, p. 4). The SDGs or Global Goals consist on new guidelines adopted by the UN General Assembly in 2015 for the following fifteen years. This new agenda reinforces the need of synergies between the environmental, economic and social dimensions of sustainable development and is intended to be universal, transformative, ambitious and essential (UN GENERAL ASSEMBLY, 2015). The SDGs recognize the impact of environmental degradation and unsustainable patterns of consumption and production and their links to increased inequities and inequalities globally (TINKER, 2016, p. 3).

Inserted on each goal are targets with related statistical indicators that correspond to a consensus of UN member States. Whilst the language is sometimes used interchangeably, goals or targets specify a desired end point and indicators simply provide information on the direction of travel, without necessarily telling us when we have arrived (LEE, 2014, p. 73). Some indicators might simply provide a snapshot of a situation for which no one can easily be held to account, but which might help policy-making (LEE, 2014, p. 73). One target of the responsible consumption goal, for instance, is the substantial reduction of waste generation through prevention, reduction, recycling and reuse whose indicator is the national recycling rate measured according to the tons of material recycled. The goals, targets and indicators achieved reflect the active participation over several years of meetings of NGOs and other stakeholders, regional and international organizations, representatives of the private sector and civil society in the Open Working Group on Sustainable Development Goals under ECOSOC (TINKER, 2016, p. 3).

The goals are interdependent and are to be implemented as a package, with no one goal separated out from the others due to their interrelationships (TINKER, 2016, p. 4). Sustainable consumption and production, for example, is essential to achieve the other following goals: elimination of poverty, address inequality, construction of peaceful and inclusive societies with good governance and the rule of law, access to information, participation in decision making and transparency and partnerships for implementation of all goals. Sustainable development goals will, thus, include not only the continuation of the fight against extreme poverty but also the integration of that goal

with several others, including social inclusion and environmental sustainability (SACHS, 2015, p. 493).

The SDGs are not limited to an idealistic proposal that reflects the interests of different stakeholders. They are inserted on the phenomenon of economic globalization that reveals to the consumer the interdependence between the consumption in one and another part of the world and highlights the environmental and social challenges posed by the development of the world economy (BOURGOIGNIE, 2017, p. 6). Globalization, thus, has the effect of increasing the conscience of the urgent and relevant need of defining standards of production and consumption that integrate broad questions and not only the economic question (BOURGOIGNIE, 2017, p. 6). Two aspects of sustainable development that make the problems even more complicated are the natural time horizon for results in the long term and the requisite of the buy-in and action of all parts of the world, rich and poor (SACHS, 2015, p. 493).

Different factors allow the identification of the importance of the goals. First, goals are critical for social mobilization and stating goals helps individuals, organizations and governments all over the world to agree on the direction to fight poverty and to achieve sustainable development (SACHS, 2015, p. 490). A second aspect is peer pressure that comes in when leaders are publicly and privately questioned on their progress and the steps they are taking to achieve the goals (SACHS, 2015, p. 490). Thirdly, goals mobilize epistemic communities – networks of expertise, knowledge and practice around specific challenges like growing food, fighting diseases or designing and implementing city plans (SACHS, 2015, p. 490). When goals are set, those communities of knowledge and practice come together to recommend practical pathways to achieve results (SACHS, 2015, p. 490). Finally, goals can mobilize multiple stakeholders that reflect the political, scientific, religious and social interests involved on the negotiation and application of the goals. The multi stakeholder process is essential for the complex challenges of sustainable development and for the fight against poverty, hunger and disease (SACHS, 2015, p. 491).

The pillars of sustainable development and the goals that arise from it can, however, be appropriated by particular interests. Sustainable development can serve to increase environmental protection by taking advantage of the virtues of the principle of integration which makes it possible to green all policies smoothly (PRIEUR, 2014, p. 20). It is therefore a real awareness of the sharing of responsibilities which implies a concerted action by all actors in the face of an increasingly threatening world for the

environment (PRIEUR, 2014, p. 20). On the other hand, sustainable development can serve to create the least possible environmental protection when the objective is first of all development and the environment remains a luxury (PRIEUR, 2014, p. 20). Sustainable development is then a decoy which allows one to pretend to act for the environment by taking advantage of the weakness of the legal commitments linked to sustainable development, in contrast to the legal rigor of the obligations resulting from environmental law (PRIEUR, 2014, p. 20).

In forestry issues, synergies and conflicts between the goals can be identified. An example of synergy is between goal 15 that aims to sustainably manage forests and goal 13 on action to combat climate change and its impacts as forests alleviate climate change through carbon sequestration. A clear conflict is present between indicator 2.4.1 on proportion of agricultural area under productive and sustainable agriculture that seeks to promote rural economic development and indicator 15.1.2 on proportion of important sites for terrestrial and freshwater biodiversity covered by protected areas and by ecosystem type that seeks to maintain the habitat for endangered species. The SDGs then, despite the linkage between its goals and the aim to foster integrative policies, provide limited tools to find a solution to potential clashes among goals.

Besides the possibilities of synergies and conflicts between goals, the sustainable management of forests inside SDG 15 was recognized as a main concern among other important goals in a plan developed by the UNFF. The recognition is derived from the concrete action of the UN that, in 2016, through a working group and special session of the UNFF, created a strategic plan to be applied from 2017 to 2030, the UN Strategic Plan for Forests (UNSPF) 2017-30 adopted by UN General Assembly Resolution A/RES/71/285. It encompassed a framework to UN forest-related efforts and cooperation and coherence between affected and interested parties and international instruments. The concept of sustainable management of forests was thickened by means of six Global Forest Goals (GFGs) and twenty-six corresponding targets identified to be accomplished. The GFGs are universal and voluntary and their themes mirror the policies, measures and actions of UN forest instruments (SIDHU; GEORGE, 2017, p. 216). The six GFGs achieved at the special session are as follows: increase the forest cover through protection, restoration, afforestation and reforestation; supplement forest-based economic, social and environmental benefits; increase protected and sustainably managed forest area and products from them; mobilize funding for sustainable forest management and improve scientific and technical cooperation; promote governance

framework at international and national levels and enhance cooperation, coordination, coherence and synergies on forest-related issues and challenges between the different stakeholders at different levels.

The benefits that arise from the implementation of GFGs have been identified in the literature and in the indicators of each goal. The first goal relates to the reversing of loss of forest cover globally through sustainable forest management and increasing efforts to prevent forest degradation and contribute to the global effort of addressing the challenge of climate change (SIDHU; GEORGE, 2017, p. 217). A more realizable aim of increasing the forest area by 3 per cent worldwide foreseen in the first target of the first indicator can contribute to the enhancement or better maintenance of forest carbon stocks as foreseen on the second target.

The second goal links forest-based economic, social and environmental benefits to the improvement of livelihoods for forest-dependent people (SIDHU; GEORGE, 2017, p. 217). Small-scale forest enterprises, particularly in developing countries, will have an increased access to financial services and affordable credit and will be integrated in value chains and markets. When exploited sustainably, forests can increasingly contribute to food security, as well as to biodiversity conservation, climate change mitigation and adaptation.

Considering the third goal, in order to achieve the significant increase in the area of protected forests throughout the world, sustainably managed forests and an increase in the proportion of forest products from such forests, effective area-based conservation measures must be improved and special long-term management plans for these forests must be implemented.

The fourth goal is centered on mobility of financial resources to the implementation of SFM and on the strengthening of scientific and technical cooperation. The first indicator provides that the mobility of resources from all sources is necessary to provide adequate incentives to developing countries to advance SFM, including for conservation and reforestation. The second indicator provides that there must be a significant increase in forest-related financing at all levels, which includes public, private and philanthropic financing. According to the third indicator, North-South, South-South, North-North and triangular cooperation and public-private partnerships on science, technology and innovation are areas that will be significantly enhanced and increased. The two last indicators point that the number of countries that have developed and implemented forest financing strategies and have access to

financing must be increased with improved collection, availability and accessibility of forest-related information.

Inside this goal, potential paths to implement the third indicator have been proposed and the expanded role of science has been acknowledged in the literature. Besides the literal text of the indicator, new technological knowledge contributes to new forms of forest conservation and of manufacture, storage, packaging and transport of forest products in a way that protects the environment. Moreover, monitoring and controlling forest management is very dependent on technological devices and knowledge. Advances in scientific and technological tools allows the detection of logging activities and deforestation even in small forest areas and contribute to the increasing knowledge about the growing levels of forest destruction as well as to a broader public perception of environmental damage in forests. The content of the indicator and the way in which it is applied reflect the normative value of science recognized in the literature in the sense that it gives constitutive and legitimating backing to actors that participate in governance. The reliance upon science and scientific discourse as a base of legitimacy has taken a dominant role in the legitimating actions of actors engaged in governance to the extent that it has primacy over moral political or pragmatic bases of legitimacy (HAVINGA; CASEY; VAN WAARDEN, 2015, p. 7). The expansion of scientific authority provides legitimating tools for actors as the knowledge assumed to be embedded in science provides justifications for political, economic, and social choices of actors (HAVINGA, CASEY and VAN WAARDEN, 2015, p. 7). The reason for this lies in the perceived value neutrality of decisions and rules based upon science and the fact that they emanate from experts (HAVINGA; Casey; VAN WAARDEN, 2015, p. 7).

The promotion of governance frameworks stipulated on the fifth goal can be achieved, according to the first indicator, through an increase in the number of countries that have integrated forests into their national sustainable development plans and/or poverty reduction strategies. Another measure foreseen on the second indicator that can contribute to the achievement of the goal is the enhancement of forest law enforcement and governance, including through significant strengthening national and subnational forest authorities and the significant reduction of illegal logging and associated harmful forest trade worldwide. The content and the structure of forest law are foreseen on the third indicator, according to which national and subnational forest-related policies and programs are coherent, coordinated and complemented across ministries, departments

and authorities, consistent with national laws and engage relevant stakeholders, local communities and indigenous people. The last measure foreseen on the fourth indicator consists on the full integration of forest-related issues and the forest sector into decision-making processes of land use planning and development.

The enhanced cooperation, coordination, coherence and synergies on forest-related topics that constitute the core of the sixth goal can be achieved through a variety of paths. The first indicator provides one of them that consists on the coherence and complementarity of different forest-related programs within the UN system and their integration within GFGs and targets wherever appropriate. Moreover, according to the second indicator, these programs and partnerships encompass the multiple contributions of forests and the forest sector to the 2030 Agenda for Sustainable Development. Another path foreseen on the third indicator consists on cross-sectoral coordination and cooperation to promote SFM and halt deforestation and forest degradation. A broader shared understanding of the concept of SFM can then be attained and a corresponding list of indicators can be identified. Lastly, as foreseen in the fifth indicator, a viable path consists on the strengthening of input and involvement of major groups and other relevant stakeholders in the implementation of the UNSPF and in the work of UNFF. The involved stakeholders attribute different values, which interconnect, and content to a variety of services and roles provided by forests.

Moving from the normative analysis of the SDGs and of the GFGs to the concrete conservation and exploitation of forests, it is possible to identify the contribution of forests to each SDG. UNFF gathered data and numbers relative to this contribution that can be found on the table below.

Sustainable development goal	Contribution of forests
1: no poverty	40% of extreme poor in rural areas live in forests and savannas.
2: zero hunger	Around 50% of the fruit we eat comes from trees. Globally, 76 million tons of food come from forests, 95% of which are plant-based.
3: good health and well-being	2/3 of all cancer-fighting medicines come from rainforest plants, worth around US\$

	108 billion a year.
5: gender equality	850 million people collect fuelwood or produce charcoal, 83% are women.
6: clean water and sanitation	75% of the world's freshwater comes from forest watershed areas.
7: affordable and clean energy	2.4 billion people use wood fuel for cooking, boiling water and heating. 40% of our renewable energy is forest-based, that is solar, wind and hydroelectric power all combined.
8: decent work and economic growth	Nature-based tourism accounts for nearly 20% of the global tourism market.
11: sustainable cities and communities	1/3 of the world's largest cities draw their drinking water from forest watersheds. Trees and parks clean our air, reduce stress, noise, improve health and build sustainable urban communities.
12: responsible consumption and production	By 2050, the world's population could reach 10 billion, requiring more forest products and services.
13: climate action	Forests act as carbon sinks, absorbing roughly 2 billion tons of carbon dioxide each year.
15: life on land	Forests cover 31% of the Earth's land area, an area of around 4 billion hectares. 80% of all terrestrial species live in forests. 76% of the world's forests, an area of 3 billion hectares, are publicly owned.
16: peace, justice and strong institutions	1.5 billion local and indigenous people have community-based tenure over forest resources.
17: partnership for the goals	Official Development Assistance (ODA) to forestry = around US\$ 8.6 billion, over

	the past 15 years.
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Source: UNSPF

The certifier PEFC, although criticized as biased towards businesses and as allowing excessive flexibilities during the certification, features to be explained and analyzed below, also gathered information on the contribution of forests to the achievement of a range of SDGs that are presented on the table below. The data on the table are limited to the contributions derived from the conservation and utilization of forests and do not include measures taken by PEFC.

Sustainable development goal	Contribution of forests
1: no poverty	Forests contribute to livelihoods and economic growth across the full value chain, from people depending on forests for their livelihoods all the way to the consumers of wood fiber products.
2: zero hunger	Food from forests such as mushrooms, nuts, berries or game make an important contribution to the food supply and nutritional quality of diets, especially in some of the world's most vulnerable regions.
3: good health and well-being	By regulating the climate, providing clean air and water, and through recreational benefits that support physical and mental health, forests and trees play a significant role in for our well-being.
4: quality education	Given the relevancy of forestry in rural areas, there is a strong role that forest owners can play in providing education and training to workers and local businesses and communities.
5: gender equality	In many countries, the link between poverty, gender and sustainable forest management is a critical issue. Rural women are heavily involved in forest work, but frequently disadvantaged.
6: clean water and sanitation	Water security and forest health are intrinsically linked, and responsible forest

	management is key to preserving the forest and water ecosystem functions.
7: affordable and clean energy	Energy from wood provides 40% of today's global renewable energy supply and has an important role in providing accessible, affordable and reliable basic energy services.
8: decent work and economic growth	Forests are a major driver for sustainable economic growth and provider of jobs especially in rural areas, yet forestry work is considered among the most hazardous in the world
9: industry, innovation and infrastructure	Forestry positively influences the well-being of people that depend on forest operations in rural and remote areas by providing basic infrastructure and services.

Source: PEFC

Against this background, forest certification contributes to goal 8 on decent work and economic growth, to goal 12 on responsible consumption and production and to goal 15 on life on land. Regarding the first goal, certification can lead to better working conditions and safety and health of forest workers and to keeping access to certain markets. Regarding the second goal, forest certification can foster sustainable forest use and help to promote the public perception of companies that seek certification in their internal forest activities and that buy only certified goods. Regarding the third goal, forest certification can stimulate an increase in the area of forests that were correctly managed, contribute to improved forest conservation results and boost sustainable forest exploration.

Forest certification contributes to global forest goals through its performance according to parameters that correspond to the goals. The correspondence between forest certification and the content of global forest goals can be found on the following issues: a broader and shared understanding of the concept of SFM, reversal of the loss of forest coverage by means of sustainable forest management, increase of efforts to prevent forest degradation, improvement of effective area-based conservation measures, advances on monitoring and controlling of forest management through technological

devices and knowledge and the significant reduction of illegal logging and associated harmful forest trade worldwide.

2.2. The insertion of sustainable development in the current courses of global governance

The analysis of this dissertation, based on the broad concept of good governance provided by Sachs that encompasses core functions of States and multinational corporations as well as the participation of the main stakeholders, falls on forest certification, the object of the dissertation. The analysis of forest certification will be conducted through the lenses of the strict concept of non-State market-driven governance. This form of understanding global governance, despite the peripheral position of the State that, according to Sachs, can enhance policies and rules of good governance, was chosen due to the possibility of identification of the reaction of multinational companies and the civil society, very powerful actors and key agents during the certification wars and thereafter, to market incentives and opportunities. These companies are not subordinated to the State control and do not need a formal delegation of authority from a State or an international organization to take part in transnational governance schemes. The civil society, on its turn, is also beyond State control and can operate either according to a utilitarian logic and implicitly agree with companies' policies and vindications, either according to a essentialist logic and place environmental conservation and protection above the achievement of the economic welfare.

The insertion of principles of good governance on forest certification will then be analyzed through the lens of the regulator-intermediary-target (RIT) framework proposed by Abbott, Levi-Faur and Snidal. The RIT framework was chosen not only because it minimizes the role of the State in the regulatory process and puts it next to private actors in each pillar of the framework, but also and above all because intermediaries stand at the center of the theoretical model, which allows an enlargement of the scope of regulatory analysis beyond rule-makers and rule-takers.

2.2.1. Non-State market-driven governance

The initial theoretical efforts to identify a non-State market-driven (NSMD) governance arise from the understanding of the market and its supply chains as an institutional framework in which government authority is granted to market transactions

and to decisions made by consumers inside the market and through which widely based political struggles take place. When NSMD conditions exist, compliance results from market incentives and involves an evaluation on the part of those audiences the NSMD systems seek to rule, as well as other key audiences, such as environmental groups (CASHORE, 2002, p. 504). As far as NSMD governance systems gain significant policy-making authority, they could potentially reduce or alter the scope and authority of traditional domestic and international public policy-making processes (CASHORE, 2002, p. 504).

In NSMD governance systems, the State cannot be a member or vote in decision-making procedures, but acts in a manner consistent with NSMD. First, existing rules and policies beyond the NSMD program itself – from rules governing contract law to common law issues regarding property rights – play an important background role as NSMD systems never operate in isolation from a broad array of governmental policies (CASHORE, 2002, p. 510). Second, States can act as a traditional interest group attempting to influence NSMD policy-making processes, from offering advice to asking to help write specific rules, which does not mean that they are the source of authority (CASHORE, 2002, p. 510). Third, governments can act as any large organization by initiating procurement policies and other economic actions that may influence the market-driven dynamics (CASHORE, 2002, p. 510). Fourth, in the case of forest certification, governments can act as landowners; indeed, in many countries worldwide, public land ownership is a key part of forest policy and, to the extent that governments are persuaded to attempt to adopt certification on their lands, they are drawn into an NSMD system on a basis that is similar to other landowners (CASHORE, 2002, p. 510).

Besides the analysis of the State's involvement in NSMD governance, the conducts of actors must go towards certain directions so that successful outcomes are achieved. Before moving to the analysis of certification, actors must perceive that coordination will serve their interests and that the achievement of any benefit (whether individual or collective) is contingent upon mutual action (GULBRANDSEN, 2010, p. 21). Producers, firms and other market actors could therefore be expected to contribute to institutional formation as the creation of standards organizations and participation in those institutions to increase utility (GULBRANDSEN, 2010, p. 21). In business coordination situations, in which actors are indifferent about where to coordinate behavior, all actors profit from collaboration and nobody profits from defection (GULBRANDSEN, 2010, p. 21). This coordination leads to an industry code of conduct

or a standard that can be applied by economic actors and represent a common good for the industry. Agreements on these standards can be achieved without difficulties in circumstances in which actors reveal indifference on areas to coordinate and can communicate between them.

Certification schemes constitute a form of environmental and social governance that may influence the cost-benefit rationale of companies that seek to maximize utility. By targeting firms and not States, certification effectively bypasses thorny debates over sovereignty that is frequently a source of intergovernmental stalemate (BERNSTEIN; CASHORE, 2007, p. 352). The schemes can create coordination opportunities and profit opportunities that arise from market demand for products on whose course on a supply chain sustainable resource-management practices were employed.

The literature reveals particular features of forest certification schemes. All the forest certification initiatives created during the 1990s have been largely driven by non-state, private actors and voluntary subscription and are consequently regarded as private institutions (WIBOWO; GIESSEN, 2018, p. 28). In the forest sector, the multiplication of certification schemes led to the phenomenon of certification wars, value-based disagreements and conflicts between the proponents of the different non-State, market-based forest certification schemes that have emerged since the mid-1990s, particularly between the Forest Stewardship Council (FSC) and various business-promoted schemes that have challenged the FSC (HUMPHREYS, 2006, p. 116).

The main participant actors on non-State market driven governance to be analyzed are the civil society and multinational industrial corporations. The term civil society itself has no firm definition and is not a legal term of art, being used as a descriptive umbrella for a range of actors that form civil society (STABEROCK, 2011, p. 1). The actors to be analyzed in this dissertation are environmental activists on the forest sector and social activists who reveal concern with traditional communities and indigenous people who inhabit forests. Civil society is mostly described in relation to its aims, which are not for profit, and in relation to its aims, which are not for profit, and in relation to its voluntary structure, excluding other non-State actors, such as business or transnational companies (STABEROCK, 2011, p. 2). Civil society differs from these corporations due to its aforementioned non-profit action and to its opposite behavior to the one of them towards environmental and social measures. While civil society continuously advocates for an enlargement of environmental and social measures and policies to be taken by the private sector and the public sector, multinational industrial

corporations quite often neglect environmental and social issues and implement corporate and social responsibility (CSR) measures after the pressure of civil society. This topic aims to analyze the actions of these actors in the creation of forest certification and in the participation on certification wars as well as the interests behind their behaviors. The analysis will not be procrustean in the sense of considering the actors individually, but will show how they can cooperate and how they entered in conflict.

2.2.1.1. The action of the civil society

Before the start of the debates around certification, the civil society acted mainly by means of naming and shaming and boycott. Among the many episodes analyzed in the literature, the one involving Burger King in the 1980s was chosen to be analyzed because it involves the three original dimensions of sustainable development that were being debated at the time the episode happened. In the 1980s, Earth First!, an environmental advocacy group composed of timber workers, ran national campaigns to expose U.S. citizens to problems of tropical deforestation that transformed into a focus on Burger King given its public visibility as a fast food company that imported beef linked to forest clearing (AULD, 2020, p. 38). A follow-on tour in 1986 corresponded with a call to boycott Burger King – called the Whopper-Stopper Month (AULD, 2020, p. 38). A drop in sales that followed, which activists claimed was due to the boycott, helped nudge the company to stop buying beef from a Costa Rican supplier (AULD, 2020, p. 38-39). The successful outcomes of the campaign contributed lately to the definition by the NGO Rainforest Action Network (RAN) of its strategic perspective as well as to turn the targeting of a company a growing popular approach in the 1990s for forest issues.

The beginning of the involvement of civil society on forest certification is found on a range of meetings gradually centered on the issue of eco-labeling and eventually forest certification. Efforts included the Rainforest Alliance's SmartWood program created in 1989 whose objective was timber certification located in well-managed forests, Friends of the Earth-UKs "Good Wood" scheme, created in 1987 and Hubert Kwisthout's "Ecological Trading Company", which aimed at harvesting sustainable timber on-site.

The reaction of the World Wide Fund (WWF) to the rejection of its proposal to the ITTO¹ of a labeling scheme for tropical timber that was produced sustainably is recognized as a milestone. In 1991, WWF formed a certification working group with some other NGOs, including Greenpeace and Rainforest Alliance, which in 1990 had created Smart Wood, the world's first independent forest certification scheme (HUMPHREYS, 2006, p. 116-117). After, the working group decided to create the FSC, a certification scheme that was independent and aimed to create well-managed forests. An agreement was reached on the coverage of FSC that would encompass all forests and not only tropical forests as expressed on the failed ITTO proposal. In this moment, private sector support was limited to few business individuals concerned with the environment that were mainly British.

The World Rainforest Movement (WRM), an international undertaking that seeks to engage in fights, reflections and political moves of forest inhabitants, indigenous, peasants and additional communities in the global South, reacted to this scenario. It mobilized a huge sum of support from NGOs, which together convinced the groups creating the FSC to implement an open-ended membership structure that encompassed a voting structure, accountability instruments and complaints procedures. The FSC has survived as a viable and robust mechanism throughout the certification wars as its broad constituency base and participatory approach has provided it with a legitimacy that it would have lacked if established as a foundation (HUMPHREYS, 2006, p. 118).

Inside the founding assembly of FSC, created in Toronto in 1994, the civil society was represented in a social and environmental chamber that gathered 75 per cent of votes. Lately, this format was changed to a tripartite arrangement with social, environmental and economic chambers² known as general assembly, each with one third of voting rights, in which the civil society participated in the first two ones. In this structure, social stakeholders as forest supporters, trade unionists and indigenous communities were separated from environmental stakeholders that were mainly groups in favor of forest conservation. In the literature, this institutional design was cherished

¹ On this issue, it is worth mentioning that the ITTO was created with the objective of ameliorating forest management practices in the tropics.

² This arrangement can be understood as an interest-based regulatory body according to the concept proposed by Cafaggi (2006, p. 13) in which a board is composed mainly of members representing the different interests of both regulates and possibly third parties, with a limited number of independent directors providing technical expertise. It contrasts to the concept also proposed by Cafaggi (2006, p.13) of technocratic body, in which the board is mainly composed of experts, whilst it would only indirectly represent the interests of regulates and third parties.

as a democratic decision-making process and to the acknowledgment of FSC as perhaps the best current model of a civil regulation organization (MURPHY; BENDELL, 1999, p. 58). The literature also praised FSC environmental, social and economic decision-making chambers, each with equal voting weight as a way to avoid business domination, which many view as a key problem with state-centered processes (BERNSTEIN; CASHORE, 2007, p. 350). Currently, the recent literature reveals that, after FSC internal changes in the share of voting rights analyzed *infra*, representatives of companies, trade unions and environmental groups cooperate closely with each other according to the three pillars of sustainability (ecology, social equity and economy) (DILING; MARKUS, 2018, p. 187). The structure of FSC General Assembly was, however, criticized by NGOs during the certification wars, as will be analyzed below.

The FSC structure constitutes a multi-stakeholder governed program whose benefits are identified in the literature. Three types of arguments support the idea that multi-stakeholder governed programs have specific qualities that programs with other governance-models lack: inclusiveness, expertise-based effectiveness and procedural-fairness (FRANSEN, 2012, p. 169). The first line of argument is that programs developed and governed by a variety of stakeholder groups allow parties relevant to a specific issue to have a say in matters, thus increasing the legitimacy of decision-making (FRANSEN, 2012, p. 169). Secondly, governance with groups of various backgrounds can be justified with reference to notions of learning between, among and inside organizations with different sets of expertise, improving decision-making and policy (FRANSEN, 2012, p. 169). Thirdly, when companies work with NGO (and/or trade union) representatives in programs, they engage critics of business behavior in business attempts at improvements, thus letting them perform the function of watchdog (FRANSEN, 2012, p. 169).

The aforementioned FSC features reveal a conception of NSMD governance that underlies its program. The FSC model forbids government involvement in rule making and allows wide-ranging policy initiatives (BERNSTEIN; CASHORE, 2004, p. 40). This conception sees private-sector certification programs forcing worldwide and domestic standards upward and envisions new policy-making structures in which social, economic and environmental interests compete equally in the (private) policy-making process (CASHORE, 2002, p. 507). As such, procedures are developed with a view to eliminating business dominance and encouraging strict standards with limited

discretion, in order to promote on-the-ground-implementation (CASHORE, 2002, p. 507).

The initial actions of civil society on the field of forest certification and the understanding of how NSMD governance underpins FSC will be followed by a comprehensive analysis of the context during the 1990s in the forest sector. This analysis is necessary as it allows the understanding of the motivations that led to NGO actions, of how SFM was promoted when intergovernmental negotiations remained deadlocked after the United Nations Conference on Environment and Development (UNCED) in 1992, of the reactions to forest certification schemes, of the relationship between environmental certification and State legislation, of the economic rationale of eco-labeling schemes attributed to a product after an environmental certification, of the disincentives derived from eco-labeling schemes for companies to practice eco-dumping, of the conditions for success of labeling schemes and of the ways through which commercial practice can constitute a non-coercive means to encourage companies to comply with higher environmental standards. After this broad contextual explanation, the chapter returns to the analysis of civil society's actions that followed FSC creation and are inserted on the certification wars.

The creation of FSC after the efforts of the civil society must also be understood in light of four broader different developments inside the area of forestry at that period. The first two ones reflected the way through which pressure was placed on timber corporations, while the last two ones reflected the emergence of a variety of interests that could be coordinated and accommodated. By the late 1980s, buying tropical timber had become a contentious issue among Northern consumers as a consequence of extensive media-coverage on tropical deforestation and related social issues that had quickly turned the term tropical timber into a negative synonym for environmental degradation and human exploitation (PATTBERG, 2011, p. 267). Secondly, faced with environmental NGOs organizing boycotts against timber retailers and some governments discussing the possibility of banning timber imports, companies were looking for ways to protect their business (PATTBERG, 2011, p. 267). Moreover, some NGOs expressed their dissatisfaction with a timber boycott as the principal strategy of campaign, which was seen particularly by WWF as counter-productive.

Thirdly, the contradictory interests of the key stakeholders became evident at that moment. Large multinational corporations were under pressure while at the same time brand reputation became a major topic of concern; small forest owners demanded

their share of the market, but at the same time were eager to maintain their independence; communities relied on forests to finance community infrastructure; indigenous people demanded the recognition of fundamental rights while workers sought to secure employment and the application of fundamental labor standards and environmental organizations focused on protecting and preserving the integrity of the forest ecosystems within the discursive context of biodiversity conservation and sustainability (PATTBERG, 2011, p. 268). The confrontation among stakeholders together with the search of dialogue between them that constitutes the international approach of forests' conservation allowed also a broader international understanding of the complex environmental issues of forest conservation, deforestation and logging. Lastly, by 1992, especially during the UNCED, the ongoing negotiations over an international agreement on the world's forests had raised expectations among NGOs, corporations and the wider public of a credible solution to the global forest crisis (PATTBERG, 2011, p. 268).

The literature identified the main arguments advanced by the countries that participated in the UNCED. The debate at Rio pitted northern States such as the United States and Canada, which argued for a global responsibility approach, against southern States such as Malaysia and India, which argued for sovereign discretion (BERNSTEIN; CASHORE, 2004, p. 47). The latter feared that northern States would dictate how forests within the jurisdiction of southern States should be managed (BERNSTEIN; CASHORE, 2004, p. 47). As a result, negotiations were mired in north-south debates, where G77 bloc of developing countries remained suspicious of northern intentions on several fronts and at the Earth Summit refused even to consider a binding agreement with few economic incentives (BERNSTEIN; CASHORE, 2004, p. 47).

The analysis of the arguments posed at the UNCED also provides explanations to the poor results achieved at the conference that will be explained below. The failure to create a binding treaty at Rio is in large part owing to the inability to work out how this compatibility of free trade, development and protection of forests can work in practice (BERNSTEIN; CASHORE, 2004, p. 47-48). This poor fit is partly explained by the nature of forest resources themselves, which some perceive as a global commons problem, but which fall under the sovereign jurisdiction of individual States (although many forests cross borders) (BERNSTEIN; CASHORE, 2004, p. 48). Thus, proposals to address forestry issues have difficulty gaining legitimacy because they can be easily perceived as violating norms of sovereignty over resources and free trade, especially

since developing countries worry that any mandatory rules on SFM, even if not explicitly trade related, would disproportionately affect developing country exports (BERNSTEIN; CASHORE, 2004, p. 48). Aid or assistance to institute sustainable forest managements is the other major stumbling block (BERNSTEIN; CASHORE, 2004, p. 48).

The literature provides also a comprehensive political explanation of the poor results achieved at the UNCED regarding an international treaty on forests. At the time of the Rio Summit, the mood was extremely tense (SMOUTS, 2003, p. 137). NGOs demonstrated unbending fanatical conservationism, and their proposals, following a total preservation rationale, had a tendency to put tropical forests under a bell jar (SMOUTS, 2003, p. 137). Threats of a boycott on tropical timbers spread, making the timber industry and producing countries nervous (SMOUTS, 2003, p. 137). The difficulty of conciliating environment with development that weighed and still weighs on the whole environmental issue took a particularly acute turn with regard to the forest (SMOUTS, 2003, p. 137).

Lately, the Rio summit led to nothing more than the adoption of the famous “Forest Principles”³ and Chapter XI of Agenda 21⁴ (SMOUTS, 2003, p. 137). A clear consequence of the limited results of the Rio summit was the maintenance of forests’ management out of international law and as a function of rules that regulate the

³ This document constitutes a declaration of 15 principles that aims to create a worldwide consensus on the management, conservation and environmentally sound exploitation of all types of forests. A systematization by Kiss and Beurier (2010, p. 197) reveals that the declaration’s core elements are the recognition of the multiple usages of forests, the proposition of a sustainable exploitation and the declaration of the essentiality of forests for the maintenance of all forms of life; the encouragement of developed countries to help with creation of conservation programmes, to promote the stimulus to reforestation; the recognition of the importance of the knowledge of indigenous populations in this area and the highlight of the need of control of emissions of pollutants (particularly SO₂) that can destroy the forest.

⁴ This chapter, despite mainly exhortatory, provides, *in verbis*, the following programme areas to combat deforestation: sustaining the multiple roles and functions of all types of forests, forest lands and woodlands; enhancing the protection of sustainable management and conservation of all forests, and the greening of degraded areas, through forest rehabilitation, afforestation, reforestation and other rehabilitative means; promoting efficient utilization and assessment to recover the full valuation of the goods and services provided by forests, forest lands and woodlands and establishing and/or strengthening capacities for the planning, assessment and systematic observations of forests and related programmes, projects and activities, including commercial trade and processes. Besides its formal content, the text of chapter 11 is understood as aiming to promote a better commercial exploitation rather than real conservation, being a constant concern the channeling of producing countries towards a more rational management of wood (KISS; BEURIER, 2010, p. 197). This technique of small steps, however, has at least allowed the bringing up of the question, which not long ago was impossible due to the political blockage of producing countries of the inter-tropical zone which refused to approach these forest issues on the international level (KISS; BEURIER, 2010, p. 197-198).

domestic legal framework of States, which fostered alternative approaches⁵ to forest conservation. In the end, it was the failure of the intergovernmental process⁶ that gave an additional boost to the idea of establishing voluntary regulation in the global forestry area (PATTBERG, 2011, p. 268; WIBOWO; GIESSEN, 2018, p. 28).

In this context, the literature provides a deeper analysis of the research problem explained in the previous chapter. The failure of the ITTO to make a dent in the rate of deforestation, the inability of the world's governments to agree on a binding global forest convention and the perverse incentives that tropical timber boycotts gave forest owners to convert unproductive forest land to other uses created considerable frustration on the part of those environmental groups who had devoted most of the 1980s to these efforts (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 11).

Against this legal and political background, it is possible to understand the motivations that led to NGO actions explained at the beginning of this sub-chapter. The sense among environmental NGOs that a convention with concrete commitments on SFM was unlikely in the short or medium term, and could even entrench watered-down rules if a weak regime prevailed, accounts in part for the push towards certification (BERNSTEIN; CASHORE, 2004, p. 48). Such schemes could be kept relatively independent from multilateral process bogged down in north-south conflict (BERNSTEIN; CASHORE, 2004, p. 48). The inability of forest negotiators to formulate rules that fit with the broader normative context of what would be perceived as acceptable by States and the ability of nongovernmental schemes to take advantage

⁵ An example of alternative approach is the action of indigenous peoples who make efforts to be heard through coordination movements as the Coordination of indigenous organizations in the Amazon basin (Coiba).

⁶ The debate around an international agreement on the world's forests, despite not being the object of this dissertation, continued during the 1990s. On this issue, however, it is worth mentioning the phenomenon described in the literature of the change of position of influential NGOs that campaigned against a global forest convention towards the end of the decade. Over one hundred of them had gotten together with the major federations (Friends of the Earth, Greenpeace, WWF) on a Forest Policy Project to publish a manifesto explaining the six reasons why the idea was no longer a good one: countries would agree on the lowest common denominator and align themselves along very low standards, thereby paving the way for destructive practices and thwarting more rigorous initiatives underway (SMOUTS, 2003, p. 138). The text would be dominated by timber industry interests and would do nothing to counter the predatory practices of a growing number of multinational firms (SMOUTS, 2003, p. 138). It would diminish the historic role of the Convention on Biological Diversity; it would leave aside the most crucial and thorny forest issues, most of which were external to the forestry sector, and would not tackle the chronic underlying causes of deforestation (SMOUTS, 2003, p. 138). It ran the risk of sabotaging important non-governmental initiatives, such as certification, and of hampering rural societies' capacity to decide the fate of their own forests (SMOUTS, 2003, p. 138). Lastly, the fabrication of a legally binding global mechanism was a long and costly process during which a whole series of possible actions in favor of the forest would be suspended, a loss of time and money that would be better used to solve more pressing problems and implement existing agreements (SMOUTS, 2003, p. 138).

of opportunities that same normative environment provides offered an opportunity to promote SFM where intergovernmental negotiations remained deadlocked (BERNSTEIN; CASHORE, 2004, p. 48).

It is understood in the literature that the FSC was created by transnational and environmental social groups in 1994 as a reaction to the United Nations Conference on Environment and Development that was held in Rio de Janeiro, Brazil, in 1992 and, as explained above, adopted Agenda 21 but failed to produce a legally binding commitment on forest management (VILLAREAL, 2018, p. 17; BERNSTEIN; CASHORE, 2007, p. 350). Despite this failure, the Earth Summit was a great forum for NGOs to meet others who shared the same concerns (VILLAREAL, 2018, p. 17). As an outcome of this networking, the growing concern of deforestation and the lack of a binding document, a group of NGOs came together to create the FSC, a key forest certifier inside the certification wars (VILLAREAL, 2018, p. 17).

A positive reaction to the newly created forest certification schemes that came from specific States was highlighted in the literature and in the media. Some of them have adopted action plans to limit their imports to labeled tropical timber (KISS; BEURIER, 2010, p. 198). France, for instance, adopted a plan in favor of tropical forests in 2004 aiming to limit public procurement to eco-certified tropical wood whose legal origin is guaranteed and that comes from forestry operations inside a sustainable management process to the level of 50% in 2007 and to the level of 100% in 2010. The annex to the circular which establishes the means to implement the plan aims to favor the taking into consideration of the sustainable management of forests in public markets. More recently, a project on the promotion of tropical certified timber to French specifiers was launched and was centered on the organization of regional meetings, the organization of presentations to architecture schools and on the creation of a digital toolkit.

Analyses that aim to identify the relationship between environmental certification and mandatory State legislation that quite often arise from the incorporation of a treaty in a domestic legal order are found in the literature and allow a clearer understanding of the research problem. The relationship between environmental certification – in the most desirable ways – with State environmental legislation is auxiliary and the regulation of the first one generates the framing of the productive activity in the second one and overcomes it (CARVALHO, 2010, p. 25). Despite that the rules and criteria of environmental certification acquire legitimacy and consequent

authority from the value chain and from the consumer market, absent delegation or hierarchy towards State environmental legislation, the coordination between both approaches is very beneficial (CARVALHO, 2010, p. 25). Environmental certification programs are institutions whose reason of their existence resides on the environmental improvement of the production and on social justice, being thus clear that environmental certification objectives are in perfect alignment with environmental legislation objectives (CARVALHO, 2010, p. 25). When one of them is insufficient, the other helps it and, despite being independent, their objectives and consequences unite them (CARVALHO, 2010, p. 25).

The public-policy literature understands in the same sense the way certification and State legislation intertwine, but does not analyze NSMD governance. Cashore (2002, p. 514), one of the proponents of NSMD governance, in a summary of the understanding of this literature, provides that, based on the assumption that the State retains ultimate authority, truly voluntary instruments are totally devoid of state involvement and are seen as the product of negative public-policy decisions in which governments consciously decide to rely on these measures, a choice largely influenced by the nature of the subsystem and State capacity.

Moving beyond State legislation, the last development provided by Pattberg, mentioned and explained above, that reflects the research problem identified is one of the reasons of the broad economic rationale of eco-labelling schemes that are attributed to a product after an environmental certification and that started to be operative during the 1990s. In the UNCED, environmental degradation was understood as an externality and the Rio Declaration resulting from the negotiations exhorted, in its principle 16, national authorities to promote internalization of environmental costs and to adopt in some way the polluter-payer principle that deals with the internalization of costs from environmental degradation. The internalization of costs of pollution, so that polluters pay these costs, allows producers and consumers, two sources of pollution, to have respectively greater incentive to submit the manufactured product to the process that can end with the attribution of a label to it. Lately, the consumer is stimulated to buy the labeled product and concomitantly contributes to save the environment, for example, through the reduction of forest degradation. In the mid-1990s, the literature understood that the realization of internalization and of the polluter-payer principle, however, had been and would continue to be slow as the likelihood of achieving consensus in favor of their strict implementation, expressed in the form of a binding international agreement,

was remote when levels of technology and development varied so greatly throughout the world (APPLETON, 1997, p. 13). Such an agreement would also require means to offset the competitive advantage that arises from the failure to internalize prices and that could be provided to foreign firms (APPLETON, 1997, p. 13).

In the absence of an agreement, companies did not face restraints to practice eco-dumping. Eco-dumping consists on the practice of selling goods whose price is lower, because they are manufactured under less stringent environmental standards, in countries where higher standards prevail (APPLETON, 1997, p. 13). In face of this scenario, life-cycle labeling schemes, like internalization, provide producers with an incentive to develop environmentally less damaging products (APPLETON, 1997, p. 13). Instead of achieving this goal by forcing manufacturers and customers to absorb the cost of externalities through taxes and other penalties, thereby providing an incentive to reduce externalities (the stick), labeling schemes use the market mechanism to reward producers and consumers of environmentally less harmful products (the carrot) (APPLETON, 1997, p. 13-14). The number of life-cycle labeling schemes grew at that time partially due to the unlikelihood of the implementation of internalization and of the polluter-payer principle at the international level. The implementation of these principles would mean less need for labeling schemes, because if implemented, these principles would have a more profound influence on the reduction of externalities than labeling schemes (APPLETON, 1997, p. 14). Eco-labels thus provide to environmentally conscious manufacturers a marketing advantage designed to offset the price advantage that domestic and foreign competitors engaged in what can be viewed as eco-dumping may enjoy (APPLETON, 1997, p. 14).

A condition for the success of labeling schemes is behavioral changes in the supply-side and the demand-side. Trust in the label is a prerequisite for a successful eco-labeling that fosters environmental protection. The various actions of the civil society explained below contributed to these changes through the incentive of consumption of eco-labeled products and through the creation of a publicity cause around eco-labeling schemes that can lead to an increased demand of the respective products. The diffusion of eco-labeling schemes can allow a broad understanding of their advantages and foster a struggle to attain a high level of environmental protection. The costs that are incurred in operating an eco-labeling scheme are usually paid by manufacturers and are passed along to consumers as hidden costs as the higher prices that consumers voluntarily choose to pay for labeled products (APPLETON, 1997, p.

19). Eco-labeling can help to level the playing field between manufacturers compelled to meet different environmental standards, may reduce the comparative advantage that some firms may enjoy by not having to meet certain processes and production methods⁷ (PPM)-related environmental requirements and may give certain manufacturers an incentive to maintain an edge in environmental technology, thus promoting its advance (APPLETON, 1997, p. 14).

The commercial practice reveals itself as a non-coercive means to encourage companies to comply with higher environmental standards that prevail in other countries. The eco-labels that are placed on the products provide a market-oriented financial stimulus for companies to create products that provoke reduced environmental damage. A deeper analysis of the trade scenario reveals that an awareness of competitive products that are less environmentally damaging can stimulate manufacturers to improve their products and consumers to purchase these products, regardless of whether the competitive products are domestic or foreign (APPLETON, 1997, p. 18). In this context, environmentalists see eco-labeling as a method to promote environmental improvements in products and manufacturing processes that can be domestic and foreign. The practice of certification and the output of attribution of an environmental label to a product address environmental degradation and deforestation at their sources and stimulate changes at the source. They provide an incentive for producers to develop, manufacture and market environmentally less damaging products (APPLETON, 1997, p. 15). In this economic and environmental scenario of the 1990s, it was understood in the literature that eco-labeling schemes seemed in line with the general trend of integrating principles of environmental economics into the international legal framework, that they depend for their effectiveness on the market mechanism and that they can produce results generally consistent with those achieved by internalization and the polluter-pays principle (APPLETON, 1997, p. 15).

Beyond the economic rationale of eco-labeling schemes, in a panoramic perspective, with the incapacity of failed and developed States to stop forest deforestation, the absence of world forest convention, a weak international regime, the governance was progressively privatized with post-sovereign instruments as they

⁷ PPMs are commonly classified in two main categories: product-related PPMs and non-product-related PPMs. The first ones are founded on the physical features of a product and supposedly guarantee its best use. Non-product-related PPMs regard the production process and not the product in itself and its inherent features. On the forest sector, the first category of PPMs is the mostly applied as the products obtained from logging conducted in a legal manner as wood logs, paper and pulp do not have features derived from PPM.

reshape authority, norms and behaviors (DLAMINI; MONTOUROY, 2017, p. 7-8). The regime's weakness can be identified in the absence of a global system of collective action of a principal multilateral agreement, of an institutional framework that controls forestry issues and of shared long-term financial commitments.

Resuming the action of the civil society, its next move is found on the criticism to the principle on plantations that allowed FSC to certify plantations. Some NGOs, including Greenpeace and Friends of the Earth, argued that the FSC would lose credibility by certifying plantations, which are not ecologically representative, cannot support the same level of biodiversity as natural forests, cannot provide the same returns of non-timber forest products and do not provide the cultural and recreational services of natural forests (HUMPHREYS, 2006, p. 118). During 2003, some NGOs, including the WRM, Friends of the Earth and Nederlandse Organisatie voor Internationale Bijstand (NOVIB) urged the FSC to suspend certification of large-scale plantations pending a policy review (HUMPHREYS, 2006, p. 118). In 2004, FSC reviewed its plantations policy, but maintained the certification of plantations.

Besides criticism to the FSC procedures, NGOs were inserted together with the creators of the FSC on efforts to attain the success of the scheme. NGO-sponsored forest and trade networks, in which the proponents of FSC were engaged, allowed a form of demand manipulation towards the increase of the demand from environmentally discerning consumers (HUMPHREYS, 2006, p. 123). The initial network was the 1995 Group created in 1991 by the WWF-UK after the alarming ITTO report, which stated that sustainable management reached less than 1 per cent of worldwide tropical forests. The 1995 Group, later renamed to WWF's Global Forest & Trade Network, aims to stimulate companies to use only wood from sustainably managed forests.

NGOs acted on many occasions together with FSC, but against FSC competitors that sought to undermine it. Their creation and operation is analyzed in further details on the subtopic below. The literature identified that PEFC, for example, was criticized by NGOs due to its alleged less rigorous criteria than the FSC ones. The PEFC did not prohibit or limit future conversions of forest to plantations and it did not prohibit genetically modified (GM) trees (HUMPHREYS, 2006, p. 127). Moreover, the national PEFC scheme in Finland, the Finnish Forest Certification Scheme, has been criticized by WWF for allowing the logging of old growth forests in the Kainuu region and for threatening the habitat of the Siberian jay bird in the Virat region (HUMPHREYS, 2006, p. 127).

The literature also identified the action of NGOs followed by other stakeholders to make the differences between FSC and its competitors visible to the public in the wider governance field. NGOs, retailers, government procurement agencies and international organizations like the World Bank, began to benchmark the standards of these schemes against one another (OVERDEVEST; ZEITLIN, 2014, p. 33). NGOs supporting the FSC took the lead in generating comparative studies in which operational details of different emerging schemes were exposed to public debate (OVERDEVEST; ZEITLIN, 2014, p. 33). In each major location where competitors emerged, NGOs produced detailed comparisons, showing how FSC and competitors differed in terms of substantive and procedural standards, emphasizing how the weaker rival schemes lacked the FSC's balanced governance, annual and independent audits, stakeholder consultations, regular revisions and performance-based principles and assessment criteria (OVERDEVEST; ZEITLIN, 2014, p. 33). NGOs did not intend their reports to guide internal changes in the standards, but hoped instead that external audiences would reject the FSC's competitors (OVERDEVEST; ZEITLIN, 2014, p. 33).

The consequences of these reports were also analyzed in the literature. By strategically targeting public and private supply chains' reliance on "demonstrably questionable" forest management or certification systems, NGOs not only rendered the differences between FSC and its competitors transparent, but also highlighted to downstream consumers their deep dependence on the trustworthiness of upstream suppliers (OVERDEVEST; ZEITLIN, 2014, p. 33). This exposed the interdependence and uncertainty in the system (OVERDEVEST; ZEITLIN, 2014, p. 33). End-users' reputations depended on how seriously suppliers took their standards (OVERDEVEST; ZEITLIN, 2014, p. 33-34).

The keeping of NGO support to FSC during the periods of criticism to its competitors analyzed below was not unconditional. This claim is supported by many facts identified by the literature. Friends of the Earth and Greenpeace initially declined to play a formal role in the FSC after the founding assembly's decision to grant voting rights to those with an economic stake in the timber industry (HUMPHREYS, 2006, p. 129). NGO criticism of the FSC is also focused on implementation as can be seen in a study carried out by the Indonesian Forest Peoples Programme that recommended in 2003 that the FSC suspend certification in Indonesia after finding that the Indonesian State lacks effective measures for securing customary rights to land and forest (HUMPHREYS, 2006, p. 129).

A comprehensive criticism to FSC was found on the report *Trading in Credibility* prepared by Rainforest Foundation. It identified obstacles to the implementation of FSC principles 2 and 3 on workers' rights and employment conditions and indigenous peoples' rights. It also found that many timber companies were directly implicated in human rights abuses and that the FSC permitted logging in primary rainforest (HUMPHREYS, 2006, p. 130). Because there were direct economic relations between certifiers and forest managers, there was a vested corporate interest in granting certification to applicants that were in breach of FSC principles (HUMPHREYS, 2006, p. 130). FSC responded to the criticisms claiming the following: certifiers are paid irrespective of whether they approve certification, hence they have no direct financial interest in certifying forests; that the FSC has never and will never certify (or maintain certification of) any company, community or private forest owner involved in human rights abuses and that to protect the livelihoods of indigenous and local peoples, the FSC allows the possibility of logging in high conservation value forests subject to extreme precautions with the biological value of such forests protected under FSC principle 9 (HUMPHREYS, 2006, p. 130).

The analysis of the action of the civil society in forest certification allows the identification of general trends of conduct of NGOs that are also systematized in the literature. Civil society organizations replicates and expands the kind of regulation often performed by governments and extend it to a transnational level (MEIDINGER, 2002, p. 250). Governments face difficulties to regulate at the global level due to the existence of a variety of factors that can undermine negotiations when the consent of each State to be bound is necessary and many issues of dispute among States are present. In doing this, civil society organizations create their own systems to operate in parallel with governmental ones and often take a primary role in defining problems, conceptualizing solutions and shaping public culture, but also go on to establish implementation structures for their programs (MEIDINGER, 2002, p. 250). This devised *modus operandi* of NGOs is applicable to the particular promising venue of transnational certification programs, which provide greater opportunities due to a focus on a small variety of issues and the reduced veto possibilities.

Patterns of behavior can also be extracted from the conduct of the civil society towards multinational corporations. The participation of civil society is important to counterbalance the influence of economic interest groups, whose environmental externalities are often insufficiently addressed by State intervention or consumer

behavior (DUPUY; VIÑUALES, 2015, p. 32). Environmental NGOs, active at both national and international levels, have devoted substantial efforts to raise public awareness regarding environmental degradation and to channel public pressure (DUPUY; VIÑUALES, 2015, p. 32). Indeed, the main functions performed by these NGOs can be classified into three main categories: the formulation of interests of civil society, assistance in implementation and channeling public pressure (DUPUY; VIÑUALES, 2015, p. 32). That said, the relations between civil society and private sector, or between the private sector and environmental protection, are far more complex (DUPUY; VIÑUALES, 2015, p. 32). In fact, environmental protection can hardly be achieved without the cooperation or even the initiative of the private sector, as has been recognized previously, particularly at the 2002 Johannesburg Summit (DUPUY; VIÑUALES, 2015, p. 32). The subchapter below aims to analyze the reaction of multinational industrial corporations to initiatives that sought higher environmental and forest protection and that were partially supported by the civil society.

2.2.1.2. The action of multinational industrial corporations

Before the analysis of the behavior of multinational corporations towards forest certification, the way companies managed forests must be explained. In the forest sector, corporations became owners of forests that were previously public and became exploited by them in search of profit. Moreover, deregulation imposed by host countries of these corporations allowed them to stay outside of public oversight. The combination of these two processes has fuelled deforestation, which is a symptom of a broader pattern of commons enclosure, both of land and, through patents, of biological resources (HUMPHREYS, 2006, p. 218). In face of these actions of corporations, local communities reacted through the search of recovery of control over deforested areas.

The beginning of the insertion of multinational corporations in forest certification dates back to the FSC founding assembly of 1994 in which, in the economic chamber, delegates of forest owners and the retail sector held 25 per cent of votes. The housing in this chamber only of organizations or individuals that derived their livelihood from forestry as consultants, certifiers, retailers and book publishers gave an additional boost to the creation of a substitute certification program backed by wood producers (AULD, 2014, p. 84).

In the following tripartite structure, the economic chamber saw its holding of voting rights increase to 33 per cent. This new arrangement increased the share of votes

of economic stakeholders from one quarter to one third in a pragmatic shift to attract greater business support (HUMPHREYS, 2006, p. 118).

This behavior of the business sector is a reaction to the demand from consumers and retailers of certified timber. Through the engagement with the FSC, despite the attainment by businesses of a larger share of voting rights at the FSC, it was clear that the FSC would make only marginal and occasional concessions to business (HUMPHREYS, 2006, p. 124). Excessive flexibility to business demands would erode the currency of the FSC, namely its high standards, and alienate environmental and social groups (HUMPHREYS, 2006, p. 124).

The structure of FSC decision-making processes was seen as a limitation to business interests. The limiting of business influence as well as the grouping together in the economic chamber of forest owners who must implement forest certification rules with businesses further down the supply chain are key reasons why FSC competitor programs emerged (BERNSTEIN; CASHORE, 2004, p. 40). Many non-industrial private forest owners and industrial forest companies felt that their interests and concerns were not accommodated in the FSC model (BERNSTEIN; CASHORE, 2004, p. 40). As a result, most forest owners refused to participate in the FSC consensus process in regional standard-setting working groups in North America, and those who did were often at the losing end of key decisions on standards development (BERNSTEIN; CASHORE, 2004, p. 40).

Against this background, companies sought to weaken FSC through the establishment of rival certification schemes that matched its program. The literature reveals that other voluntary, non-state certification schemes⁸ that were better known locally and that had more support from industry groups were founded during the 1990s to better accommodate local forestry practices (WIBOWO; GIESSEN, 2018, p. 28). These smaller certifiers present different features from the greater ones backed by companies that were protagonists of the certification wars that started in the 1990s.

At that time, forest certification became a field in which rule-making was coveted by companies, as happened in other regulatory spaces that were captured by

⁸ Besides the great certification schemes to be analyzed in this dissertation, other schemes that were created were the Lembaga Ekolabel Indonesia (LEI) in Indonesia, the Pan African Forest Certification scheme (PAFC), the Malaysian Timber Certification Council (MTCC), the Brazilian Program of Forest Certification (CERFLOR) and the Chilean System of Certification of Sustainable Forest Management (CERTFOR). Considering these smaller certifiers, the last three ones became endorsed by PEFC and PAFC-Gabon joined the PEFC before its future endorsement. In tight synthesis, the endorsement provided by PEFC consists on a guarantee that a national certification system complies with PEFC international requirements. The concept of endorsement will be further clarified on the next chapter.

business. The conflict between the FSC and the competitor schemes is the central axis on which the certification wars have been fought (HUMPHREYS, 2006, p. 124). In 1994, simultaneous to the FSC founding assembly, businesses articulated themselves in North America to move ahead the project to establish two competitor certification structures, the sustainable forest management system of the Canadian Standards Association (CSA) and the US Sustainable Forestry Initiative (SFI). In this point, it is worth mentioning that, as identified by Gunningham and Rees (1997, p. 391), the development of a sustainable forestry management system through the CSA was motivated by the threat of a European consumer boycott of Canadian forestry products. The following moves of businesses in forest certification in North America were mainly taken inside these two competitor schemes.

A closer look of the literature provides another view in the sense that the variety of producer-backed certification programs reveals the absence of a FSC unified global competitor. On several occasions producers sought to scale up their initiatives or build new efforts via international standard-setting bodies as the attempts to apply ISO 14001⁹ standards directly to forestry (AULD, 2014, p. 88). Industry, particularly in export-oriented countries, liked the ISO option because it gave companies discretion to set their own targets and had acceptance from the WTO (AULD, 2014, p. 88). This acceptance will be further analyzed on the following chapter about the regulation of conformity assessment. Lobbying for a forestry-specific ISO standard then began and, starting in 1995, Canadian officials proposed using their CSA-sponsored program as a starting point and, in June 1996, a meeting of the ISO Technical Committee 207 voted to form a forestry working group to determine the feasibility of applying the generic ISO 14001 to forestry (AULD, 2014, p. 88). Despite the initial support of WWF International to apply ISO 14000 series of standards, it soon changed its position as it was deeply concerned that certain sections of the international timber industry would try to use ISO's reference to develop a "quasi-eco label" as an alternative to independent certification (AULD, 2014, p. 88). Lately, the idea did not go ahead, but ISO was seen as a key early venue for companies that operated internationally. Canadian companies, for instance, rapidly searched for a possible certification function derived from ISO

⁹ The same literature clarifies that the ISO 14000 series had initially been advocated by the World Business Council for Sustainable Development (WBCSD) soon after the UNCED, an encouragement that stimulated the ISO to create the Technical Committee 207 on Environmental Management. A comprehensive and breathtaking analysis on the rise and evolution of forest certification can be found in Auld, 2014, p. 70-111.

14000 series and moved to guarantee that its CSA program complemented ISO requisites.

Moving to the understanding of the main actors of the certification wars, an overview of the initial CSA composition reveals that, despite initiated by industry, it included environmental and indigenous representatives on the responsible technical sub-committee (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 16). Inside CSA, the majority of certifications were performed according to ISO 14000 standards and to the CSA Sustainable Forest Management System (SFM) standard. The verification of conformity with standard ISO 14001 is due to CSA leading role in the creation of ISO 14000 series. The criteria and indicators applied were achieved after negotiations between the Canadian Council of Forest Ministers and the Montreal Process for non-European temperate and boreal forests¹⁰. Under the CSA scheme, each company draws up a sustainable forest management plan, but there are no common performance targets or minimum thresholds across the scheme, hence standards vary substantially from case to case (HUMPHREYS, 2006, p. 125). The scheme also does not prohibit the use of GM trees, has weak procedures for involving indigenous peoples and places no restrictions on the establishment of new plantations (HUMPHREYS, 2006, p. 125).

Besides the technical features of CSA forest certification, its reception must be understood. This is so to allow a clearer identification of the extent to which CSA was successful in counterbalancing FSC. The scheme was never accepted by Canada's environmental and indigenous peoples' network and even struggled to gain acceptance from industry, which found its provisions onerous in comparison to ISO or SFI (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 16).

Based on the Canadian actors previously identified and on their moves, the literature provides a summary of certification wars fought on Canadian territory. Initially, quite distinct provincial companies first banded together by proactively setting up a certification alternative to the FSC under the auspices of the CSA (CASHORE; AULD; BERNSTEIN; MCDERMOTT, 2007, p. 165). The industry association, then known as the Canadian Pulp and Paper Association, paired up with the Canadian Council of Forest Ministers to create a certification program, known as the CSA standards, which gave firms ultimate authority as to what "on the ground"

¹⁰ The Montreal Process was a long-lasting series of negotiations that encompassed forestry representatives from twelve countries over the common understanding of SFM in different regions of the world. The countries that participated in the Montreal process were Argentina, Australia, Canada, Chile, China, Japan, Mexico, New Zealand, South Korea, Russia, United States and Uruguay.

environmental standards it would be audited against (CASHORE; AULD; BERNSTEIN; MCDERMOTT, 2007, p. 165). Environmental groups ultimately rejected such an approach as inadequate and called on industry to join them in developing and supporting the FSC (CASHORE; AULD; BERNSTEIN; MCDERMOTT, 2007, p. 165). The dynamics that followed included an FSC regional strategy to focus on developing more prescriptive standards at the subnational level, and then to explain to firms that they could either join the FSC and gain a green market advantage or they would be subject to international boycotts denouncing their practices as unsustainable (CASHORE; AULD; BERNSTEIN; MCDERMOTT, 2007, p. 165).

The SFI was created in 1995 by the American Forest & Paper Association (AF&PA) and, similarly to the FSC, is governed by a board of 18 members, in which two thirds of them represent non-business interests. It adopts its own standards, rules for label use, procedures and guidance and makes available a list of indicators to be addressed by companies. The bias towards corporations in its initial years was identified by the literature in its certification parameters. Each company can adapt the aforementioned indicators when producing its own standards (HUMPHREYS, 2006, p. 125). The scheme, moreover, does not address social issues, such as the rights of forest workers and indigenous peoples and permits the use of GM trees, herbicides and pesticides (HUMPHREYS, 2006, p. 125).

Further limitations in SFI forest certification were also identified in the literature. While AF&PA members were committed to implementing SFI, the standard endorsed existing practices and a third-party audit was not mandatory (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 15). Instead, a company's CEO submitted a signed statement that the firm was in compliance (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 15). Moreover, unlike FSC's complex membership arrangements for democratic input from diverse constituencies, SFI was carefully controlled by AF&PA, enduring heavy criticism for its lack of consultation with external stakeholders (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 15).

In the following years of the certification wars, reacting to internal and external pressures, SFI adopted a significant array of measures to promote changes to its program. In an effort to garner broader support, SFI increasingly distanced itself from AF&PA, establishing itself as a separate organization in 2000 as the Sustainable Forestry Board (SFB) (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 15). In a further move towards achieving broader support, AF&PA restructured the SFB in

2002, reducing its own control from 40 to 33 percent, with the remaining two-thirds split between representatives of forest conservation groups and the broader forestry community (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 15-16). In response to criticisms about lax enforcement, AF&PA encouraged members to undergo third party verification (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 16). Following periodic reviews of its standard, SFI adopted a number of revisions to better incorporate biodiversity objectives, although those remained weaker than FSC's, as do its provision on worker and indigenous peoples' rights (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 16).

In Europe, an opposition to the FSC by private forest owners came during the 1990s. They acted through the lobbying of the European Commission to create a European Union (EU) framework for forest certification capable of also accommodating the interests of small forest owners. The Commission, nonetheless, did not legislate on the issue. The creation of the Pan-European Forest Certification (PEFC) scheme in 1999 was principally a forest owner reaction against the FSC, although it was also a reaction to the European Commission's reluctance to intervene in favor of European forest owners (HUMPHREYS, 2006, p. 127).

A deeper look at the literature reveals that PEFC initially attracted small forestry. The European certifier originally appealed to non-industrial landowner associations who found the FSC's model of regular annual audits economically impractical, because many small-scale forest operations do not harvest every year and because they worried that the FSC was dominated by environmental advocacy organizations which knew little about silviculture (OVERDEVEST; ZEITLIN, 2014, p. 32-33). Small landowners' associations in countries dominated by fragmented, small-scale ownership, but generally quite strong environmental regulations, like Finland, Sweden and Germany, created the PEFC in order to combat pressure to join the FSC (OVERDEVEST; ZEITLIN, 2014, p. 33). Later however, the PEFC enrolled industrial landowner associations whose members harvest thousands of acres on an annual basis in countries such as the US and Canada, as well as industrial forestry associations in the global south, such as Argentina and Brazil (OVERDEVEST; ZEITLIN, 2014, p. 33).

The PEFC constitutes a mutual recognition structure in which domestic certification schemes are able to recognize each other as operating according to equivalent standards. The parameters adopted by PEFC are the criteria and indicators adopted by the Ministerial Conference on the Protection of Forests in Europe (MCPFE)

and the MCPFE's Pan-European Operational Level Guidelines as the framework for national-level standard-setting. Annex 3 of the guidelines provides that they cannot be used in isolation to determine sustainability in management and that their purpose is to identify complementary actions at the operational level which will further contribute to sustainability of forest management.

Lately in 2003, PEFC relaunched itself as a worldwide structure, the Programme for the Endorsement of Forest Certification schemes, keeping the previous acronym. Its key feature that allowed its distinction from FSC was the permission of endorsement of national schemes that were exclusively systems-based, despite the existence of a performance-based element in many national schemes. Despite the constitution of PEFC as a mutual recognition system, an issue to be analyzed in more details in the following chapter, it had initially and during the years of certification wars no available tools to guarantee that diverse national schemes provided similar standards.

The main aforementioned FSC competitors together with then newly created certifiers as the CERFLOR created a broad organization with the aim of setting an international presence similar to the FSC one. It was at the beginning sponsored by the International Forest Industry Roundtable (IFIR) of the WBCSD. Initial efforts by the IFIR to establish mutual recognition among all systems were later transformed by the WBCSD's CEO Action team into a proposed legitimacy threshold model (BERNSTEIN; CASHORE, 2004, p. 39). The content of mutual recognition proposals and the reaction of forest certifiers to it will be analyzed in more depth on chapter 4.

The description of FSC competitors and the analysis of their moves was systematized in the literature. The table below illustrates the features of FSC and its competitors in the middle of the first decade of this century.

Comparing FSC and FSC competitors as of 2006

	FSC	PEFC	SFI	CSA
Origin	Environmental groups, socially concerned retailers	Landowner (and some industry)	Industry	Industry
Types of standards: performance or systems-based	Performance emphasis	Combination	Combination	Combination
Territorial focus	International	Europe origin, now international	National/bi-national	National

Third party verification of individual ownerships	Required	Required	Optional	Required
Tracking provisions?	Yes	Yes	Yes	Yes

Source: Cashore, Auld, Bernstein and McDermott, 2007, p. 167.

The literature also mapped the way that certification schemes other than FSC reacted to NGO reports with the benchmarking of FSC standards against the competitors' standards. These reports generated unexpected reactions from weaker industry schemes, which became concerned that such reported contrasts would delegitimize them with external audiences (OVERDEVEST; ZEITLIN, 2014, p. 33). Weaker certification schemes were forced to justify their standards publicly, at the same time as retailers, manufacturers and government procurement agencies came under pressure to live up to their commitment to high standards (OVERDEVEST; ZEITLIN, 2014, p. 34). This benchmarking process, moreover, also generated learning by the FSC about the relative strength of competing systems, such as the PEFC's greater accessibility and affordability for smaller landowners (OVERDEVEST; ZEITLIN, 2014, p. 33).

The radical changes of the industry schemes are also a result of benchmarking in search of equivalence. The FSC and its competitors started off far apart in both substantive and procedural standards (OVERDEVEST; ZEITLIN, 2014, p. 33). Thus the industry-sponsored schemes initially lacked multi-stakeholder governance structures, independent audits, stakeholder consultations, regular revisions and performance-based principles and assessment criteria and have all moved closer to the FSC on these dimensions (OVERDEVEST; ZEITLIN, 2014, p. 34).

Some time after the remarkable moments of the certification wars, it is not possible, currently, to determine precisely the forest certifiers to which the corporations on the sector mostly resorted. Among the four main forest certifiers that took part in the conflicts around the establishment of content of the benchmarks for forest certification, FSC and PEFC remain operative at the international level. Narratives of multinational corporations that act on the paper and pulp sectors and work with certified timber that will be explained below demonstrate the presence of FSC certification. These narratives were gathered by the International Social and Environmental Accreditation and Labelling Alliance (ISEAL), a non-profit institution created based on the efforts of a

variety of certification undertakings, with the goals of stimulating cooperation of their agendas and fostering their interests towards States and other actors.

Domtar, a large producer of different types of paper and pulp, applies the FSC certification that is understood by the company as the best scheme to satisfy its trade needs for a continuous supply of timber and at the same time to guarantee SFM. In order to do business in a responsible manner, Domtar agreed with the performance of FSC third party forest certification that distinguishes Domtar's products in a highly competitive marketplace and allows the compliance with global consumer demand for paper originated from sustainable sources. Domtar understands third party certification as the best tool to guarantee the responsible management of its forests, manufacturing and distribution activities due to its meaning attributed to sustainable forestry that encompasses the replacement of trees and the conservation of environmental, economic and social roles of the forests.

Aiming to reveal the benefits of FSC certification to forest owners, Domtar entered into partnerships with small landowners in the United States and Canada to stimulate the increase of the provision of certified fibre. In concrete terms, Domtar's efforts led to the creation of the Four States Timberland Owners Association¹¹ and its corresponding growth, an increase in the amount of sustainably managed forests in North America, which represents an investment in the continuity of forests, and the company was awarded in 2014 the first-ever annual FSC Leadership Award for the paper sector. The award recognizes the company's original search of FSC certification in North America and emphasized its engagement to preserve forests for future generations.

At the end of the supply chain, Domtar makes available to consumers products that are expected by them to be sourced in sustainable conditions. Domtar's Earth Choice line was created and comprises a variety of office papers whose origin are North American forests, where, according to Domtar, there is protection of endangered species, workers are paid with fair salaries and indigenous people's rights are guaranteed. This claim is supported and reinforced by the compliance of the totality of EarthChoice's types of office papers with FSC standards and by their submission to

¹¹ The association works together with private landowners in Arkansas, Texas, Louisiana and Oklahoma and has as its mission the gathering of landowners with similar thoughts with the objective to guarantee and preserve FSC forest management certification. The mission can be achieved through the fulfillment of all FSC certification requisites and the keeping of certification by means of adequate forest management activities on the covered lands that are in conformity with standards established by the FSC.

Rainforest Alliance certification. Its success reveals the existence of a demand for papers from sustainable sources. Besides the final consumers, the Earth Choice Line aids companies to comply with their sustainable supply goals through the guarantee that the paper is produced according to high social and environmental standards.

Other information reveals Domtar's concern with forest protection. The company dialogues with a variety of forest stakeholders and directs its investments to forest management practices that seek long term sustainability. Lastly, it is worth noting that despite Domtar's clear preference for FSC in circumstances in which it is available, other certification schemes are also accepted to assess the fibre to be used.

Tetra Pak is a company that produces its distinguished beverage cartons from a liquid paperboard, a flexible paper product covered with plastic. Recently, the company established as its final goal the attribution of FSC certification to the totality of its packaging. The reasons behind this goal are the company's will to enhance its ability to position its beverage packaging; the understanding of FSC as a tool to surpass competitors in the plastic and metal packaging market, as an international standard that could guide local standards and as a path of external communication and the maintenance of a key feature of its cartons, their primary composition of wood fibre, a renewable raw material. The choice of FSC as the performer of third party certification allows, thus, the guarantee that its raw materials originate from sustainable and legal activities; the fostering of the reliability of its marketing strategy; a high reduction of risks; a connection with the company's consumers and the strengthening of the brand.

The reach of consumers by Tetra Pak through third party certification was due to diverse reasons. The FSC label on a product allows the increase of consumer awareness of its certification and objectives insofar as consumers often do not believe in the information directly provided by companies. FSC, which aims to increase forest protection, reinforces Tetra Pak's motto "protect what's good" through the enhancement of the good aspects of the company's packaging. The package that covers the food and its nutrients is tied to a source to that is being protected by Tetra Pak through its best efforts.

Kimberly-Clark, a leading global buyer of pulp, has throughout its existence continuously improved its sustainable performance. Initially, the company entered into a partnership with FSC as a component of a supply chain initiative aiming to bolster responsible forest management. FSC was understood as an element that could contribute to distinguish the company's products by means of the presence of labels on

them. After a huge investment of time and of financial and human capital, it was noticed that FSC could not only distinguish their products, but also differentiate them as having sustainable features. The FSC labels on the products also allowed the creation of a path to tell their production story throughout the supply chain to consumers.

Throughout time, determinant factors on the path taken by the company toward FSC were the joint action with Greenpeace and the improvements on its supply chain. The cooperation with Greenpeace allowed the identification of environmental solutions and paved paths to link the company's brands in line with environmental stewardship. Inside the supply chain, the company found venues to move its efforts ahead that could lead to a better environmental performance and speed the pace of change and established in 2007 a commitment to use all of its fiber from certified suppliers that had preferentially the FSC certificate. Recent numbers reveal the outputs obtained by the company. Since 2015, the majority of the company's tissue products in North America received the FSC certificate, which reveals a fundamental change and a huge investment during a quite brief period of time. In concrete terms, Kimberly-Clark rose the use of FSC-certified fiber by 111 percent in the period between 2009 and 2013.

The increasing awareness by consumers of sustainability features that are considered in purchasing choices was also a source of pressure on Kimberly-Clark similarly to the one exerted by the civil society. The company, for instance, was asked by them about its tissue goods, which revealed that a sustainability communications plan was necessary. After the tests to insert FSC on the market and to put the certifier's logo on packages, the results revealed clearly that, despite the absence of a precise knowledge by consumers of FSC, the research institute verified that the implementation of the FSC logo could contribute to the differentiation of Kimberly-Clark's products and to an increase of the consumer's purchase intent. Consequently, the addition of the FSC logo to tissue products' packaging was recommended.

The changes implemented by the company on its supply chain were noticed by the company's customers and its competitors, which led to an increase of quality in the sector. The differentiation aspect of the company's products corresponded to the requirements expected by company's consumers and other businesses in the same area went in the same direction. In a broad perspective, Kimberly-Clark's measures influenced the whole tissue area, which led to an important new demand and a shift to the supply of FSC-certified fiber. An additional change identified was the move of big

retailers towards Kimberly-Clark in search of assistance on the paths to be taken that could lead to social and environmental responsibility.

The commitment to FSC allowed then a leading position to Kimberly-Clark. The company currently works with value chain partners to concretize this commitment and the addition of the FSC label on its key products allows the reaffirmation of its lasting leadership in the industry sector in which it operates. Looking ahead, Kimberly-Clark aims to keep innovating and sees the rising number of Millennials who reveal affinity with environmental matters and are in line with FSC's objectives. This future scenario can generate opportunities for Kimberly-Clark to move ahead the engagement of its consumers on sustainability issues and responsible forest management.

2.2.2. Regulator-intermediary-target (RIT) framework

Regulation in practice reveals that rule-makers and rule-takers frequently request different forms of external support and resources to fulfill their goals. To this end, they may engage with (or be engaged by) diverse intermediaries, which subsequently act on their behalf or in conjunction with them to achieve their regulatory goals (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 3). The presence of intermediaries is necessary in circumstances in which regulators do not have direct contact with their targets, channels of influence or other resources essential to regulate them and/or all necessary means for collection of information. The work of regulators together with a third party allows the overcoming of these deficiencies.

In the theoretical framework that provides the theoretical background of this dissertation, NSMD governance, intermediaries occupy a central position in a three (or more)-party relationship that can be depicted as follows: $R \leftrightarrow I \leftrightarrow T$. An intermediary consists on any actor that acts directly or indirectly in conjunction with a regulator to affect the behavior of a target and is a go-between, whose presence necessarily makes some aspects of regulation indirect, as the intermediary stands between the regulator and its target (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 9). Examples of regulatory intermediaries are private sector actors as certification enterprises and credit rating agencies and third sector groups as non-governmental organizations (NGOs). Examples of activities performed by regulatory intermediaries are the provision of expertise and feedback, making implementation easier, monitoring the conduct of targets and building assurance and reliability. A key feature of intermediation to be analyzed is its changing nature that can be formal and an actor's singular function, but that can also be informal

and one of many roles an actor plays (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 3). In the forest sector, it is noteworthy that the two main international certifiers, FSC and PEFC, besides performing certification, create standards that underpin their certification activities. The first one, additionally, develops an interim national forest standard in countries in which a national forest stewardship standard was absent and later was created the standard to be complied with to the achievement of forest management and chain of custody certification.

In order to analyze the application of the RIT framework to forest certification, it becomes necessary to identify who performs the roles of regulator, intermediary and target. The regulators are the creators of standards and technical regulations as, respectively, ISO and the legislative branch of a country with a vast area of forests. The intermediaries are the certifiers that took part on the certification wars and were previously analyzed. The targets are consumers, corporations and the civil society. Consumers can recognize the added value of a product that underwent a certification. A corporation can raise profits originated from standards and technical regulations. The civil society reveals interest on the environmental and social content of standards and technical regulations, aiming to enable them to guarantee a high level of environmental protection.

A series of factors can be identified from the study of intermediaries at the center of the regulatory analysis. It is emphasized that regulation often operates indirectly via chains of intermediation and ways in which regulators and targets can expand their capacities by selecting, engaging and even creating intermediaries are emphasized (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 5). In the same sense of the non-State market-driven governance, the limits of the role of the State and of the domain of legal rules are surpassed, diverse private and hybrid public-private actors are identified, each type of actor is linked to its role performed in the regulatory process and complex regulatory systems can be studied. Questions of special importance include the relative effectiveness of different two-party and three-party regulatory arrangements, the influence of intermediaries on regulatory interactions, who wins and who loses from intermediation and, of course, the power relations among regulatory actors, including possibilities for capture (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 5).

The focus on regulatory intermediaries allows the enlargement of regulatory analysis in at least three ways. First, regulation is not just about regulatory agencies or even the State, but also involves private actors as rule-makers, intermediaries and

targets, often in complex private governance regimes (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 6). Second, not only domestic regulation is addressed, but also international and transnational regulation, as well as a wide variety of actors that act as intermediaries (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 6). Third, not only formal regulatory arrangements are considered, but also informal arrangements that substitute for or supplement formal regulation (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 6).

The center of analysis will fall on intermediaries whose functions are performed after a regulation has been adopted. The main intermediaries that correspond to certification performers are auditors, inspectors, stewards and endorsers.

The influence of intermediaries on regulatory interactions can be verified through the intermediation feedback. Auld and Renckens (2017, p. 96), based on the RIT framework, elucidate the phenomenon that consists on the possibility of feedbacks between intermediation and rule-making wherein the regulator considers and potentially undertakes some form of rule-reformulation on the basis of information received from actors performing intermediation functions. The certifier's feedback can contribute in an important way to regulation's evolution with time. In the forest sector, this feedback can lead to a changed regulation that foresees a higher level of forest certification and issues that were previously neglected. The performance of the intermediation feedback comprises two processes external to the R-I-T framework. First, delegation of responsibilities to auditors results in them translating regulations into practical forms (AULD; RENCKENS, 2017, p. 96). Auditors – and the individual assessors they employ – have access to information that is not directly available to the regulator and external evaluative audiences (AULD; RENCKENS, 2017, p. 96). Second, delegation of rules to auditors creates the possibility of competitive dynamics, as competition emerges among auditors, especially if the market of potential targets is large enough and demand for certification is increasing (AULD; RENCKENS, 2017, p. 96). On forestry issues, forest certifiers competed on the certification wars previously explained, as the demand for legal timber increased due to the growing consumer awareness of the environmental harm caused by deforestation and illegal logging.

The practice of regulatory stewardship can fend off the threat of regulatory capture or mitigate its effects when it is already occurring. It consists on an assignment of mutual-monitoring and support responsibilities among intermediaries themselves with the goal of safeguarding against capture and enhancing performance (PEGRAM, 2017, p. 226). Stewards may use both hierarchical and managerial techniques to monitor

and support other intermediaries (PEGRAM, 2017, p. 232). When performing their function, stewards, in order to monitor and support other intermediaries, can employ mechanisms that can be managerial or instrumental according to the scenario encountered by them. Managerial non-coercive measures are taken to provide support to targets who demonstrate the will to comply, but do not have resources to it. On the contrary, instrumental measures address compliance issues in contexts of high distributive and value conflicts, especially when the target resists the implementation of the regulation. Mutual monitoring performed by stewards encompasses other intermediaries' mandates, independence, capacity, routines and operating procedures as they develop over time and can be extended to monitoring the creation of intermediaries yet to be established, whether the creator is a target, beneficiary, regulator or any other actor with a view to facilitate subsequent activities (PEGRAM, 2017, p. 232). Mutual support, on its turn, might involve promoting voluntary adherence through training, technical assistance, fostering dialogue and capacity-building (PEGRAM, 2017, p. 232). Support and assistance can also be provided in a situation in which an intermediary has an adequate structure and performs huge efforts to fulfill its function, but does not achieve an optimal performance.

Abbott, Levi-Faur and Snidal (2017, p. 17) in the same sense detail the content of the feedback of intermediaries, who can provide first-hand information on areas of ambiguity, problems of maladaptation to local conditions, difficulties of implementation and burdensome demands, barriers to effective monitoring, more efficient alternatives and similar matters, indicating how rules might be revised, rescinded or expanded. Moreover, when they are close to targets, they can pass on the targets' views, suggesting how rules might be amended to lessen regulatory burdens while achieving regulatory goals; they can also help build communities of compliance among targets and other stakeholders in society (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 17).

Intermediation feedback, however, can be understood as an opportunity for intermediaries to shape regulatory rules to advance their interests and even to appropriate regulatory authority. This distortion of the intermediation feedback in which intermediaries act according to their self-interest in the creation of regulatory rules is a form of regulatory capture. This phenomenon reflects the capture theory that points to the capture of the regulator by the regulated, in which the regulation, if it was direct, despite having its central foundation on public interest, is subsumed to the interests of the regulated industries (SALOMÃO FILHO, 2015, p. 209). Inside the RIT framework,

instead of the classical capture of the regulator by the target, new perspectives on capture are present, which happens through the domination of one actor by another, restricting the autonomy of the captured actor in performing its regulatory function (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 24).

A deeper analysis of the RIT framework reveals that the possibility of regulatory capture derives not only from the previously mentioned action of intermediaries, but also of the other key players. The classical capture happens when the target dominates the regulator, which loses its independence from the target and is therefore diverted from pursuing regulation in the public interest or when the target proactively persuades a regulator to adopt rules that benefit it (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 25). In the forestry area, companies ambioned rule-making on certification. As previously explained, in 1995, when lobbying for a forest ISO standard, Canadian agents proposed the use of their CSA-sponsored program as a starting point. Another possibility of regulatory capture is present in the situation in which a regulator creates a rule that aims to achieve public policy objectives, but that also opens the possibility of the insertion of the target to penetrate the regulatory realm and bias the regulator to eliminate the regulation's effects or even to alter it to suit the target's interests. In face of the classical capture, intermediaries can provide checks on capture by monitoring the behavior of targets and regulators, acting as whistle-blowers and holding regulators and targets accountable, e.g., through public disclosure of misconduct (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 25).

Intermediaries are also susceptible to capture in multiple circumstances identified in the literature. Targets often lobby for the inclusion of intermediaries with greater monitoring capacity to perform tasks such as interpreting the rules and assisting in implementation or monitoring, but, in a circumstance in which the regulator can adopt more nuanced rules, there can be reduction of costs for itself and for complying firms (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 26). In other circumstances, targets can understand intermediaries as a means to capture. Intermediation provides two channels to capture, as the target may use the intermediary to capture the regulator, influencing the intermediary to recommend changes in the rules that favor the target and the target may capture the intermediary itself, influencing it to interpret or implement existing rules in ways that favor the target (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 26). On the forest sector, activists, for example, reveal a preference to influence procedures applied to the oversight of rule adherence. The literature provides further

reflections of this desire to control that are apparent in the various ranking systems that activists have developed in the forest sector (AULD, 2020, p. 42).

In its turn, the trust on an intermediary turns the capture costs lower when the target seeks only to capture the regulator or intermediary in a regulatory structure. When intermediaries work together with a regulator to induce a change of behavior of target, for example, they may be susceptible to capture, as regulators frequently do not have the adequate operational resources to defend the intermediary from interference. In an effort to better elucidate this phenomenon, Abbott, Levi-Faur and Snidal (2017, p. 14) explain that the resources and authority the regulator provides may give it some degree of control over intermediaries and may protect them from capture by targets – but the need for intermediary independence may constrain such control. On forestry issues, as will be analyzed infra, ISO is a key regulator that creates standards as ISO 14001 that can be voluntarily followed by companies on the pulp and paper sectors, but clarifies that does not perform certification and highlights that it is performed by external certification bodies, which can turn certifiers independent and at the same time more vulnerable to capture. There are then the possibilities of both capture of the regulator by means of the intermediary (T captures R through I) and capture only of the intermediary, where that is sufficient (T captures I).

Targets, moreover, often create friendly relationships with intermediaries with whom they share similar interests, aiming to open venues for capture. These intermediaries may be sufficiently responsive to regulatory intent to avoid stricter regulation or targets may bring in new intermediaries with the aim of influencing regulators directly as when industry groups hire supposedly independent, expert organizations to advise regulators (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 27). This last phenomenon can happen through the payment by targets for the intermediaries' services, which turns the intermediary overly responsive to the target's needs, mainly when targets can engage in intermediary shopping and threaten to choose alternative intermediaries (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 27).

This complex scenario reveals a variety of strategies and paths that a target can employ to capture an intermediary. Multiple intermediaries can facilitate capture, especially if they have conflicting interests as when alternative certification bodies compete for business, a common feature of private standards schemes and the target needs to capture only one of them through the decision of which certification body to employ (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 27). On forestry issues, reasons

for the choice of PEFC by businesses as the certifier to counterbalance at the international level FSC can be found on different elements. CSA certification contained very onerous provisions that kept companies away from it. SFI, despite biased towards corporation, was unable to set clear and stable rules and, during the years of certification wars, adopted measures to incorporate social and environmental objectives, which raised awareness of companies. PEFC had significant features that satisfied the business sector as it allowed countries to create their own standards as opposed to the ten FSC rigid principles and provided flexibility on the endorsement of national certification schemes due to, on its beginning, the absence of tools to guarantee that diverse national schemes provided similar standards as previously analyzed supra. More broadly, if different intermediaries adopt divergent interpretations of a rule, targets may claim that compliance is too costly, or even impossible (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 27).

Another form of regulatory capture reveals that regulators can be captured by intermediaries. This possibility of capture derives from the unusual influence of intermediaries in the framework, who, with their expertise, informational advantages and experience, are in a better position than the regulator in terms of understanding needed modifications (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 28). Intermediaries may act through the press for regulations that would increase demand for their services and products (and oppose those that would lessen it), while couching their advice in terms of their ability to strengthen interpretation, monitoring and enforcement, through the press for rules that play to their organizational strengths and reduce their costs and through the informal interpretation of rules to make them more amenable (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 28).

The last form of capture consists on the one of an intermediary by the regulator. The negative effects from the regulator domination of the intermediary were identified in the literature. First, a captured intermediary may not perform or be allowed to perform the desired regulatory functions, may be unable to follow professional norms or act in a neutral fashion and may even resist participation in the regulatory system to avoid regulator interference or takeover (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 29). Second, without assurance or trust building, the target may resist the regulation and avoid complying with it, perceiving the system to be biased against it (ABBOTT; LEVI-FAUR; SNIDAL, 2017, p. 29). On the abstract level, the consumer or the civil society may not trust a label that is not an output of a third-party certification and avoid

buying a product whose packaging contains it. The capture by the regulator can then weaken the main objective of the use of an intermediary. The table below provides a summary of the four forms of capture previously analyzed.

Form of capture	Regulatory failure
Classical regulatory capture T captures R	Impedes regulation in public interest, but intermediary may inhibit capture
Capture of intermediary T captures I	Intermediary influences regulator, or modifies own practices, to favor target
Intermediary captures regulator I captures R	Intermediary promotes its services, influences form of regulation
Regulator captures intermediary R captures I	Avoids regulatory slippage, but limits intermediary assurance function

Source: Abbott, Levi-Faur and Snidal, 2017, p. 25

2.3. Partial conclusions

The thickening of the concept of sustainable development was followed by the inclusion on it of the dimension of good governance by current legal theory. Good governance consists on the action of the public sector and the private sector according to the rule of law with accountability, transparency, consideration of the needs of stakeholders and the active public participation on core issues. Moreover, on the abstract level, SDGs orient the future development of the planet from 2015 to the first half of the century. Having an interdependent nature, these goals are framed with the objective of being implemented as a whole due to their interrelationships demonstrated throughout the chapter. On the other side, a frailty of these goals that was found consists on the limited instruments to offer a solution to possible clashes among them. On the forest sector, the sustainable management of forests established on SDG 15 was recognized as a key concern by UNFF and was matured through six GFGs. Benefits derived from the implementation of GFGs are, for instance, better keeping of forest carbon stocks, enhancement of livelihoods for local communities, enhancement of effective conservation measures of an area and new possibilities of conservation and of

production, storage, packaging and transport of forest products in a manner that protects the environment.

Against the background of the concept of good governance, NSMD governance demonstrated that the conduct of international relations' actors and of States in a peripheral position can result in win-win outcomes or conflicting scenarios. The first output can be found when the State behaves in a manner consistent with NSMD, for instance, by means of providing advice to the creation of written rules and through economic conducts that can change market-driven dynamics as procurement policies and, at the same time, multinational corporations and the civil society realize that their behaviors must consist on dialogue, cooperation and coordination of interests aiming to achieve successful outcomes. Conflicts, however, appear when multinational corporations compete for market access and market portions and the civil society acts as a core stakeholder that backs companies with a high environmental and social performance and at the same time criticizes in a public manner companies with a corresponding low performance. On forest issues, conflicts happened in the form of certification wars.

The examination of certification wars since the starting point of the FSC creation and after by the reaction of competing forest certifiers against the background of the actions of civil society and multinational corporations permitted a clear identification of the wars' outcomes. Instead of additional fragmentation, competition among forest certification schemes provoked a mutual adjustment after the learning from experience and the augmented accountability of schemes to the adversary ones and to the broad public. NGOs performed the key function of stimulating economic actors to identify each one's rationality to adopt higher environmental standards in order to attenuate forest campaigns until the end of them. With the passage of time, as revealed by the ISEAL narratives, these standards have acquired the nature of a commonplace good business practice.

The main actions of the certifiers, the protagonists of the certification wars, their interactions with competitive standards, their respective competitors and their stakeholders can be more clearly understood in light of the RIT framework. This framework makes possible the enlargement of the regulatory analysis through the presence of intermediaries in conditions in which regulators are not in direct contact with their targets and there are neither resources to regulate them neither necessary means to gather information. Regulation as analyzed in this dissertation involves private

actors as regulators, intermediaries and targets, operates in the international and transnational levels in which a variety of actors act as intermediaries and encompasses informal arrangements that replace or complement formal arrangements. As previously explained in greater details, the creators of standards and technical regulations occupy the place of regulators, certifiers, the place of intermediaries and consumers, corporations and the civil society, the place of targets.

In terms of interactions between the agents inside the framework, intermediaries can provide feedback to regulators. During rule-making, regulators can consider and potentially implement rule-reformulation based on the information received from intermediaries. In the forest sector, this feedback can foster a change in the regulation that can then provide a higher level of forest protection through certification and consider issues that were previously disregarded. The performance of the intermediation feedback embraces the attribution of competences to auditors who transform them into practical forms and can contribute to the creation of a competitive environment, in which auditors compete mainly when there are a high number of potential targets and a soaring demand for certification. On forestry issues, competition between certifiers during certification wars was explained above and took place in a scenario in which there was an increasing demand for legal timber because of the increasing consumer awareness of the environmental harm provoked by deforestation and illegal logging. At the same time, when practiced to achieve the public interest, regulatory stewardship can put away the possibility of regulatory capture that consists, inside the framework, on the domination of one actor by another, which limits the autonomy of the captured actor to undertake its regulatory function. This happens through the attribution of mutual-monitoring and support competences among intermediaries that aim to protect against capture and improve performance. Moreover, intermediaries, as a result of the mutual-monitoring, can verify the occurrence of captures and act as whistleblowers and turn regulators and targets accountable.

The analysis of the certification wars revealed, however, the existence of a multiplicity of forms of regulatory capture. Starting with the classical regulatory capture in which the target captures the regulator, it is worth recalling that rule-making on certification has been coveted mainly by companies that seek rules favorable to them. In the forestry area, in 1995, Canadian agents were lobbying for a forest ISO standard to be directly applicable to forests and proposed the application of their CSA-sponsored program as a bottom line.

A deeper analysis of the actions inside the framework reveals, moreover, that the intermediation feedback can go in the direction of regulatory capture. Intermediaries can take advantage of regulatory rules to put ahead their interests, to appropriate regulatory authority and to create regulatory rules according to their self-interest. As explained above, PEFC performs the roles of regulator and intermediary inside the framework and its producer-backed nature can lead PEFC certifiers to pressure regulators in the sense of tailoring standards that do not provide SFM requirements adequate enough to a specific forest ecosystem.

Intermediaries can also be captured in a variety of conditions recognized in the literature. Firstly, targets frequently pressure for the insertion of intermediaries to interpret rules and assist in implementation or monitoring in an effort to raise regulatory efficiency through the expansion of expertise concomitantly with the reduction of costs. Secondly, targets can take ownership of the intermediaries to capture the regulator by means of influencing the intermediary to propose alterations in the rules that are favorable to the target. Thirdly, the target can capture the intermediary itself through the influence on him to interpret or implement rules in a favorable manner to the target. On the forest sector, activists attempt to influence procedures applicable to monitoring and oversight of rule implementation through benchmarking of standards and ranking systems on the sector.

These possibilities of capture explained on the paragraph above can occur more easily in two specific circumstances. These are when the target reveals a supposed trust on the intermediary and when the intermediary cooperates with the regulator in an effort to spur a change of behavior of the target, but the regulator lacks operational resources to defend the intermediary from interference, leaving him in a vulnerable position. On forestry issues, ISO creates standards applicable to forest protection as ISO 14001 that can be voluntarily followed by companies, but makes it clear that does not perform certification and emphasizes that it is performed by outer certification bodies, which reveals the independence of certifiers and their vulnerability to capture.

On the certification wars, the capture of an intermediary happened in a scenario of multiple intermediaries. The multiple forest certifiers that emerged to counterbalance FSC had conflicting interests and competed for market share and for a safe position in the emerging market of certification. In these circumstances, the target needs to capture only one intermediary after the choice of the certification body to be employed. On the forest sector, motives to the choice of PEFC by corporations as the certifier to

counterweigh FSC can be found on weaknesses of CSA and SFI, its main competitors and on the alignment of PEFC characteristics with businesses' interests. CSA certification provided very burdensome benchmarks that kept companies distant from it. SFI, despite producer-backed, could not establish clear and predictable rules and, in the period of certification wars, created measures that comprised social and environmental objectives which raised objections to it by corporations. PEFC features that pleased the business sector were the possibility of countries to adopt their own standards in a path contrary to that followed by FSC, which created ten strict principles, and the attribution of flexibility on the endorsement of national certification schemes in reason of the lack of tools that can guarantee that a variety of national schemes can provide similar standards. In broader terms, when intermediaries follow dissonant interpretations of a rule, targets can argue that compliance is excessively costly or impossible.

3. Regulation of forest certification: from standards to a multifaceted structure

This chapter aims to provide an analysis of the legal instruments that regulate forest certification, which are inserted on a complex legal background. The chapter begins with an explanation of international standards and private standards that can underpin a certification and whose compliance can be assessed during a certification. Their regulation on the multilateral trade system is then provided. Moving ahead, the chapter examines the multiple forms of conformity assessment procedures and their regulation also on the multilateral trade system through the lens of protectionism. After this initial systematization, the few broad environmental certifications identified, named as sustainable fragments, are analyzed from an environmental background.

The understanding of this comprehensive legal framework allows the move towards the analysis of the regulation of forests either in legal tools, either in certification guides and how they intertwine. International forest regulation at the multilateral level that can be binding and voluntary is, however, limited and sparse as the ways partially analyzed on the previous chapter and is complementarily analyzed on this chapter. On the regional level, a promising regulatory initiative identified to be analyzed is the Forest Law Enforcement Governance and Trade (FLEGT) Action Plan that aims to combat illegal logging through the cooperation between developed and developing countries and the dialogue with forest certification standards. Despite the potential of this sole recent regional initiative, the limitations and gaps existing on the regulation of the forest subsystem reveal the need of forest certification, which will have its regulation analyzed with a focus on FSC and PEFC, the two main international forest certifiers. After this analysis, FSC certification and PEFC certification will be analyzed in order to identify strengths and weaknesses of each of them and to demonstrate the eventual need of accommodation of each of them in face of its competitor.

3.1. Understanding private standards

This topic provides an overview of private standards. An analysis of private standards is necessary not only because they often provide the basic foundations of a conformity assessment, but also due to the frequent evaluation during a conformity assessment of the compliance of a standard. The clarification of the concept of private standards is followed by the identification of their stages of intervention and by a description of conformity assessment standards, one of the objects of this research. The topic then moves to the identification of standards that provide rules for the conformity

assessment procedures and to the description of their application during these procedures.

Private standards constitute documents prepared by non-governmental entities for continuous use which are not mandatory in nature, meet written requirements relative to products, processes and management and aim to ensure food safety, product quality and to protect ecosystems that include human, animal and plant life and health. The content of a standard comprises guidelines, features, requisites or specifications in order to assure that products, processes, services and materials perform the functions attributed to them. Examples of non-governmental entities are companies, associations and entities of the third sector. The actions of all these entities can be understood as a multi-stakeholder approach in which the sustainability dimension is integrated.

The word private has a specific meaning when qualifying the aforementioned standards. Confidence in the virtues of market-generated outcomes, as well as distrust for government's ability to regulate, has led to widespread advocacy for forms of private regulation in lieu of public regulation (CAFAGGI; RENDA, 2012, p. 16). Against this background, the choice of private regulation, according to a transaction costs perspective, emerges in a policy decision where evidence suggests that this is the most cost-effective way of achieving a given policy outcome or whenever this option maximizes net benefits (CAFAGGI; RENDA, 2012, p. 22). The main goals to be achieved by private standards are to complement public regulation or to replace it. On the first situation, the complementary function of private standards makes easier implementation and conformity with valid public regulation as happens in the New Approach¹² to standardization applicable in the EU since directive 98/34. On the second situation, the pre-empting and avoidance of public regulation happens through private standards that are enforced in environmental regimes in the shadow of regulation.

¹² A more comprehensive analysis reveals that the New Approach replaced former methods that sought to harmonize all product standards inside the region by means of individual specific directives. Schepel (2005, p. 63) clarifies that what is now called the traditional approach to technical harmonization consisted of a programmed patchwork of directives establishing product-by-product and hazard-by-hazard regulation. The drawbacks of this approach identified by Schepel (2005, p. 63) are the difficulty to find consensus on sensitive issues of health and safety regulation and the requirement of a high level technical detail and sophistication, which led the political bottlenecks existing in the layered structure of Community decision-making to be kicked down to the level of expert bureaucrats and technical disagreements to be kicked up to the level of political decision-making. As a result of this legislative weakness, there was the enactment of directives extremely complicated and detailed on issues of doubtful importance. As a long time was taken for these directives to be adopted, they were frequently outdated well before they truly came into force. One example is Directive 87/402/EEC on roll-over protection structures mounted in front of the driver's seat on narrow-track wheeled agricultural and forestry tractors with a total of 43 pages.

The voluntary character of private standards ascribed by the doctrine has been questioned in commercial practice. Two practices of international trade confirm this statement. The first is present in situations where, when the exporter does not meet a standard, he is unable to sell his products in a foreign market and excluded from that market, which would make the standard *de facto* mandatory.¹³ The second is the attribution of the binding nature to private standards under domestic law as a result of its incorporation into domestic law as occurred in the EU, which will be explained below, or its recognition by international bodies such as the *Codex Alimentarius*. Private standards often prevail over multilateral trade system regulatory treaties that address trade-related regulatory measures and introduce the characteristics of new protectionism.

The stages of intervention of private standards can be identified as specification, performance and target. The first one targets the prevention through the control of the processes that lead to dangerous situations. Positive aspects of these standards are the low cost to their enforcement and the immediate calculation of compliance costs. These standards, however, are intrusive as the regulator participates in the design of the manufacturing process and the technique can inhibit innovation. The second one¹⁴ requires a certain level of delivery at the operation stage, but does not determine how that delivery is to be reached. Despite the low level of technological restriction of these standards, there are difficulties to relate a range of levels of performance to regulatory goals. The third one aims to solve the problems present on the linkage between standards and regulatory goals through the prescription of those goals or results directly. Such standards allow firms to decide the manners and the allocation of costs to achieve

¹³ An example of this situation is case *Fra.bo* (C-171/11) decided by the European Court of Justice (ECJ). In this case, the German certification body *Deutsch Vereinigung des Gas und Wasserfaches eV* (DVGW) decided to withdraw or refuse to extend the certificate for copper fittings produced and distributed by the company *Fra.bo*. The certification is done according to standard W 534, the voluntary basis for certification of products which come into contact with drinking water. The reasons for its decision are as follows: the fitting had not passed the ozone test, the test report by another laboratory was not recognized and *Fra.bo* had not submitted a positive test report on the 3000-hour test, a new form of certification that was introduced. *Fra.bo* questioned DVGW's decision, arguing, *inter alia*, that it became virtually impossible for it to distribute its products in Germany without that certificate. The Court decided that DVGW, by virtue of its authority to certify the products, in reality holds the power to regulate the entry into the German market of the copper fittings at issue, that DVGW's activities can erect new barriers to the free movement of goods in the EU and that article 28 EC (current article 34 TFEU) must be interpreted as applicable to standardization and certification activities, where national law has the effect of restricting the trade of products that are not certified by that body.

¹⁴ Standards that provide performance thresholds for specific features can be referred as relatively high (e.g. demanding in their requirements) or low (e.g. less demanding in their requirements). Standards can also provide a low level of performance at the beginning and require later the improvement of performance levels.

the targets established. These standards can also be combined with central information of the regulatory agency and with specification standards when firms do not have conditions to determine the best means to attain the targets.

The understanding of the concept of private standards, of its main features and of its main forms of application allows their contextualization in the current economic scenario. The expectation is that standardization will accelerate the process of legal convergence, with the dual benefit of reducing transaction costs and improving the quality of legal institutions in countries whose institutions are less well developed (MILHAUPT; PISTOR, 2010, p. 216). Instead of improving domestic legal institutions, however, standardization may undermine the development of effective legal systems (MILHAUPT; PISTOR, 2010, p. 216). The reason for this can be found in two essential features of legal systems, the interdependence of legal rules, concepts and doctrines and the fact that legal systems (as distinct from legal rules) include the people who interpret, apply and enforce the rules (MILHAUPT; PISTOR, 2010, p. 216). In order for a rule to be standardized then, there must be multinational agreement about the basic concepts behind the rule and those concepts must be shared by diverse populations of legal professionals (MILHAUPT; PISTOR, 2010, p. 216).

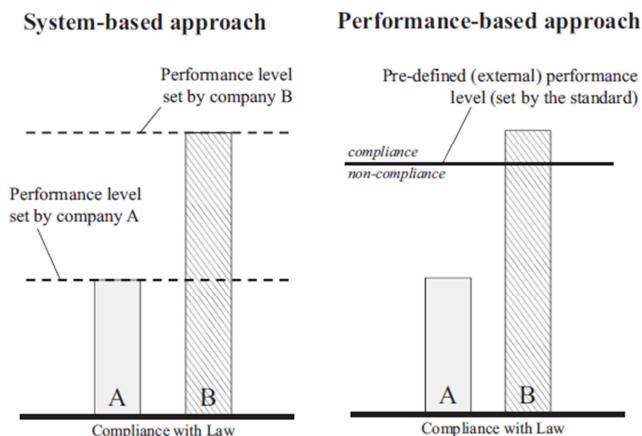
Aiming to perform this challenging task, the ones that take part in legal harmonization efforts frequently resort to one of the following strategies: the lowest-common-denominator approach or a synthetic approach. In the lowest-common-denominator approach, the minimum standard in force among the relevant countries is applied to all of them (MILHAUPT; PISTOR, 2010, p. 216). The synthetic approach is to create a new legal concept that is based on comparative research but is not actually in force anywhere, and to incorporate it into a standardized rule (MILHAUPT; PISTOR, 2010, p. 216). Both approaches represent a compromise between the desire to reduce transaction costs and improve governance institutions across a range of countries and the reality of distinct preexisting legal systems in those countries (MILHAUPT; PISTOR, 2010, p. 216).

The subtype of private standard to be analyzed in this dissertation is the environmental management system (EMS) standard. EMS standards can be partially approximated to NSMD governance, the theoretical framework of this dissertation, and have specific features that deserve to be highlighted. The content of these standards, such as the ISO 14001, comprises the process by which a product is made as logging performed together with reforestation and elements of management systems as the

analysis of a company's environmental impacts that can be the deforestation of the native forest, a program of environmental goals as reforestation and the maintenance of natural forest and a compromise to continuous improvement that can comprise previous forest issues mentioned in this paragraph. EMS standards can be one standard of reference of forest certification.

Their extension is not limited to a product or service, but reaches the ties of a supply chain. Two key characteristics of management system standards are that they do not define threshold performance requirements, being up to each user the determination of the level of performance that it considers appropriate for its circumstances and their basis on the concept of continual improvement (UNFSS, 2013, p. 16). A firm thus has in principle complete discretion in establishing to what extent they want to alleviate environmental or social problems. Other two key aspects are the heavy reliance on documentation of processes and the objective of ensuring consistency of outputs (CASTKA; CORBETT, 2013, p. 170). In clearer terms the second aspect refers to the act of following processes in practice, which will have good outputs, irrespective of what good outputs means in any specific instance (CASTKA; CORBETT, 2013, p. 170). It does not mean that the firm will never produce a faulty output, but that such errors will be relatively infrequent and that the firm has procedures to such incidents and prevent recurrences (CASTKA; CORBETT, 2013, p. 170). In principle, these standards contrast with performance standards that require a level of performance to be achieved by a product or organization in order to delineate conformity.

As could be partially understood on the explanation about stages of intervention of private standards, it is also possible to classify them as performance standards. These standards specify a level of performance that a product or organization has to achieve in order to claim conformity (UNFSS, 2013, p. 16-17). Standards that specify performance thresholds for particular characteristics are sometimes referred to as being relatively high (i.e. demanding in their requirements) or low (i.e. less demanding in their requirements) (UNFSS, 2013, p. 17). Standards that cover multiple environmental and social aspects may be considered to be high in relation to some of those aspects and low in relation to others (UNFSS, 2013, p. 17). The figure below illustrates the difference between a performance-based standard and a system-based standard.



Source: Secco and Masiero, 2018, p. 47.

On the forest sector, the distinction between performance standards and management system standards is also seen in the literature. A performance-based standard foresees accurate concrete management conducts that must be performed in order to attain conformity. An example is a performance standard that determines a 50 m buffer zone on each side of the forest stream in which harvest is prohibited. This substantive approach is more prescriptive than a policy that is exclusively procedural (MCDERMOTT; CASHORE; KANOWSKI, 2009, p. 220). In the previous chapter, the benchmarking between FSC and its competitor certifiers done by the civil society revealed that FSC has higher environmental and social standards than its competitors. Performance standards can, thus, constitute standards of reference of forest certification. Management system standards can be exemplified in a standard that requires a management planning to provide riparian conservation. In the latter case, the policy does not prescribe the specific on-the-ground action but leaves room for variations in management prescriptions via the management planning process (MCDERMOTT; CASHORE; KANOWSKI, 2009, p. 220).

The distinction between management-systems standards and performance-prescriptive standards (like the FSC and various other NSMD governance initiatives), despite real, is blurry and should not be exaggerated. It is real in the sense that NSMD standards directly incorporate requirements for environmental or social performance, whereas management system standards leave it to each organization to determine what its environmental or social performance requirements are. It, however, should not be exaggerated, because management systems standards do not give organizations free discretion to determine those requirements. Rather, some of those requirements are

dictated by the legal requirements that apply to the organization. Some legal requirements arise involuntarily (e.g. through legislation, decrees, regulations, orders, permits and approvals). Others arise voluntarily but are legally binding once undertaken (e.g. through contracts, industry association membership rules and impact-benefit agreements). These legal requirements are what ISO 14001 calls compliance obligations. Beyond legal requirements, organizations also have non-legal requirements that are not wholly within their discretion, which ISO 14001 calls interested party requirements. The organization has some discretion in identifying these requirements and determining which ones it will assume, but this discretion is not unlimited.

Beyond this, even if ISO 14001 does not prescribe specific standards for environmental performance, it requires organizations to set environmental objectives and targets. Those objectives and targets become EMS requirements, along with the organization's compliance obligations as legal requirements, the interested party requirements it determines to be applicable, and any environmental commitments it subscribes to voluntarily which would include any environmental NSMD schemes it joins. Failure to fulfill these EMS requirements would be a non-conformity that must be addressed by corrective action and continual improvement. If the non-conformity is severe or persistent enough, it could mean that the organization's EMS does not conform to ISO 14001 and/or preclude certification. In this way, even EMS standards incorporate environmental performance requirements, albeit indirectly. There can be then an overlap between ISO 14001 and NSMD governance: if an organization implements ISO 14001 and an environmentally related NSMD certification scheme, the requirements of the NSMD scheme become EMS requirements and non-conformity to the NSMD scheme becomes an ISO 14001 non-conformity.

In the international level, the most significant achievement towards an EMS approach has been the creation of ISO 14000 series of standards and its respective implementation. During the creation of the series, ISO sought to replicate the successful results arising from ISO 9000 quality standards in environmental management. The ISO approach is structured to permit the development of internationally recognized labeling standards, which is apparent from ISO efforts to develop terms, definitions and standards to be used in specific environmental labeling programs (APPLETON, 1997, p. 4). The main goal of ISO 14000 is the avoidance of multiplication of domestic and regional environmental technical regulations that could constitute trade barriers.

Benefits for firms derived from the adoption of ISO 14000 were mapped on the literature. They constitute the potential pre-emption of industry-unfriendly regulations, the delivery by firms of comparable levels of environmental performance at lower costs if they were to write such standards themselves and the provision of opportunities for firms to participate in the writing of efficient and easy-to-implement environmental standards (PRAKASH, 1999, p. 328). The second aforementioned benefit is the main element of proximity with NSMD governance in the sense that profit-seeking companies are required to perform expensive reforms that they by themselves would not implement. In a complementary manner to the NSMD governance explanation provided in the previous chapter and following the same line of thought of the previously authors there quoted, Cashore, Auld, Bernstein and McDermott (2007, p. 161) clarify that a key feature of NSMD governance is that their systems govern the social domain requiring profit-maximizing firms to undertake costly reforms that they otherwise would not pursue. That is, they pursue prescriptive hard law, albeit in the private sphere (CASHORE; AULD; BERNSTEIN; MCDERMOTT, 2007, p. 161).

Among the benefits, a particular attraction of this type of system-based approach is its perceived capacity to move corporate thinking on environment from the sort of compartmentalization, that characterized the earlier generation of pollution control (vertical standards addressing discrete areas of activity), to a horizontal standard (GUNNINGHAM; GRABOSKY, 1998, p. 176). This one cuts across the functions of the organization and integrates environmental considerations with other corporate functions as cost reduction, efficiency and productivity (GUNNINGHAM; GRABOSKY, 1998, p. 176).

The scope of ISO 14000 series is broad and the standards inside it serve a variety of functions. A systematization in the literature reveals that ISO 14000 series comprises standards and guidelines for EMS, environmental auditing, eco-labeling, life-cycle assessment, environmental performance evaluation and environmental dimensions of product standards (PRAKASH, 1999, p. 324). Among the ISO 14000 standards, the environmental management standard ISO 14001 constitutes a systematic and detailed resource to international corporate sustainable development management and international environmental protection. ISO 14001 is understood as the only mandatory compliance standard in contrast to the other non-mandatory guidelines standards (PRAKASH, 1999, p. 327).

In practice, any company can submit an application to register its EMS in ISO. Following the registration, an independent third-party agent will assess a company's system and determine the degree of compliance with ISO 14000. ISO, however, as will be explained below, is not a certification body, which impedes forest products the labeling of a product as ISO certified and the use of ISO 14000 to vindicate the sustainability of products. ISO, moreover, does not provide a mechanism for supply chain certification. A company's management system, nonetheless, can be registered as in conformity with ISO 14000 standards.

EMS standards are closely tied to forest certification, the object of this dissertation, due to its reliance on Sustainable Forest Management (SFM) and to their role as the partial basic foundation of forest certification. SFM is an ever-evolving concept that attempts to incorporate and recognize all values associated with forests and further attempts to give equal weighting to all of these varying and potentially conflicting forest values (MAGUIRE, 2010, p. 56). It has been adopted as the overall goal for global forest management (MAGUIRE, 2010, p. 56). The concept of SFM was clarified for example through a criteria and indicator definitional process¹⁵ that achieved the creation and the delineation of its requirements. The criteria were created to be used by States at the domestic level and each of them must ensure that their forest regulation deal with the criteria. The process gives to States a structure to evaluate their advancements towards SFM. It is understood that, if such an approach was adopted, this would go some way to resolving the confusion over global forest norms, standards and processes (MAGUIRE, 2010, p. 58).

¹⁵ Initially the criteria were created at the follow-up meeting to the Helsinki Process, a meeting of European countries entitled The European Process on Criteria and Indicators for Sustainable Forest Management, which remains operative until today. A criterion is a category of conditions or processes by which sustainable forest management may be assessed, while an indicator is a quantitative or qualitative variable that can be measured or described (MAGUIRE, 2010, p. 56). The six criteria for SFM created in the Helsinki Process are as follows: maintenance and appropriate enhancement of forest resources and their contribution to global carbon cycles; maintenance of forest ecosystems health and vitality; maintenance and encouragement of productive functions of forests (wood and non-wood); maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems; maintenance and appropriate enhancement of protective functions in forest management (notably soil and water) and maintenance of other socio-economic functions and conditions. Additional processes on criteria and indicators (C&I) for SFM which proactively coordinate and support their member countries are the International Tropical Timber Organization's (ITTO) C&I for sustainable management of tropical forests, the Montreal Process on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests, the Amazon Cooperation Treaty Organization (ACTO) Tarapoto/ITTO Process on C&I for the sustainability of Amazon forests, the Association of Southeast Asian Nations (ASEAN) C&I for the sustainable management of tropical forests in Southeast Asia and the Low-Forest-Cover-Countries Process (LFCC).

A clear definition of SFM, however, does not exist, because it is dynamic and inserted on ongoing legitimacy-seeking processes. The persistence at the international level of a concept that is vague and ambiguous allows to States a broad flexibility in the implementation and enforcement of the concept. Recurring themes that surround the concept of SFM include balancing economic and ecological interests associated with forest areas, representation and recognition of all forest interests and values and the promotion and certification of sustainable timber harvesting practices (MAGUIRE, 2010, p. 59). In light of these themes, a definition of SFM recognized in the literature refers to the ways and processes of managing forest resources to meet society's varied needs, today and tomorrow, without compromising the ecological capacity and the renewal potential of the forest resource base (MAGUIRE, 2010, p. 59; WANG, 2004, p. 206). SFM thus reflects the holistic concept of sustainable development adopted in this dissertation and contributes to guarantee that forest activities provide social, environmental and economic benefits as well as to keep and stimulate forest functions to the present and to the future.

SFM is applied during forest certification through the assessment of the way in which a forest is being managed. Certification of forest management is a type of forest certification in which there is an assessment of whether forests are being managed according to a specific set of standards (FAO, 2020, p. 2). Certification of the chain of custody, also known as CoC certification is another type of forest certification. It consists on the verification that certified material is identified or kept separate from non-certified or non-controlled material through the production process, from the forest to the final consumer (FAO, 2020, p. 2).

The considerations above show that the dissemination of ISO EMS standards led to a blur of the public and private international law divide. In terms of subjects, the standards are mainly created by the private sector that replaces traditional public actors as States and international organizations. At the same time ISO standards were granted recognition inside the WTO and therefore can be understood as public standards in international trade law. It is true that the TBT agreement does not attribute to ISO the condition of a competent body to establish international standards, but the treaty, through numerous references to the ISO, implicitly acknowledges this organization as an international standardization body recognized by the WTO. It is possible, thus, to challenge ISO 14000 standards at the WTO in circumstances in which a member considers that they can be a barrier to trade under the rules of the TBT agreement. The

WTO dispute settlement system, however, is not a locus to the questioning of standards on environmental grounds.

Different from EMS standards are transnational sector-specific production standards that have been created together with stakeholders that are out of the business area. They concern not only procedural aspects (like organizational structures and process sequences), but also include detailed substantial production requirements and are particularly common when it comes to the use of natural resources in agriculture, forestry, aquaculture and fisheries (DILING; MARKUS, 2018, p. 187). A noteworthy example to be analyzed below are the FSC stewardship standards that constitute the basis to FSC's certification, monitoring and accreditation.

3.1.1. The regulation of private standards on the multilateral trade system

The WTO regulatory framework, despite its focus on trade liberalization and its self-limitations in relation to the current reality, allows a clearer understanding of the private standards as their features differ from the ones of international standards. The agreement on technical barriers to trade (TBT) and the agreement on sanitary and phytosanitary measures (SPS) will be analyzed below with a focus on rules on standardization.

The TBT has as one of its objectives the harmonization of technical regulations through standardization and establishes a strategy to this end based on a public stand and a private stand. The first one consists on the rule foreseen on article 2 of the treaty according to which members' technical regulations shall not be more trade restrictive than necessary to fulfill a legitimate objective, taking into account the risks non-fulfillment of these objectives would create. A central unfolding of this general rule that is foreseen on the same article is the use of international standards by members to the creation of their technical regulations. The second one is the Code of Good Practice for the Preparation, Adoption and Application of Standards. Central obligations imposed by the code on standards bodies are the guarantee that standards are not prepared, adopted or applied with a view to creating unnecessary obstacles to trade; the use of international standards as a basis for national standards unless this would be ineffective or inappropriate, the performance of a full part by standards bodies in the work of relevant international standardizing bodies and the making of efforts to avoid duplication or overlap of work (SCHEPEL, 2005, p. 180).

The SPS, in the same sense, provides a general structure of creation and application of international standards. Differently from the TBT, the SPS contains a much stricter obligation for members to base their measures on international standards, guidelines or recommendations¹⁶ and is much more scientific¹⁷ than the TBT (SCHEPEL, 2005, p. 181). While the TBT does not specify parameters for the harmonization of technical measures as international standards, guidelines and recommendations of the International Organization for Standardization (ISO) and the International Electrotechnical Committee (IEC), the SPS recognizes the Codex Alimentarius Commission (Codex), the International Office of Epizootics (OIE) and the International Plant Protection Convention (IPPC) as international organizations that develop and review periodically standards, guidelines and recommendations on all aspects of sanitary and phytosanitary measures. Paragraph 3 of annex A of the SPS provides in an exhaustive manner that international standards, guidelines and recommendations are the ones created by the Codex, OIE and IPPC and enumerates the objectives¹⁸ sought by each of the three institutions. Moreover, in order to allow the creation of international standards with the participation of all WTO members, the agreement obliges them to play a full part within the limits of their resources in the relevant international standardization organizations.

In this context, it must be pointed out that article 10.4 of the agreement invites WTO members to encourage and facilitate the active participation of developing country in the respective organizations. The SPS, however, does not clearly link political acceptability with epistemic authority, despite measures in this sense, as the attempts to increase the scientific credibility of Codex through the consultation of expert committees and efforts to separate risk assessment from risk management, that is, scientific decision-making from political decision-making (SCHEPEL, 2005, p. 182).

¹⁶ The stricter nature of the obligation arises from a positive presumption of conformity that encompasses the avoidance of unnecessary obstacles to trade and the necessary character to protect human, animal or plant life.

¹⁷ The scientific nature of SPS derives from the general obligation to found all measures on scientific principles and not to maintain them without sufficient scientific evidence. In this sense, note 2 to the SPS agreement provides that for the purpose of application of sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measures based on relevant international standards, there is a scientific justification if, on the basis of an examination and evaluation of available scientific information in conformity with the relevant provisions of the agreement, a member determines that the relevant international standards are not sufficient to achieve its appropriate level of sanitary or phytosanitary protection.

¹⁸ Codex aims to achieve food safety relating to food additives, veterinary drug and pesticide residues, contaminants, methods of analysis and sampling and codes and guidelines of hygienic practice. OIE aims to attain animal health. IPPC seeks plant health.

Two key institutions inside the WTO regulatory treaties are the SPS Committee and the TBT Committee, in which debates on private standards have been recently raised. In short, the committees manage the operation of both agreements and constitute platforms for the discussion of concerns that can arise during the exchange of information that is required by transparency rules foreseen on the agreements. The committees allow to its members the opportunity to make consultations about any question relative to the functioning of the respective agreement or to the promotion of its objectives. Examples of themes debated on the committees are standards, conformity assessment and good regulatory practices. It is worth noting that the TBT Committee adopts non-binding acts as well as binding acts that provide necessary clarifications relative to transparency obligations and important specific rules on principles to be followed on the creation and application of international standards, guides and recommendations. The committees are successful on the contention of discriminatory standards, but are not able to induce convergence among the regulatory systems of the countries with the existing tools.

The lens of the multilateral trade system allows the grasp of international standards through the parameters of avoidance of protectionism and search of technical and scientific criteria. Non-tariff measures have obtained great prominence in recent years within the multilateral trade system (FERNÁNDEZ PONS; BARONCINI, 2004, p. 129). In fact, the almost complete abolition of tariff measures has concentrated the attention of interested actors on non-tariff measures, be such attention aimed at disciplining technical measures so as to further facilitate trade beyond tariff reduction as well as to find the right balance between conflicting trade and non-trade values; or segmenting markets, i.e. at creating and using regulatory measures with a protectionist intent (FERNÁNDEZ PONS; BARONCINI, 2004, p. 129).

On the issue of protectionism, on one level, the thrust of international legislation as reflected in the General Agreement on Tariffs and Trade/World Trade Organization (GATT/WTO) system is to strive to harmonize technical standards so that discrepancies in standards do not impede the flow of international trade (LOWENFELD, 2008, p. 83). On another level, the rules of international trade should not be used to compromise genuine concerns with safety, health or conservation (LOWENFELD, 2008, p. 83). In similar words, the TBT and the SPS agreements represent a compromise between, on the one hand, the desire to avoid creating unnecessary obstacles to international trade

and, on the other hand, the recognition of members' right to regulate (MATSUSHITA; SCHOENBAUM; MAVROIDIS; HAHN, 2015, p. 434).

On the issue of the search of technical and scientific criteria, as previously explained, the TBT agreement and the SPS agreement follow different paths. The first one makes recurrent references to international standardizing bodies. The second one recognizes the Codex Alimentarius Commission, the International Office of Epizootics and the relevant international and regional organizations operating within the framework of the International Plant Protection Convention as international organizations that develop international standards, guidelines and recommendations and can further the use of harmonized sanitary and phytosanitary measures between members.

It is by no means clear through those lenses, however, how international standards can be regulated by international economic law. The understanding of the development of private standards and their subsequent application must begin with the identification of their creators and their understanding. The creators of private standards can be an international standardization organization or a recognized organization in a specific area as health, environment and food. The last one can be either an individual company as Nature's Choice either a chain with national or international reach as GlobalGAP and the Marine Stewardship Council respectively.

When applied, private standards coexist with technical regulations in the same scope of incidence when they share the same objectives and are founded on the same justifications that constitute the basis of their criteria and indicators. The fact that private standards can exceed requirements established by technical regulations is a striking feature of these standards that, actually, corroborates the view that in certain topics States give up regulating or do so in a generic manner, opening space to private regulation of environmental themes (LIMA, 2016, p. 125).

3.2. The international framework of conformity assessment

Besides the stipulation of the quality and safety of goods, the guarantee of human, animal and plant life and health and the attestation of compliance with environmental criteria by management systems, private standards also provide rules for the conformity assessment procedures of goods. These standards can also be derived from international standards produced by the International Organization for Standardization (ISO) or present a national character. Before deepening the analysis of

these standards and of the types of conformity assessment, the TBT regulation of these procedures must be understood. The results arising from the compliance of the steps of the conformity assessment procedures foreseen in each standard must be accepted by other countries when they understand that such assessments offer guarantee of conformity with their technical regulations or standards. The focus of the assessment is on compliance with pertinent and substantial sustainability content foreseen in a technical regulation or standard. The idea underlying this conduct of the States is the elimination of duplicity of procedures, which allows the reduction of costs and the increase of the speed of the commercial exchange. Members must also make efforts in the sense of guaranteeing equivalence and mutual recognition of the results of conformity assessment procedures. After the understanding of the regulatory husk of conformity assessment procedures, it is possible to move on to the understanding of the effectiveness of their main types.

The most common species of conformity assessment are certification, testing and inspection. Certification consists on the attribution by an impartial body of a written assurance, the certificate, that a product, service or system under analysis complies with specific requirements. Testing, frequently done by a laboratory, is the determination of one or more than one feature of an object or a good and is applicable, for example, on the analysis of blood according to a number of parameters. Finally, inspection gives an account of the regular checking of a good to guarantee compliance of specific criteria and attributes, for instance, safety for fire extinguishers.

The conceptual description provided above is confirmed by the definitions of conformity assessment foreseen in international regulatory instruments. The definition found in paragraph 1 of annex 3 of the TBT agreement is the following: any procedure used, directly or indirectly, to determine that relevant requirements in technical regulations or standards are fulfilled. It can also be found in an explanatory note to TBT annex 1.3 an exemplary list of conformity assessment procedures as the ones previously mentioned and other ones as evaluation, registration and sampling. Similarly, standards provide the elements of the concept of conformity assessment. The standard ISO/IEC 17000 provides general terms and definitions relative to conformity assessment. According to this standard, conformity assessment consists on a systematic process, with pre-established rules, duly monitored and evaluated, that attributes an adequate degree of confidence that a product, process or service or even a person, complies with

the pre-established specified requisites foreseen on technical standards or technical regulations, with the best possible cost-benefit for the society.

The ISO also created standards that provide parameters for specific forms of conformity assessment. Criteria that determine the capability of certifiers to perform certification activities can be found on the following standards: ISO 17021 on certification of management systems, ISO 17065 on requirements for bodies certifying products, processes and services and ISO 17024 on requirements for bodies certifying persons. ISO 17065, for instance, foresees several provisions on the independence and impartiality of certifiers.¹⁹

Standards that are assessed on each conformity assessment procedure can allow the demonstration of the operation of a quality management system and the insurance that the results produced can be trusted but without threshold performance requirements or specify a level of performance to be achieved by a product or organization. The two types of standards described above are respectively identified as management standards (sometimes also called systems-based or process standards) and performance standards. Both types of standards are present on the forest sector to be analyzed in this dissertation. Management standards focus on the means of forest management, in other words, the management systems by which forest owners and managers review their objectives, and, when certified, it is not the forest that is assessed, but the management system such as a forest management plan or monitoring system (HUMPHREYS, 2006, p. 117). Performance-based standards focus on the ends of forest management, that is, the goals and results that forest owners or managers must attain and, when certified, the forest itself is assessed (HUMPHREYS, 2006, p. 117).

These conformity assessment types can be classified in three main categories according to the ISO, namely first-party, second-party and third-party. The first-party conformity assessment is performed by the person or organization that supplies the object as producers, distributors and retailers and constitutes a self-assessment. The second-party is performed by a person or organization interested on the use of the object as an industry association and the customer of the organization. The manufacturer's customer, for instance, can evaluate the product against requirements provided by a regulatory authority and applicable to it. The third-party is performed by a person or organization that is not a user of the product and that is independent of the person or

¹⁹ Articles 4.2 and 5.2 of ISO 17065.

organization that supplies the product and is interested on its use. An impartial certification body, for example, can certify that an organization is in conformity with ISO 9001 and can attribute to it a certificate in this regard. This useful classification of conformity assessment activities is standard in the conformity assessment industry (APPLETON, 2013, p. 87).

This classification was also analyzed in the legal literature. Regarding first-party certification, in certain cases, as happens with CE mark, there is no actual audit and only the word of the declaring party itself is sufficient to establish compliance with the standard for the interested party (WOUTERS, 2020, p. 103). These circumstances turn first-party conformity assessment subject to criticism. This procedure leaves the door open to possible conflicts of interest and is generally only used when a relationship of trust exists, for standards whose non-compliance has only benign consequences or when the protocols for compliance with standard are widely followed by the whole sector and very well known (WOUTERS, 2020, p. 103).

Inside a company, the previously mentioned conflicts of interest become clearer. When the environmental auditor integrates the company, he will face difficulties that are common to all internal auditors and that are greater as the environment still remains quite often a secondary issue of a company. In these conditions, the internal environmental auditor runs the risk of not having the whole independence and all the powers to perform well its mission (LEPAGE-JESSUA, 1992, p. 147 apud MACHADO, 2016, p. 368). In effect, in the hierarchical plan, the environmental auditor must not be subordinated to another director or superior that is out of an environmental directorate or an auditing directorate (LEPAGE-JESSUA, 1992, p. 147 apud MACHADO, 2016, p. 368).

The analysis of second-party conformity assessment falls on the different interests on the use of a product. A sectorial association can have the interest in promoting the idea that the sector is responsible and respects the environment and may eventually decline the granting of a certificate (WOUTERS, 2020, p. 103). This is what happens, for instance, in the international association of the chemical industry, which created the program Responsible Care and that issues environmental certificates for its member companies. In other cases, the conflict is opposite and the certifying party has an interest in being more severe than necessary with the requesting party regarding compliance with a given standard (WOUTERS, 2020, p. 103). This would be the case,

for example, of a consumer association militating for high food safety standards and of an NGO promoting the highest environmental standards (WOUTERS, 2020, p. 103).

In what regards third-party conformity assessment, the features of a third-party certifier are analyzed. These third-parties perform the control of a certificate and its issuance and are frequently commercial enterprises specialized in audit and certification (WOUTERS, 2020, p. 103). An example of such enterprise is Bureau Veritas, a leader in the certification area. These enterprises perform audits according to the procedure foreseen on a standard, which often implies, for instance surprise visits of facilities at certain intervals and tests of products (WOUTERS, 2020, p. 103-104).

Conformity assessment procedures can also be compulsory or voluntary. The compulsory ones are based on a technical regulation and are performed by an accredited private entity that follows a normative prescription issued by the State through a regulatory authority. This entity performs the function of a gatekeeper that can either be reputational intermediaries²⁰ that provide verification and certification services, either be parties that disrupt misconduct by withholding their cooperation or consent from wrongdoers (DE BRUYNE, 2019, p. 78). The certificate constitutes condition *sine qua non* for an entity to use or market its products. The voluntary ones are based on a technical standard and are performed after the decision of the supplier. Voluntary conformity assessment takes place mainly when it is sought by a requesting entity that aims to raise third party's confidence in the certified product. Many activities of this form of conformity assessment seek to achieve sustainability goals as forest management certification and the Fairtrade program. The compliance of standards on voluntary conformity assessment, however, raises doubts to the protection of the aforementioned values as this form of conformity assessment, through the aggregation of value to a product, represents an important competitive advantage in relation to competitors and can serve the private interests of companies.

Labels that constitute one of the outputs of a conformity assessment are also classified according to criteria similar to the ones applied to classify conformity assessment as first-party, second-party and third-party, namely type I labels, type II labels and type III labels. Type I labels are voluntary labels that give consumers an indication of the overall environmental preferability of a specific product compared

²⁰ The reputational capital is acquired during the years after the assessment of many clients and qualifies the conformity assessment entity to guarantee the accuracy of declarations or representations that it performs or verifies.

with others within the same product category and are designed to make it as easy as possible for consumers to judge between similar products (ROTHERHAM, 1999, p. 3). The assessment of conformity with criteria²¹ is performed by an independent institution, which allows the information available to have a high degree of impartiality and a high reliability by the targeted consumers. Type II labels are any kind of environmental declaration made by manufacturers, importers, distributors or anyone who is likely to benefit from the product's environmental claim (ROTHERHAM, 1999, p. 4). The content of these labels is limited to a single issue of a product. An independent verification and costly audits are not required. A positive aspect of these labels is their efficacy in the presentation of the information. A negative aspect is the difficult reliability on a unilateral declaration that can be excessively simple²². Type III labels are comprehensive data lists that give environmental information on a product throughout its life-cycle (ROTHERHAM, 1999, p. 4). This data is verified by independent bodies that also establish the categories of information. The information available on a label are however only disclosed to the public and do not indicate whether a product is good or bad. There is thus no distortion in the choice of specific criteria to be complied with in order for a product to bear a type III label, but it becomes harder for a consumer to choose a product. Because these labels are not selective, consumers must identify and weigh the different environmental risks themselves (ROTHERHAM, 1999, p. 5).

3.2.1. The regulation of conformity assessment on the multilateral trade system

The analysis of the WTO rules on conformity assessment does not aim to be exhaustive, but to reveal the regulation of conformity assessment through the lens of protectionism either in the positive law, either in the possible interpretation of the WTO dispute settlement system and to identify the institutes in which sustainable elements can be inserted. In light of the rules that provide parameters to determine the existence of protectionist practices, must be analyzed the criteria to be fulfilled to the award of a certification and the administration of certification criteria. The analysis will also allow

²¹ These labels are, however, criticized due to the factors of lack of adequate scientific knowledge, high cost of some testing procedures and the perception that some environmental issues deserve priority that can make the development of criteria susceptible to strategic manipulation by special interests, unfairly benefiting some at the expense of others (ROTHERHAM, 1999, p. 4). Biased criteria that do not consider the context in the exporting nation can also be used as disguised barriers to trade (ROTHERHAM, 1999, p. 4).

²² On this issue, Rotherham (1999, p. 4) clarifies that particularly in mature markets where consumers have a high level of environmental awareness and are skeptical of manufacturer's claims, type II labels are not likely to provide useful information.

a deeper understanding of the principles of equivalence and mutual recognition and of the definition of conformity assessment previously provided. The WTO obligations on conformity assessment procedures can be found on the section of the TBT agreement entitled Conformity with Technical Regulations and Standards that encompasses articles 5 to 9 of the agreement. The scope of the section comprises procedures for assessment of conformity by central government bodies, recognition of conformity assessment by central government bodies, procedures for assessment of conformity by local governance bodies, procedures for assessment of conformity by non-government bodies and international and regional systems. Labeling schemes²³ which fall within the scope of the agreement will be obliged to comply with these obligations as long as such schemes constitute a form to assess whether a good is in conformity with technical regulations or standards.

Article 5 is the heart of the TBT Agreement's provisions on conformity assessment and like article 2 imposes obligations on central government bodies (APPLETON, 2013, p. 88). In its nine sub-paragraphs, the following core disciplines

²³ In the Tuna-Dolphin II case, which was decided by the WTO Dispute Settlement Body (DSB), the measure at stake established the conditions under which a label dolphin-safe, whose meaning is that dolphins were not killed during the fishing of the tuna, can be attributed to a tuna product. At the insistence of certain members of Congress, the US has pursued a unilateral course by enacting and maintaining its own dolphin-safe labeling scheme promulgated by private economic interests in the US market (ROBERTSON, 2015, p. 3). This label was effectively unregulated, was essentially unverifiable in its claims of no harm to dolphins and, as such, was deceptive to consumers (ROBERTSON, 2015, p. 3). The conditions varied depending on the area in which tuna was harvested. Moreover, from its base in the US this false dolphin-safe labeling scheme has been exported internationally by some environmental groups, effectively closing those markets to Mexico's tuna products as well (ROBERTSON, 2015, p. 3).

In May 2012, the Appellate Body decided that article 2.1 of the TBT agreement had been violated by the US, due to the application of dolphin-safe labeling criteria for tuna products from the US and other countries that were looser than the ones from Mexico and did not regulate mortality levels in other areas of the ocean derived from fishing methods. The American measure was deemed as not even-handed and as conducive to a harmful impact on Mexican tuna products that could not be justified as a legitimate regulatory distinction.

Lately, a WTO compliance panel was constituted due to an American amended rule of July 2013 that provided further requirements for certification and tracking and verification of dolphin-safe tuna harvested outside the Eastern Tropical Pacific (ETP). It established that, no matter their origin, imports of tuna and tuna products that sought eligibility to bear the dolphin-safe label had also to undergo a certification that would evaluate the presence or the absence of nets purposively set on dolphins during the tuna harvest and the presence or absence of killed or seriously injured dolphins in the fishing activity. The compliance panel focused on conflicting requisites between tuna harvested in the ETP and outside of it for verifications of conditions to bear the dolphin-safe label and traceability from capture to selling. The compliance panel in April found that, while the US can disqualify from its dolphin-safe label tuna caught by setting on dolphins, different certification, tracking and verification requirements imposed on ETP fisheries as compared with others were not linked to a legitimate regulatory distinction and were not even-handed (ROBERTSON, 2015, p. 2). The compliance panel was convinced that the task of certifying that dolphins were not killed was a complex one that captains were not necessarily qualified to handle (ROBERTSON, 2015, p. 3). Without the necessary skills to certify whether dolphins had been seriously injured or killed made it difficult for the different certification requirements to be considered even-handed (ROBERTSON, 2015, p. 3).

that are also foreseen in other provisions of the agreement are established: non-discrimination, prohibition of unnecessary obstacles to international trade, harmonization and transparency.

The non-discrimination principle foreseen in article 5.1.1, the counterpart of TBT article 2.1 applicable to technical regulations and standards, comprises the obligation on national treatment and on most-favored nation that are applicable when conformity assessment procedures are prepared, adopted and applied. Article 5.1.1 clearly imposes a non-discrimination obligation with respect to the granting of access to domestic conformity assessment procedures to the suppliers of other WTO members (BARTELS, 2005, p. 708). The scope of the article encompasses only the preparation, adoption and application of conformity assessment procedures by a member and its applicability to the recognition of another member's conformity assessment procedure is questionable, as will be analyzed on chapter 4. Article 5.1.1 does not impose any most favored nation obligation on the recognition of conformity assessment procedures carried out in the territories of other WTO members (BARTELS, 2005, p. 708). The obligation protects suppliers of like products and guarantees such suppliers the right to an assessment of conformity pursuant to the rules specified under the procedure, including onsite inspection when foreseen, and the right to receive the mark of the conformity assessment system (APPLETON, 2013, p. 89).

The understanding of the applicability of the non-discrimination principle to conformity assessment procedures allows the imagination of its interpretation by the WTO dispute settlement system. The similar wording of TBT article 2.1 and of TBT article 5.1.1 indicates that conditions no less favorable under article 5.1.1 will be interpreted as treatment no less favorable under article 2.1 has been interpreted by the Appellate Body. The literature that dwell on the topic proposes a test in which the first prong of article 5.1.1 test is the same as that for treatment no less favorable under article 2.1 and GATT article III:4 – whether conditions of competition have been detrimentally modified (ZELL, 2016, p. 19).

The following question refers to the inclusion by article 5.1.1 test of a second prong that would correspond to the Appellate Body's test for article 2.1. Unlike technical regulations, conformity assessment procedures do not by their nature create distinctions between products; conformity assessment procedures simply enforce the distinctions created by technical regulations (ZELL, 2016, p. 19). However, given the context provided by the sixth recital of the TBT and TBT article 5.1.2, the most-

favoured-nation (MFN) and national treatment obligations of article 5.1.1 should be qualified to allow a member to ensure that all products sold in its market adequately conform to its technical regulation (ZELL, 2016, p. 19). A second prong is thus needed in article 5.1.1 test, which is called by Zell as the necessary procedural distinction prong. In this context, the distinction is that aspect of a conformity assessment procedure which is causing a discriminatory effect between the like products of two members (ZELL, 2016, p. 19). Similar to a legitimate regulatory distinction, a necessary procedural distinction should be one which has a legitimate objective and which could not be better designed or applied to pursue that objective (ZELL, 2016, p. 19). However, for a necessary procedural distinction the only legitimate objective must be ensuring that a product conforms to a relevant technical regulation which itself pursues a legitimate regulatory objective (ZELL, 2016, p. 19-20).

On the prohibition of unnecessary obstacles to international trade established in article 5.1.2, conformity assessment procedures must not be prepared, adopted or applied with a view to or the effect of creating unnecessary obstacles to international trade. Article 5.1.2 seeks to assure that conformity assessment procedures are not stricter than necessary and that they give the importing country adequate confidence that a product conforms to applicable technical regulations or standards taking account the risks that non-conformity would create (APPLETON, 2013, p. 93). Behind this objective, a policy perspective and a trade perspective clash and can give rise to a dispute in the WTO. From a policy perspective, the application of a more relaxed necessity test would be defensible as the goal of conformity assessment procedures is to give the importing member adequate confidence of conformity, which implies giving the importing member some policy discretion in choosing the most appropriate conformity assessment procedure (APPLETON, 2013, p. 94). From a trade perspective, however, the risk of giving members too much discretion could nullify the value of article 5.1.2 and other conformity assessment provisions that incorporate article 5.1.2 by reference (APPLETON, 2013, p. 94).

Harmonization with international standards, besides applicable to conformity assessment procedures, is a key principle of the TBT agreement. According to article 5.4, a harmonization requisite is applicable to conformity assessment procedures when a positive assurance is required by a member that products conform with technical regulations or standards and when relevant guides or recommendations issued by international standardizing bodies exist or their completion is imminent. Members are

obliged to ensure that their central government bodies use them or the relevant parts of them as a basis for their conformity assessment procedures, except when these guides or recommendations or relevant parts are inappropriate due to a non-exhaustive list of reasons foreseen in article 5.4. Upon request, members that allege an exception must provide an explanation with the reasons of the allegation of the exception. Aiming to achieve harmonization of conformity assessment procedures, article 5.5, with a similar content of article 2.6 on technical regulations, provides that members, within the limits of their resources, shall play a full part in the preparation by appropriate international standardizing bodies of guides and recommendations for conformity assessment procedures.

Transparency obligations are foreseen in paragraphs 6 to 9 of article 5 and comprise four important mandatory measures. The obligations are applicable when a relevant guide or recommendation issued by an international standardizing body does not exist or the technical content of a proposed conformity assessment procedure is not in accordance with relevant guides and recommendations issued by international standardizing bodies and the conformity assessment procedure may have a significant effect on trade of other members. The four obligations to be undertaken by members are the following: publish a notice at an early appropriate stage that they propose to introduce a particular conformity assessment procedure; notify other WTO members at an early appropriate stage through the WTO Secretariat of the products to be covered by the proposed conformity assessment procedures with a brief explanation of its objective and rationale; upon request from another member, provide copies to other members of the proposed procedure or particular parts and, when possible, identify portions of the measure that deviate from relevant international guides or recommendations issued by international standardizing bodies and provide a reasonable time for other members to offer written comments, to discuss these comments upon request and to take these written comments and the results of these discussions into account.

Obligations connected to the promulgation of technical regulations must also be highlighted. As foreseen in article 5.8, members shall ensure that adopted conformity assessment procedures be published or otherwise made available in a manner that enables interested parties in other members to become acquainted with them. Additionally, according to article 5.9, members shall allow a reasonable time between publication and entry into force of a conformity assessment procedure to allow producers in exporting members to adapt their products or methods of production of the

importing member. The determination of the necessary reasonable time for adaptation of products or production methods must be done taking into account the interests of developing country producers.

Derogations from transparency requirements can also be adopted under strict conditions. Article 5.7 provides that a member can omit one of the four transparency measures previously described when urgent problems of safety, health, environmental protection or national security arise or threaten to arise. Members thus have a margin of discretion to ascertain the existence of urgent problems as article 5.7 attributes to members the right to determine that a derogation is necessary. Limitations to this derogation also exist. Pursuant to the adoption of a conformity assessment procedure to address one of the established urgent problem, a member must notify WTO members immediately through the Secretariat of the particular procedure and products covered with a brief indication of the objective and rationale of the procedure together with the nature of the urgent problem; upon request, provide members with a copy of the rules of the procedure and allow members, without discrimination, to offer written comments, to discuss these comments upon request and to take the written comments and the results of these discussions into account.

Among the accessory obligations of central government bodies, the siting of conformity assessment facilities, spot checks and reviews will be explained. The first one requires that conformity assessment facilities and the selection of samples do not cause unnecessary inconvenience to applicants. The importance of this requirement is due to the potential of the location of test facilities far from a port or an airport to disadvantage foreign suppliers more than domestic suppliers (APPLETON, 2013, p. 99). The second one refers to reasonable spot checks to be carried out within the territories of member States, which were appreciated on the Schmitt case²⁴. The third one refers to the need of establishment of a review procedure for complaints concerning the operation of a conformity assessment procedure and to take corrective action when a

²⁴ Spot checks were one of the key issues analyzed on the Schmitt case (C-219/15) decided by the ECJ. In this case, Mrs. Schmitt claimed that TuV Rheinland, the certifier, had not fulfilled its obligations satisfactorily by allowing the disposal on the market of faulty breast implants and required a compensation for non-material damage as well as TuV's liability. The German Federal Court of Justice, the referring court, asked the ECJ whether there was unrestricted liability of TuV towards the patients concerned, whether there was a general obligation to examine devices and whether there was an obligation to examine records and/or carry out unannounced inspections. When answering the question posed by the referring court, the ECJ stated that notified bodies under the New Approach must act with all due diligence in conformity assessment procedures and that a new duty of care owed to end-users of products within the New Approach exists, but that notified bodies are not under a general obligation to carry out unannounced inspections to examine devices and/or to examine the manufacturer's business records.

complaint is justified. The text of article 5.2.8 that provides the obligation appears to allow a review procedure falling short of formal judicial or administrative review by a neutral body (APPLETON, 2013, p. 99).

Article 6 on the recognition of conformity assessment by central government bodies aims to establish the foundation of mutual recognition of conformity assessment procedures by them. The text of the provision is qualified by expressions as “whenever possible”, “as far as practicable” and “are encouraged”. The general philosophy of article 6 is laid down in the first paragraph, which requires that members ensure, whenever possible that results of conformity assessment procedures in other members are accepted, even when procedures differ from their own (APPLETON, 2013, p. 100). Paragraph 6.1 determines who has the last word as to what is possible through the requirement that members be satisfied that foreign conformity assessment procedures offer an assurance of conformity with technical regulations or standards equivalent to their own. This language appears to accord at least limited deference to members to determine whether they are satisfied with respect to the equivalence of foreign conformity assessment procedures (APPLETON, 2013, p. 100). An excessive deference, however, could undermine the legal certainty of this mutual recognition rule.

Consultations are also recognized as a necessary measure to achieve a mutually satisfactory understanding. The criteria assessed during the performance of a consultation are adequate and enduring technical competence of conformity assessment bodies in the exporting members and limitation of the acceptance of conformity assessment results to those produced by designated bodies in the exporting member. In order to achieve a mutually satisfactory understanding on the adequate and enduring technical competence of conformity assessment bodies in the exporting member, there must be verified compliance with relevant guides or recommendations issued by international standardizing bodies as an indication of adequate technical competence that can happen, for example, through accreditation.

The remaining paragraphs of article 6 present a hortatory and vague language. Article 6.2 provides the obligation of members to ensure that their conformity assessment procedures permit, as far as practicable, the implementation of provisions in paragraph 1. It is obscure the meaning of the term “practicable”, which can be determined by members or the Appellate Body. Article 6.1 appears to vest some discretion with members, but also places importance on verified compliance in particular through accreditation (APPLETON, 2013, p. 101). Perhaps the most

important criterion in interpreting article 6 is contained in article 6.1.1, which places emphasis on verified compliance, for instance through international accreditation (APPLETON, 2013, p. 101). The importance attributed to international conformity assessment systems is also found on the third and fourth recitals of the TBT agreement's preamble. These provisions suggest that members will not have unfettered discretion to determine what is practicable with respect to mutual recognition of conformity assessment procedures and further that panels and the Appellate Body will also place importance on international accreditation (APPLETON, 2013, p. 101).

Articles 6.3 and 6.4 are not mandatory. Article 6.3 fosters members to be willing to enter into negotiations to conclude mutual recognition agreements (MRAs) of results of each other's conformity assessment procedures. As a corollary of this non-binding obligation, another non-binding obligation foreseen on the second sentence of article 6.3 establishes that members may require that such agreements fulfill the criteria of paragraph 1 and give mutual satisfaction regarding their potential for facilitating trade in the products concerned. Article 6.4 stipulates non-binding recommendations to the geographical expansion of conformity assessment through the encouragement of members to permit participation of foreign conformity assessment bodies in their conformity assessment procedures on non-discriminatory conditions. This provision represents a move in the direction of national treatment for conformity assessment procedures in instances where these procedures offer an equivalent assurance of conformity with applicable technical regulations and standards (APPLETON, 1997, p. 134).

The legal content of article 6.3 was discussed on the Third Triennial Review of the TBT Committee and difficulties to the negotiation of MRAs were identified. Considerations identified for the conclusion of effective MRAs are a sound regulatory infrastructure and a sufficient volume of trade in specific sectors between the parties involved to justify the high administrative costs and the generally long-term nature of the negotiations (Document G/TBT/13, paragraph 39). Factors that may also have to be taken into account in the creation of MRAs are tangible economic benefits, interest of stakeholders, support from key players, underlying compatibility in the regulatory systems of potential MRA parties and sufficient resources for MRA negotiation and implementation (Document G/TBT/13, paragraph 39). Moreover, a step-by-step approach by means of technical cooperation to obtain mutual benefits may be useful to

conclude an MRA, in particular, where the technical competence of the two parties is not equivalent (Document G/TBT/13, paragraph 39).

Despite existing difficulties, WTO members are entering into MRAs. These agreements exist between the EU and its key economic partners as United States, Australia, Canada and Japan and their contents comprise the sectors covered as good manufacturing practices and good laboratory practices and a list of conformity assessment bodies designated by each party. The agreements can also be incorporated in regional trade agreements (RTAs) which, in conformity with article 6.1.1 of the TBT agreement, stipulate that previously to the recognition of the outcome of conformity assessment procedures carried out by the other party's conformity assessment bodies, the parties may require consultations on such issues and on the technical competence of the conformity assessment bodies examined. Examples of RTAs²⁵ that foresee or promote mutual recognition of outcomes of conformity assessment procedures are the Australia-Thailand Free Trade Agreement, EC-Turkey, the European Economic Area (EEA), the Japan-Malaysia Agreement for an Economic Partnership, the Japan-Swiss Confederation Agreement on Free Trade and Economic Partnership and the North America Free Trade Agreement (NAFTA).

In brief, the wording of article 6 aims to equilibrate its legal effect. It is unrealistic to expect that members will surrender sovereignty over conformity assessment unless they are satisfied that there is equivalence between and among foreign and domestic conformity assessment procedures (APPLETON, 2013, p. 102). Members can reasonably concede mutual recognition, however, when compliance of conformity assessment procedures is verified by means of international accreditation. It is expected that MRAs on conformity assessment be concluded between developed countries in which laboratory standards are presumably high and a great level of scientific trust between members exists.

On the topic of procedures for assessment of conformity by local government bodies, article 7 aims to make mandatory for members to take reasonable measures as may be available to them to ensure compliance by such bodies with the provisions of articles 5 and 6. In the same sense, the prohibition foreseen in article 7.4 forbids

²⁵ Annex I to this dissertation will provide an overview of the equivalence and mutual recognition provisions in RTAs per country according to a study done by the Organization for Economic Cooperation and Development (OECD) on mutual recognition and international regulatory cooperation.

members to adopt measures that would require or encourage local government bodies to act inconsistently with the provisions of articles 5 and 6.

Article 7, moreover, establishes notification obligations. Local governments directly below the central government must notify their conformity assessment procedures in accordance with general obligations established in articles 5 and 6. The exception to this obligation concerns the situation in which the technical content of the local conformity assessment procedure is substantially the same as that of conformity assessment procedures previously notified by the central government body. The exception reduces the notification burden of local government bodies not on the level directly below the central government (APPLETON, 2013, p. 103).

Finally, according to article 7.5, members are responsible for the observance of all obligations on procedures for conformity assessment by central government bodies and on recognition of conformity assessment by central government bodies. This is consistent with the doctrine of State responsibility, which would make members responsible for the actions of their local government bodies (APPLETON, 2013, p. 104). Moreover, members must implement positive measures and mechanisms in support of the observance of the aforementioned obligations by other than central government bodies.

The regulation of conformity assessment beyond the State is initially provided in article 8 about conformity assessment by non-governmental bodies. The conjugation of the definition of the expression non-governmental body in annex 1.8 of the TBT agreement²⁶ with the definition of the term body in paragraph 4.1 of ISO/IEC Guide 2:2004²⁷ is not enlightening. The TBT definition of a non-governmental body is vague and would appear to include any legal or administrative entity that has specific tasks and composition, including a non-governmental body that has legal power to enforce a technical regulation (APPLETON, 2013, p. 104). The first sentence of article 8, which limits the scope of the rule to non-governmental bodies that operate conformity assessment procedures, however, attenuates this interpretation.

According to article 8.1, members are obliged to take such reasonable measures as may be available to them to ensure that non-governmental bodies that perform conformity assessment procedures within their territory comply with the provisions of

²⁶ A non-governmental body is defined as a body other than a central government body or a local government body, including a non-governmental body which has legal power to enforce a technical regulation.

²⁷ A body is defined as a legal or administrative entity that has specific tasks and composition.

articles 5 and 6, with the exception of the obligation to notify proposed conformity assessment procedures. Moreover, members are forbidden to take measures that, directly or indirectly, require or encourage such bodies to act in a manner inconsistent with articles 5 and 6. Lastly, article 8.2 forbids central government bodies to rely on conformity assessment procedures operated by non-governmental bodies that are not in compliance with the requisites established in articles 5 and 6, with the exception of the obligation to notify procedures.

Certain redundancy can be identified on articles 8.1 and 8.2. While article 8.1 requires a member to take reasonable measures to ensure that non-governmental bodies comply with the provisions of articles 5 and 6, article 8.2 forbids central governmental bodies to rely on conformity assessment procedures operated by non-governmental bodies that do not comply with the same previously mentioned provisions. An explanation of this legislative writing provided by Appleton (2013, p. 105) is the possibility that other bodies (local and regional) might be tempted to rely on the findings of non-governmental bodies that operate conformity assessment procedures.

Article 9 proceeds on the regulation of conformity assessment beyond the State and is applied to international and regional conformity assessment systems and also encompasses obligations that reach the activities of central government bodies. Article 9.1 furthers the TBT goal of harmonization by requiring members, wherever practicable, to formulate and adopt international conformity assessment systems and to either become members of these systems or participate in their activities (APPLETON, 2013, p. 105). This provision is related to article 2.6, which requires members to play a full part, within the limits of their resources, in the preparation by international standardization bodies of international standards for which they have adopted, or expect to adopt, a technical regulation or standard (APPLETON, 2013, p. 105). Moreover, this requirement parallels those of TBT article 2.4, annex 3(F) and article 5.4, with respect to the international harmonization of technical regulations, standards and assessment procedures (APPLETON, 1997, p. 134). Another link can be made between the provision and paragraph G of the Code of Good Practice for the Preparation, Adoption and Application of Standards, which, in light of the objective of harmonizing standards on as wide a basis as possible, establishes that the standardizing body shall play a full part, within the limits of its resources, in the preparation by relevant international standardization bodies of international standards on the topic for which it has adopted or expects to adopt standards. The paragraph also rules that the representation of all

standardizing bodies in the territory of a member occurs through one delegation that represents all those standardizing bodies.

Article 9.2 makes mandatory for members to take reasonable measures to ensure that international and regional conformity assessment systems in which relevant bodies within their territories are members or participate comply with articles 5 and 6. Members also must not take any measures in the sense of requiring or encouraging such systems to act in a manner inconsistent with articles 5 and 6. This provision is particularly important within regional trade agreements, such as the EU, with strong conformity assessment machinery covering a wide number of areas (APPLETON, 2013, p. 106). Lastly, article 9.3 obliges members to ensure that their central government bodies rely on international or regional conformity assessment systems only to the extent that these systems comply with provisions of articles 5 and 6.

Besides the WTO obligations on conformity assessment procedures, rules on information and assistance are also applicable to them. Articles 10 to 12 regulate information and assistance and comprise obligations relative to transparency, technical assistance and special and differential treatment. A brief description of these provisions is necessary given the technical nature of conformity assessment procedures and the need for transparency and technical assistance to facilitate the operation of these provisions of the TBT agreement (APPLETON, 2013, p. 106).

As regards provision of information about conformity assessment procedures, article 10 mandates members to establish enquiry points that are able to answer reasonable enquiries from other members and interested parties about any conformity assessment procedures. Enquiry points must also be able to provide relevant documents regarding conformity assessment procedures for free or at an equitable price and on a non-discriminatory manner. The answering of questions by enquiry points and the provision of relevant documents by them, according to article 10.1.3, regard actual or proposed conformity assessment procedures operated within a member's territory by central government bodies, local government bodies, non-governmental bodies that have legal power to enforce a technical regulation or regional bodies for conformity assessment in which the aforementioned bodies within their territories are members or participants. Article 10.1.4, moreover, obliges members to provide information and documents regarding their membership and participation in international and regional conformity assessment systems, as well as bilateral and multilateral arrangements

within the scope of the TBT agreement. Members must also provide reasonable information on the provisions of such systems and arrangements.

The main objective of article 10.3 is the production of information originated from members' enquiry points when conformity assessment responsibilities have been delegated by members to non-governmental bodies. The information obligation in article 10.3.2 encompasses actual and proposed conformity assessment procedures operated in a member's territory by non-governmental bodies and by regional bodies in whose activities non-governmental bodies operate as members or participants. An additional obligation foreseen in article 10.3.3 that falls on members is to ensure that enquiry points can provide documents or information on the membership and participation of relevant non-governmental bodies within their territory in international and regional conformity assessment systems and bilateral and multilateral arrangements within the scope of the TBT agreement. In both situations the enquiry points must be able to provide reasonable information on the provisions of such systems and arrangements. The obligation to ensure that enquiry points can provide relevant documents is more limited than under article 10.1 – the enquiry point is only required to provide relevant documents or information as to where relevant documents can be obtained (APPLETON, 2013, p. 107).

A broad understanding of the obligations foreseen in articles 10.1, 10.3.2 and 10.3.3 is obtained by their reading in conjunction with article 8. While article 10.1.3 specifically describes non-governmental bodies that have legal power to enforce a technical regulation (or regional bodies of which such non-governmental bodies are members or participants), articles 10.3.2 and 10.3.3 omit mention of the need for this enforcement power (APPLETON, 2013, p. 108). There is a debate around the reading of the enforcement power in articles 10.3.2 and 10.3.3. The definition of a non-governmental body is provided in annex 1.8, which states that a non-governmental body is a body other than a central government body or a local government body, including a non-governmental body which has legal power to enforce a technical regulation. The drafters' failure to place a comma after the last use of the word "body" may suggest to some that the power to enforce a technical regulation is not necessary for the actions of a non-governmental body to fall within the scope of a member's responsibility pursuant to articles 10.3.2 and 10.3.3 (APPLETON, 2013, p. 108). If so, a member, through its enquiry point, might be responsible for meeting the transparency requirements with

respect to the activities of companies and non-governmental organizations active within its territory (APPLETON, 2013, p. 108).

Article 10.6 deepens transparency obligations applicable to conformity assessment procedures. It attributes responsibility on the WTO Secretariat to circulate copies of the notifications received to members and interested international conformity assessment bodies and draws the attention of developing country members to notifications concerning products of particular interest to them. This requirement is analogous to the notification requirements for technical regulations present in articles 2.9.2 and 2.10.1 – which each require notification through the Secretariat (Appleton, 2013, p. 108). The scope of article 10.6 also encompasses conformity assessment procedures that cover standards.

Article 10.7, in addition, requires members to notify other members through the Secretariat of agreements they have reached with any other country or countries on issues related to technical regulations, standards or conformity assessment procedures which may have a significant effect on trade. The notification must contain the products to be covered by the agreement and a brief description of the agreement. Some of the notified agreements constitute agreements regarding conformity assessment as the agreement between Mexico and United States on conformity assessment for telecommunications equipment.

On technical assistance, article 11 provides technical assistance obligations of members towards other members and many of them involve conformity assessment procedures, whose content consists on a request to a member for technical assistance. Most provisions that enable assistance to all members emphasize assistance to developing country members. Article 11.8 establishes that, when advice and technical assistance is provided to other members, priority shall be given to the needs of the least-developed country members.

Among technical assistance obligations at the national level, three of them relative to conformity assessment procedures must be highlighted. Firstly, members shall take reasonable measures to arrange for their regulatory bodies to advise other members, especially developing country members and grant technical assistance on mutually agreed terms and conditions regarding the establishment of bodies for the assessment of conformity with technical regulations. Secondly, the same reasonable measures shall be taken to the granting to other members, especially developing country members technical assistance regarding the establishment of bodies for the assessment

of conformity with standards adopted within the territory of the requesting member. Thirdly, technical assistance shall be granted regarding steps that developing country's producers should take to access conformity assessment systems operated by governmental or non-governmental bodies within the territory of the member receiving the request.

Articles 11.6 and 11.7 regulate technical assistance for regional or international conformity assessment systems. Members which integrate international or regional conformity assessment systems or participate in them shall advise other members, in particular developing country members and grant them technical assistance regarding the establishment of the institutions and legal framework which would enable them to fulfill the obligations of membership or participation in such systems. Members shall also encourage bodies within their territories which integrate international or regional conformity assessment systems or participate in them to advise other members, in particular developing country members. Furthermore, members are stimulated to consider requests for technical assistance from other members regarding the establishment of institutions that would enable their relevant conformity assessment bodies to fulfill the obligations of membership and participation.

Article 12 regulates special and differential treatment regarding conformity assessment, but most of its provisions are hortatory. Despite this, members shall take into account the special development, financial and trade needs of developing countries in the implementation of the TBT agreement. Members shall take account of the special development financial and trade needs of developing country members' in the preparation and application of conformity assessment procedures, aiming to ensure that conformity assessment procedures do not create unnecessary obstacles to exports from developing country members. Members must also recognize that developing country members should not be expected to use international standards as a basis for their test methods, which are not appropriate to their developing, financial and trading needs. The reason of this rule lies on the preservation of indigenous technology and production methods and processes compatible with development needs. The value of this proposition for developing countries is questionable since it does not further market access for developing country exports (APPLETON, 2013, p. 110-111).

Other provisions on special and differential treatment deal with international systems for conformity assessment, preparation and application of conformity assessment procedures, the action of the Committee on Technical Barriers to Trade and

measures to be taken during consultations on a dispute. On the first issue, members shall take reasonable measures to ensure that international systems for conformity assessment are organized and operated to facilitate active and representative participation of relevant bodies in all members, taking into account the special problems of developing country members. On the second issue, members shall provide technical assistance to developing country members to ensure that the preparation and application of conformity assessment procedures do not create unnecessary obstacles to the expansion and diversification of exports from developing country members. The terms and conditions of the technical assistance are taken according to the stage of development of the requesting members. On the third issue, upon request, the Committee on Technical Barriers to Trade is enabled to grant developing countries time-limited exceptions from conformity assessment obligations under the TBT agreement. When analyzing the requests, the Committee shall consider the special development and trade needs of the developing country and its stage of technological development. On the fourth issue, during consultations, developed country members must consider the difficulties experienced by developing country members in formulating and implementing conformity assessment procedures.

3.2.2. The regulation of conformity assessment on the regional level

After the analysis of the regulation of conformity assessment on the WTO multilateral level that currently comprises 164 members and reaches almost the whole international community, it is possible to advance to the regional regulation of conformity assessment. This subsection, besides providing the systematization of conformity assessment in the European region, where it was more substantially regulated and paths of implementation of multilateral rules, aims to provide examples of comprehensive regulation in the EU that can guide regulatory cooperation in Mercosur, where conformity assessment is poorly regulated by only three Mercosur norms²⁸.

²⁸ The Mercosur norms identified are as follows: Resolution of Grupo Mercado Comum (GMC) n° 25/2003 that provides a standardized mechanism constituted of directives to the creation of mutual recognition agreements of conformity assessment procedures, Resolution GMC n° 14/2005 that complements the previous resolution with a guide to the recognition of conformity assessment systems and Resolution GMC n° 45/2017 about procedures to the creation, review and derogation of Mercosur conformity assessment procedures.

3.2.2.1. The European framework of conformity assessment

Conformity assessment in the EU comprises first party activities and third party activities. For the majority of goods sold on the European market, producers evaluate the compliance with requirements foreseen in standards and in directives. First party conformity assessment is mainly applied to products of low risk. On the other hand, for products whose conformity assessment requires tests or trials, a third party with technical competence in a specific area must perform them to later issue a certificate of compliance with essential requirements. The national bodies that perform this last type of certification are inserted on a list provided by each member State, for each directive, that it considers competent to certify that products comply with the essential requirements foreseen in the corresponding directive. These national certification bodies are then notified to the European Commission by the member State in which they are established. The methods applied by the producer, the tests and trials integrates a menu of modules of conformity assessment that enables the legislator to choose a procedure from the least to the most stringent, in proportion to the level of risk involved and the level of safety required.²⁹

After the conclusion of the conformity assessment, manufacturers must guarantee the compliance of the requirements in the conformity assessment procedure. Whether or not a notified body participated in the conformity assessment procedure, the manufacturer must stick the CE marking³⁰, provide a declaration of conformity and assure compliance with applicable supranational legislation.³¹ This obligation of the manufacturer was interpreted in a sense to attribute to the certificate the value of a building block for manufacturers to show they complied with the requirements in a directive, being the sense and purpose of the certification not the protection of third parties, but a requisite for the manufacturer to sell goods on the European market (DE BRUYNE, 2019, p. 51).

The two forms of European conformity assessment and the manufacturers' and notified bodies' obligations are inserted on the broader framework of the New Approach to technical harmonization and standards introduced in a 1985 Council Resolution. The core of this resolution provides that Community harmonization reaches products for

²⁹ Recital 14 of Decision 768/2008/EC.

³⁰ The CE marking constitutes a written document and a single declaration provided by the manufacturer to attest the compliance of the EU requirements applicable to a product that he has manufactured and that bears the mark.

³¹ This obligation of the manufacturer is foreseen on pages 57 to 60 of the Blue Guide on the implementation of EU product rules.

which conformity with key requisites as for instance protection of the health and safety of the product's users is needed. Under the New Approach, legislative acts, competences were attributed to the European institutions. The EU adopts legislation (EU directives) that defines essential requirements - in relation to safety and other aspects of public interest - which should be satisfied by products and services being sold in the single market (CEN, 2019). The European Commission issues standardization requests (mandates) to the European Standardization Organizations (CEN, CENELEC and ETSI³²), which are responsible for preparing technical standards and specifications that facilitate compliance with these essential requirements (CEN, 2019). Public authorities must recognize that all products manufactured and services provided in accordance with harmonized standards are presumed to conform to the essential requirements as defined by the relevant EU legislation (CEN, 2019).

3.2.3. The regulation of sustainable fragments

Before deepening the analysis on the regulation of forest certification it is necessary to identify an overview of sustainable conformity assessment. This topic is devoted to the analysis of sustainable elements found on conformity assessment procedures. The forms of certification identified are sustainable and voluntary environmental certifications that are inserted on EU environmental schemes.

3.2.3.1. EU environmental schemes

EU environmental schemes as the Eco-Management Auditing Scheme (EMAS) and the EU Ecolabel scheme also known as EU Flower Scheme integrate national schemes into an European one consistently implemented and managed in all member States. They were both chosen to be analyzed, because they constitute forms of environmental certification regulated mandatorily in the EU whose participation is voluntary and aim to ensure that any multilateral market access rules adequately incorporated reflect the concerns and preferences of the EU and that national schemes within the EU do not threaten to fragment the EU market. More specifically, as will be explained below, EMAS regulation provides rules for its interaction with other

³² These three acronyms correspond respectively to the European Committee for Standardization, the European Committee for Electrotechnical Standardization and to the European Telecommunications Standards Institute.

environmental management systems in accordance with appropriate certification procedures recognized at national or regional levels.

3.2.3.1.1. EMAS certification

EMAS certification constitutes a tool inserted on the general goal of the EU of promotion of sustainable growth and regulated inside the European legal framework. The main objectives of its regulation are the creation of a single credible scheme and the avoidance of the creation of different national schemes. Besides the technical aspects inherent to the environmental auditing, EMAS encourages wider participation of organizations, in particular of small organizations, helps organizations to optimize their production processes, to reduce environmental impacts, to make more effective use of resources and to increase their accountability through the stimulus to the publication of rigorous and independently verified environmental or sustainable development performance reports and recognizes links with other environmental management schemes. In practical terms, EMAS constitutes a label that can be applied by a company to prevail over suppliers, economic and social partners and customers and that demonstrates its environmental credibility and responsibility, one of the legs of a company's corporate social responsibility.

An analysis *ratione personae* of EMAS certification reveals that the certifier shall be an external and independent third party, particularly of the organization's auditor or consultant, impartial and objective on its activities. Its impartiality is verified by its guarantee of being free from any commercial, financial or other pressures which might influence its judgment or endanger trust in its independence of judgment and integrity in relation to the verification activities. The certifier shall ensure compliance with any rules applicable in this respect.³³ In its tasks, the certifier shall act according to documented methods and procedures that comprise quality control mechanisms and confidentiality provisions to be in conformity with certification and validation requirements of EMAS Regulation.

The analysis of EMAS certification in light of the EU legal framework³⁴ reveals its integration into policies and instruments of the Community. Firstly, registration under EMAS can be taken into account in the development of new legislation, used as a

³³ The rule on the independence of the certifier is foreseen in article 20(5) of Regulation 1221/2009 of the European Parliament and of the Council.

³⁴ The legal discipline of EMAS certification is established in Regulation 1221/2009.

tool in the application and enforcement of legislation and taken into account in public procurement and purchasing.³⁵ Secondly, without prejudice to Community legislation, member States shall, where appropriate take measures facilitating organizations to become or remain EMAS registered³⁶ as regulatory relief³⁷ and better regulation³⁸. Lastly, the powers of the Commission must be highlighted, as it shall consider how registration under EMAS in accordance with Regulation 1221/2009 can be taken into account in the development of new legislation and revision of existing legislation, in particular in the form of regulatory relief and better regulation previously described³⁹ and used as a tool in the context of application and enforcement of legislation.⁴⁰

EMAS originality can be found on the environmental declaration that each organization must prepare in order to communicate its environmental performance. Article 2 of the aforementioned regulation provides that this declaration must contain comprehensive information to the public and other interested parties regarding an organization's structure and activities; environmental policy and environmental management system; environmental impacts; environmental program and general and specific objectives and targets.

An essential aspect of EMAS certification that deepens its insertion in the EU legal framework to be thoroughly analyzed is EMAS connection with other environmental management systems that is partially structured on Regulation 1221/2009. In procedural terms, initially, member States may submit to the Commission a written request for recognition of existing environmental management systems, or parts thereof, that are certified in conformity with appropriate certification procedures that comply with the corresponding requirements of the Regulation.⁴¹ In the request, member States shall specify the relevant parts of the environmental management systems and the corresponding requirements of the Regulation.⁴² In this initial phase, it

³⁵ Article 38(1) of Regulation 1221/2009.

³⁶ Article 38(2) of Regulation 1221/2009.

³⁷ Regulatory relief, as stated in article 38(2)(a) of Regulation 1221/2009, allows that a registered organization be considered as being compliant with certain legal requirements relating to the environment laid down in other legal instruments, identified by the competent authorities.

³⁸ Through better regulation foreseen in article 38(2)(b) of Regulation 1221/2009, other legal instruments are modified so that burdens on organizations participating in EMAS are removed, reduced or simplified with a view to encouraging the efficient operation of markets and raising the level of competitiveness.

³⁹ Article 44(1) of Regulation 1221/2009.

⁴⁰ Article 44(1) of Regulation 1221/2009.

⁴¹ Article 45(1) of Regulation 1221/2009.

⁴² Article 45(2) of Regulation 1221/2009.

is essential the demonstration of equivalence with the Regulation of all relevant parts of the environmental management system to be analyzed.

The Commission shall then examine the request, recognize the relevant parts of the environmental management systems and recognize the accreditation or licensing requirements for the certification bodies. The conditions to be accomplished are the following: the member State has specified in the request the relevant parts of the environmental management systems and the corresponding requirements of the Regulation and the member State has provided sufficient evidence of equivalence with the Regulation of all parts of the environmental management system at stake.⁴³ Lastly, the Commission shall publish the references of the recognized environmental management systems and the recognized accreditation or licensing requirements in the Official Journal of the European Union.⁴⁴

EMAS can also be applied outside the EU, a claim that can be sustained according to many elements foreseen on Regulation 1221/2009 that were identified by Pomade. Firstly, the objectives⁴⁵ established on the recitals of the regulation clearly reflect a will to assure the compliance of the label beyond the EU (POMADE, 2016, p. 74). The content of these recitals is important, because it establishes the possibility of a coordination between EMAS and other management systems to allow the maximum compatibility between different systems and the highest accession to the European program (POMADE, 2016, p. 74). It also establishes the bases to reduce to the minimum the risk of conflicts between technical regulations and the risk to discourage institutions that wish to adopt EMAS (POMADE, 2016, p. 74). Secondly, Regulation 1221/2009 adopts a broad definition of organizations⁴⁶ that can adopt EMAS and invites small organizations⁴⁷ to adhere to the system. (POMADE, 2016, p. 74). The global

⁴³ Article 45(4) of Regulation 1221/2009.

⁴⁴ Article 45(5) of Regulation 1221/2009.

⁴⁵ In this point, two recitals must be highlighted. Recital 9 provides that EMAS should be made available to all organizations, in and outside the Community, whose activities have an environmental impact. Recital 11, on its turn, emphasizes that organizations which implement other environmental management systems and want to move to EMAS should be able to do so as easily as possible.

⁴⁶ Article 2 of Regulation 1221/2009 defines an organization as a company, corporation firm, enterprise, authority or institution, located inside or outside the Community, or part or combination thereof, public or private, which has its own functions and administration.

⁴⁷ Small organizations are listed on article 2 as follows: micro, small and medium-sized enterprises, local authorities governing less than 10000 inhabitants or other public authorities employing fewer than 250 persons and having an annual budget not exceeding EUR 50 million or an annual balance sheet not exceeding EUR 43 million, including government or other public administrations or public advisory bodies at national, regional or local level; natural or legal persons performing public administrative functions under national law, including specific duties, activities or services in relation to the environment

character of these definitions reflects the flexibility of the instrument and allows the adhesion of a variety of worldwide interested organizations (POMADE, 2016, p. 74). Lastly, annex IV of the regulation provides a group of basic indicators that an organization must include in its information documents and from which its environmental performance is assessed (POMADE, 2016, p. 74). These indicators can be applied flexibly inside EMAS, as each organization can present the indicators that it considers most representative of its activity, which allows to it an opportunity to benefit from the great adaptability of the system to its environment (POMADE, 2016, p. 74).

In order to understand this phenomenon, the example of the Eco-Lighthouse (ELH) certification scheme was chosen for legal and practical reasons. Legally, Commission Implementing Decision 2017/2286 regulates the recognition of the requirements of the Eco-Lighthouse environmental management system as complying with the corresponding requirements of the EMAS in accordance with article 45 of Regulation 1221/2009. Following the will of this article, the regulatory assessment was performed by means of a comparison of similar features between Eco-Lighthouse scheme and EMAS and of the possible alignments of the Eco-Lighthouse scheme with EMAS. In practical terms, the Commission demonstrated significant interest in effective and digital tools provided by the Eco-Lighthouse Foundation to facilitate the implementation of environmental responsibility by enterprises.

Eco-Lighthouse certification scheme constitutes the Norwegian mostly broadly applied environmental management system that encompasses more than 5000 valid certificates attributed to small, medium and large organizations. The certification scheme gathers environmental management of internal and external environmental aspects that are inserted on the legal structure of Norwegian Regulations relating to Systematic Health, Environmental and Safety Activities in Enterprises. Certified enterprises are able to have a better environmental performance, manage their environmental impact and demonstrate their commitment to corporate responsibility.

A step previous to the certification is the self-reporting by the enterprise. It consists on the confirmation by an organization of the level of compliance with a group of general and industry specific criteria. They are the cornerstone of the management system, which guarantee its proper functioning. An environmental statement that attests compliance with all criteria shall be uploaded in the Eco-Lighthouse web portal.

Certification can only be achieved upon compliance of all general and industry criteria. The previously mentioned criteria are created by ELH together with relevant stakeholders as government bodies, scientists, interest institutions and customers and aim to identify and regulate key environmental elements, as well as effective measures of the industry to be certified. Lastly, the criteria undergo periodic reviews that allow continuous refinement.

The submission of the climate and environmental report in the ELH web portal is another step previous to the certification. This report encompasses universal indicators and parameters that are applied to all industries and specific indicators created by the selection of important criteria.

The certification procedure comprises an independent verification and a certification that can be qualified as *stricto sensu*. The first one consists on a verification of the implementation of an environmental management system by a third-party certifier or verifier. The assessment performed falls on the compliance of the organization with general and industry-specific criteria chosen by the consultant that integrates the ELH system. The activities of the certifier or verifier are under the control of ELH at each certification done in a 3-year period. In circumstances in which there were significant changes in the organization which provoke an alteration of industry criteria, the organization will need once more to hire an Eco-Lighthouse consultant or make use of its own trained and approved internal consultant if there is one.

The second one happens after the self-reporting by the enterprise and consists on ELH certification. It comprises the verification of compliance with pre-established criteria that can be general or specific to an industry, which also includes checking the existence of an updated overview of the legal requirements to which an organization is subject to and of a system to handle non-compliance. The most significant legal requirements correspond to ELH criteria which are checked in details. The verification process is then restricted to verifying a check-list using the environmental statement through standardized web-based tools with specific guidelines to each criterion.⁴⁸ The next and final step comprises the checking by the ELH foundation of each individual certification that must be approved before the emission or renewal of the certificate.

Positive consequences can arise to the trade between Norway, a country that integrates the European Free Trade Association (EFTA), and the EU from the

⁴⁸ Commission Implementing Decision 2017/2286, p. 113.

recognition of Eco-Lighthouse according to article 45 of Regulation 1221/2009 as explained above. Due to this recognition, in a Norwegian public procurement conducted according to the Norwegian regulation about public procurement, the contracting authority may request participant suppliers in a competition to provide certification under the Eco-Lighthouse scheme and shall accept suppliers that bear a Eco-Lighthouse Foundation certificate as participants in the tender. This certificate is thus accepted as an equivalent certificate issued by entities that pertain to other European Economic Area (EEA) member States. This means that, for instance, if a requirement for Eco-Lighthouse Foundation certification is established, a supplier with EMAS certification may provide it as documentary evidence that there is compliance with the requirement. This example demonstrates that a reference by a certification scheme to another reliable scheme can contribute to attain higher consistency and efficiency in trade practices.

The recognition of Eco-Lighthouse as in conformity with the corresponding EMAS requirements previously explained was also praised by the few literature on the issue. The Eco-Lighthouse and EMAS schemes learnt from each other – the Eco-Lighthouse perhaps adapting itself the most, to meet the demands of EMAS requirements but also in the face of new understandings of how its scheme might be improved (ASGARD, 2018, p. 15). A balance was achieved in which the goal of the Eco-Lighthouse (a successful application) seemed to coincide with that of the Directorate-General of the Environment, in whose interest it was to prove that an application could succeed if the applicant met the criteria for approval (ASGARD, 2018, p. 16). Emphasis on the overall, shared goal of boosting environmental management and certification in general was essential for the Eco-Lighthouse when meeting the EMAS committee, as a reminder that conflict or competition as to which scheme should be predominant (the question in itself hypothetical) would only serve to distract from tackling the very real real-world problems of climate change and environmental degradation that threaten our existence as species (ASGARD, 2018, p. 16).

Besides the recognition of the requirements of the Eco-Lighthouse certification scheme as complying with the corresponding requirements of the EMAS, differences between the two certification schemes exist. In a recent document prepared by Eco-Lighthouse, it is possible to identify differences between it and EMAS. These features are provided on the table below.

EMAS	Eco-Lighthouse
Action of a consultant	No requirement for using a consultant
Requirement of an accredited certifying body	Eco-Lighthouse has predefined criteria and carries out its own training, advisory service and control of certification activities
Requirement of an annual environmental report	Requirement of a climate and environmental report
Environmental reports must be submitted to the Eco-Lighthouse Foundation	Environmental reports are made publicly available

Source: Eco-Lighthouse

3.2.3.1.2. EU Ecolabel scheme

EU Ecolabel also known as EU Flower is a voluntary, third party certified ecolabel, which was established by the European Commission in 1992. A product or a service can only be awarded with the EU Ecolabel in case specific criteria were developed. As of today, there are 24 EU Ecolabel product groups, each with its own scientifically-backed multi-criteria Commission decision. The documents that regulate certification regarding EU Ecolabel are the EU Ecolabel Logo Guidelines produced by the European Commission, Regulation 66/2010 on the EU Ecolabel and the Marketing Guide produced by the same institution. The first one is based on EU Ecolabel Regulation n° 66/2010 to be analyzed below and only requires the license holder to guarantee that the EU Ecolabel logo is solely associated with a product or service to which the EU Ecolabel was awarded. This requirement gains importance in situations in which certified products and non-certified products are announced together.

The second one deepens the requirement explained above and provides further information and details about EU Ecolabel. Besides an analysis of the certification that must be performed to the attribution of EU Ecolabel to a product, the context in which the label is inserted, its objectives, its general requirements and the market surveillance and control of the use of the label will be described.

The scheme is inserted on EU sustainable consumption and production policy. Its goal is the reduction of negative effects of consumption and production on the

environment, health, climate and natural resources⁴⁹. In this sense, in order to ensure the overall coherence of the Community's action, it is appropriate to require that the latest strategic objectives of the Community in the field of the environment, such as Environment Action Programs, Sustainable Development Strategies and Climate Change Programs, be taken into account in the development or revision of EU Ecolabel criteria.⁵⁰

Regarding the objectives, this scheme seeks to foment those products which have as an inherent feature a high level of environmental performance, to avoid the multiplication of environmental labeling schemes and to stimulate higher environmental fulfillment in all areas in which environmental impact is a variable to be considered in consumer choice. The recitals of the regulation of this scheme provide desirable actions to be undertaken to achieve them. To the effect of the first objective, as foreseen on EU legislation, it is appropriate to require that the criteria with which products must comply in order to bear the EU Ecolabel be based on the best environmental performance achieved by products on the Community market.⁵¹ It is then possible to attribute to those products the EU Ecolabel. Those criteria should be simple to understand and to use, should be based on scientific evidence, taking into consideration the latest technological developments, should be market oriented and limited to the most significant environmental impacts of products during their whole life cycle.⁵² To the effect of the two last objectives, the possibility of applying the EU Ecolabel should be broadened⁵³ with the caveat that for food and feed product categories, a study should be performed to guarantee the feasibility of criteria and the existence of added value. To the specific effect of the last objective, it is necessary to inform the public and to raise publicly awareness of the EU Ecolabel through promotion actions, information and education campaigns at local, national and supranational levels, in order to make

⁴⁹ Recital 5 of Regulation (EC) 66/2010.

⁵⁰ Recital 9 of Regulation (EC) 66/2010.

⁵¹ Recital 5 of Regulation (EC) 66/2010.

⁵² Recital 5 of Regulation (EC) 66/2010.

⁵³ This possibility is broadened on recital 15 of Regulation (EC) 66/2010, according to which, in order to facilitate the marketing of products bearing environmental labels at national and Community levels, to limit additional work for companies, in particular small and medium enterprises (SMEs) and to avoid confusing consumers, it is also necessary to enhance the coherence and promote harmonization between the EU Ecolabel scheme and national ecolabelling schemes in the Community. In the same sense, according to recital 16 of the same regulation, in order to ensure a harmonized application of the awarding system and of the market surveillance and control of the use of the EU Ecolabel throughout the Community, competent bodies should exchange information and experiences.

consumers aware of the meaning of the EU Ecolabel and to enable them to make informed choices.⁵⁴

In terms of general requirements, the emphasis falls on the criteria to be accomplished to the attribution of EU Ecolabel. These shall be based on the environmental performance of products, with due regard to the latest strategic objectives of the EU in the field of the environment and shall be determined on a scientific basis that takes in consideration the whole life cycle of products.⁵⁵ The content of these criteria comprises the environmental requirements that a product must fulfill in order to bear the EU Ecolabel and requirements intended to ensure that the products bearing the EU Ecolabel function adequately in accordance with their intended use.⁵⁶ The label may not be granted to goods that contain substances or preparations/mixtures meeting the criteria for classification as toxic, hazardous to the environment, carcinogenic, mutagenic or toxic for reproduction nor to goods with adverse effects on sexual function and fertility or on development, which are persistent, bioaccumulative and toxic and substances for which there is scientific evidence of probable serious effects to human health or the environment.

After the understanding of the scenario behind EU Ecolabel and of the criteria to be fulfilled to the attribution of the label, it is possible to analyze the certification to be undertaken to assess compliance with the label criteria. Named as verification, this form of conformity assessment consists on a procedure to certify that a product complies with specific EU Ecolabel criteria.⁵⁷ Competent bodies designated to perform tasks foreseen in the regulation shall ensure that the verification process is carried out in a consistent, neutral and reliable manner by a party independent from the operator being verified, based on international, European or national standards and procedures concerning bodies operating product-certification schemes.⁵⁸

Beyond these sparse rules about certification on the articles of the regulation, annex V of the regulation allows a deeper understanding of the issue. The annex foresees initially general rules that guide certification as the impartiality and the independence of the competent body of the organization or the product it assesses; the performance of conformity assessment with integrity, the necessary technical

⁵⁴ Recital 13 of Regulation (EC) 66/2010.

⁵⁵ Articles 6(1) and 6(3) of Regulation (EC) 66/2010.

⁵⁶ Articles 6(2) and 6(4) of Regulation (EC) 66/2010,.

⁵⁷ Article 3(5) of Regulation (EC) 66/2010.

⁵⁸ Article 4(4) of Regulation (EC) 66/2010.

competence in a specific field and the lack of any kind of pressure or inducement; the confidentiality, objectivity or impartiality of the subsidiaries or subcontractors of the conformity assessment activities of competent bodies and the capability of a competent body to perform all certification tasks attributed to it by the regulation. In order to carry out conformity assessment tasks assigned to it by the regulation, a competent body shall have at its disposal the necessary technical knowledge and sufficient and appropriate experience to perform conformity assessment tasks; descriptions of procedures in accordance with which conformity assessment is carried out, ensuring the transparency and the ability of reproduction of those procedures and procedures for the performance of activities which take due account of the size of an undertaking, the sector in which it operates, its structure, the degree of complexity of the product technology in question and the mass or serial nature of the production process.⁵⁹ In terms of skills of the personnel responsible to carry out conformity assessment activities, they shall have sound knowledge covering all conformity assessment activities in relation to which the competent body has been designated and the ability to draw up certificates, records and reports demonstrating that assessments have been carried out.⁶⁰

Considering market surveillance and control of the use of the EU Ecolabel, the rules aim to provide predictability and establish measures to oversee the use of an EU Ecolabel. Firstly, any false or misleading advertising or use of any label or logo which leads to confusion with EU Ecolabel shall be prohibited.⁶¹ In what regards products to which the EU Ecolabel was awarded, a competent body shall verify that the product complies with EU Ecolabel criteria and assessment requirements on a regular basis and shall, as appropriate, undertake such verifications upon complaint.⁶² Moreover, the competent body which has awarded the EU Ecolabel to the product shall inform the user of the EU Ecolabel of any complaints made concerning the product bearing the EU Ecolabel and may request the user to reply to those complaints.⁶³ Besides that, where, after giving the user of the EU Ecolabel the opportunity to submit observations, any competent body which finds that a product bearing the EU Ecolabel does not comply with the relevant product group criteria or that the EU Ecolabel is not used in accordance with the terms and conditions of its use, it shall either prohibit the use of the

⁵⁹ Item 4 of Annex V of Regulation (EC) 66/2010.

⁶⁰ Item 5 of Annex V of Regulation (EC) 66/2010.

⁶¹ Article 10(1) of Regulation (EC) 66/2010.

⁶² Article 10(2) of Regulation (EC) 66/2010.

⁶³ Article 10(2) of Regulation (EC) 66/2010.

EU Ecolabel on that product, or, in the event that the EU Ecolabel has been awarded by another competent body, it shall inform that competent body.⁶⁴

On the other side, the user of the EU Ecolabel shall allow the competent body which has awarded the EU Ecolabel to the product to undertake all necessary investigations to monitor its ongoing compliance with the product group criteria and the terms and conditions of the use⁶⁵ of the label.⁶⁶ The user of the EU Ecolabel shall also, upon request at any reasonable time and without notice by the competent body which has awarded the EU Ecolabel to the product, grant access to the premises on which the product concerned is produced.⁶⁷

The third one recognizes the need of cooperation between national schemes and the EU Ecolabel in a scenario of overabundance of certificates, logos and claims. The main function of this cooperation is the offer of a growingly harmonized system of universal parameters for a broad variety of product groups to which independent certification was attributed. The Ecolabel logo conveys the message that the product complies with a range of criteria concerning its impact on environment, health and quality of use. The compliance with criteria derives not only from the statement of the producer or seller, but also from the verification and certification by impartial certification bodies. The European Commission lists on the document (2007, p. 6) the following key arguments for a Flower labeled product: lower environmental impact, good for health, strict criteria, verification by independent consultants, official certificate from the European Commission in accordance with EU member States and contribution to a sustainable economy by both producer and consumer.

Once a product is certified, it is possible to use the EU Ecolabel picture anywhere the product is mentioned and advertised. In order to optimize the marketing of the product, the certificate can be presented in a prominent position, in strategic spaces and in sales outlets. A key function of the picture is the attribution of added value to a

⁶⁴ Article 10(5) of Regulation (EC) 66/2010.

⁶⁵ Among the terms and conditions of EU Ecolabel use foreseen on article 9 of Regulation (EC) 66/2010, deserve to be highlighted the use of the referred label only in connection with products complying with the label criteria applicable to the products concerned and for which the label has been awarded; the need of compliance with certain requirements, where required by the label criteria, in all facilities in which the product bearing the label is manufactured; the need of a contract between a competent body that performs certification and each operator that covers the terms of use of the label that is a condition *sine qua non* for the operator to place the label on the product; the use of the label on products for which it has been awarded and on their associated promotional material and the limits on the right to use the label that shall not extend to the use of the label as a component of a trademark.

⁶⁶ Article 10(3) of Regulation (EC) 66/2010.

⁶⁷ Article 10(4) of Regulation (EC) 66/2010.

product. The Flower symbol can be used, for instance, on product brochures, company brochures, websites and press works. Together with the Flower the description of a product can indicate what it stands for. Another important function of the picture is the prevention of consumers' confusion, whilst concomitantly providing security as it is an official EU certificate.

3.3. The regulation of forests in hard law and soft law

The previous analysis of conformity assessment regulation on the multilateral level and on the regional level, which took shape mainly in the EU, provides the input to a comprehensive analysis of forest conformity assessment that occurs on the aforementioned two levels and also produces impacts on the State national level. The rise of multiple forms of forest certification that was analyzed on the previous chapter is now followed by the understanding of the current international binding and non-binding regulation on forests. It is their existing limitations that are the main cause of the search of forest certification schemes and of their continuity. The initial understanding of the aforementioned forest regulation will be followed by the identification and the analysis of the current levels of SFM and of the current benchmark standards to certification that were achieved after the pressure of the civil society and after the struggle of the business sector and of the industry sector to reduce the degree of forest protection. The analysis will fall on forest certification performed by FSC and PEFC, the main ones inserted on the certification wars analyzed on the previous chapter and that remain operational at the international level.

The reasons behind the need of international forest regulation can be partially derived of the actions of the civil society and of multinational industrial corporations and go beyond the numbers attributed to forests provided on the first chapter. Forests merit regulation so as to safeguard an equilibrium between protection and utilization (EIKERMANN, 2015, p. 29). It must be assured that the diverse interests in forests, resulting from the multi-functionality of forests, do not lead to a prioritization of one – most likely economically profitable – forest function to the detriment of other forest functions and hence, to the detriment of human well-being in general and particularly to the detriment of stakeholders dependent upon the – most likely economically undervalued – functions (EIKERMANN, 2015, p. 29). Therefore, international regulation is needed to ensure that the full range of forest functions remains available to all stakeholders, both locally and globally (EIKERMANN, 2015, p. 29).

In order to achieve this need, an international cooperative regulatory effort must be undertaken. An overview of social and economic practices on forests reveals that the exploration of certain forest functions can provoke negative transboundary or global effects that can open way to the need to consider shared interests on, for instance, the safeguard of biological diversity or climate regulation. Moreover, the complexity of drivers for deforestation and forest degradation, particularly the fact that they operate largely on a global scale, taking for example consumption patterns into account, give rise to shared responsibilities with regard to forests (EIKERMANN, 2015, p. 29).

3.3.1. The sparse regulation in the universal level

A mapping of the institutions involved in forest regulation reveals that the United Nations Forum on Forests (UNFF) has an evident forest mandate. The origins of UNFF can be found on the creation of an Intergovernmental Panel on Forests (IPF) by the UN Commission on Sustainable Development (CSD) in 1995. IPF was competent to implement decisions on forest issues taken at UNCED. IPF, moreover, dealt with the issue of illegal logging after it was introduced on its sphere of action through the action of environmental NGOs. The main IPF initiative on this issue was the summoning of participating countries to take into consideration national measures and further international cooperation to decrease illegal trade of forest products. The main IPF's achievements identified in the literature are the negotiation of its proposals on action (and thereby adding to the body of instruments on forest issues), the establishment of the concept of national forest programs in international forest discourse, the establishment of the link between forest issues and indigenous peoples' concerns and traditional knowledge and the creation of an impetus beyond its initially envisaged termination period of two years, in that it led to the establishment of its successor, the Intergovernmental Forum on Forests (IFF) (EIKERMANN, 2015, p. 40). The main failure identified in IPF's mandate was the impossibility to overcome shortcomings inherent to the UNCED forest negotiations, which include the amplifying north-south divide in forest issues, financial matters and finding the right trigger to overcome the dominant economic interests in forests (EIKERMANN, 2015, p. 40-41).

The IFF that followed the IPF was created in 1997 by the UN General Assembly with a renewed mandate that incorporated central issues from the IPF's program of work that were not finished. IFF's mandate encompassed the consideration of international arrangements and mechanisms to promote forest management,

conservation and sustainable development, aiming to develop a legally binding instrument (EIKERMANN, 2015, p. 41; SANDS, PEEL, FABRA and MACKENZIE 2018, p. 429).

In face of the impossibility to reach a conclusion on the debate on a forest convention, the UNFF was created in 2000 as a subsidiary body of the UN Economic and Social Council (ECOSOC). The mandate of the UNFF foreseen on ECOSOC decision 1995/226 comprises the promotion of the management, conservation and sustainable development of all types of forests and the strengthening of long-term political commitment to this end. The positive impetus to provide an international platform on forests and forest-related issues is one of the pillars of UNFF, furnishes the cause of conservation and sustainable development of all forests with a positive momentum and establishes this cause as an inherent part of the international political agenda (EIKERMANN, 2015, p. 41-42). The crucial aspect of UNFF's role derives from its historical development and institutional structure that provide for valuable insight into the core of forest governance and its purpose and mandate that are evidence of a deeply rooted knowledge of forest issues (EIKERMANN, 2015, p. 40).

UNFF, however, could not cope in an effective manner with political interests behind forest regulation. Lack of progress by the UNFF has led to the development of a number of alternative international forest regulatory approaches (MAGUIRE, 2010, p. 54). Currently, global forest governance is patched together with different international bodies regulating individual forest values (MAGUIRE, 2010, p. 54).

At the UN level, another institution is FAO that has fostered SFM by means of two instruments that constitute planning tools to guide SFM, the Global Forest Resource Assessment (FRA) and the State of the World's Forests Report. The first one is applied by the gathering of data about two forest-related indicators inside the SDGs, namely indicator 15.1.1 on forest area as a proportion of total land area in 2015 and indicator 15.2.1 on progress towards SFM.

The second one provides a global outlook on the forest sector in accordance with sustainable development and its environmental, economic and social pillars (DLAMINI; MONTOUROY, 2017, p. 20). The ultimate purpose of this report is to assess progress towards sustainable forest management across the world (DLAMINI; MONTOUROY, 2017, p. 20). Lately, the report has focused on socio-economic issues surrounding the world's forests, thus linking forests and sustainable livelihoods (DLAMINI; MONTOUROY, 2017, p. 20). This emphasis can be found on the 2020 report, which

urges transformational change in the way management of forests and their biodiversity is performed, food is produced and consumed and the interaction with nature is conducted. According to the report, it is imperative that human beings decouple environmental degradation and unsustainable resource use from economic growth and associated production and consumption patterns and that land-use decisions take the true value of forests into account (FAO, 2020, p. xx). The report, moreover, emphasizes that the guarantee of positive effects on biodiversity and people depends upon a careful equilibrium between conservation measures and demands for resources that back livelihoods. Recognizing the urgent need to insert biodiversity conservation in forest management practices in all forest types, the report states that a realistic balance must be struck between conservation goals and local needs and demands for resources that support livelihoods, food security and human well-being⁶⁸ (FAO, 2020, p. xx).

The partial regulation of forests on treaties as the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and on soft law instruments as the UN Forest Instrument is due to intrinsic features of forests. Forest ecosystems are highly diverse, each highly able to adapt to the geographical conditions surrounding them, are at the core of interdependence between a variety of natural processes as climate regulation and water catchment and are among the most complex environmental systems covering a variety of ecosystem services for the benefit of other ecosystems, species and human well-being worldwide (EIKERMANN, 2015, p. 9).

The literature proposed a typology to better understand instruments that regulate forestry issues. After the emergence of international forestry problems and, following the bargaining and the various influences, States defined dedicated instruments and cross-cutting instruments to reach the problem (DLAMINI; MONTOUROY, 2017, p. 11). Dedicated instruments are hard and soft law that target a specific problem and include, for example, the International Tropical Timber Agreement (ITTA) for SFM, CITES, the UNCED Agenda 21 International Forestry Principles and the Rio Convention (DLAMINI; MONTOUROY, 2017, p. 12). These entail essential elements of forest conservation and species protection (DLAMINI; MONTOUROY, 2017, p. 12-13). Cross-cutting instruments refer to hard and soft law that target forest issues among

⁶⁸ In further details, the FAO report (2020, p. xx) considers that requirements for a balance with positive outcomes are effective governance; policy alignment between sectors and administrative levels; land-tenure security; respect for the rights and knowledge of local communities and indigenous people; enhanced capacity for monitoring of biodiversity outcomes and innovative financing modalities.

other issues, indirect/direct causes and consequences in a wider problem (DLAMINI; MONTOUROY, 2017, p. 13). These cross-cutting instruments include, for example, climate change policies (DLAMINI; MONTOUROY, 2017, p. 13). Examples of them are the 1992 Forest Principles, the FAO planning tools to guide SFM, namely the FRA and the State of the World's Forests Report, which were previously explained, and the UN Collaborative Program on Reducing Emissions from Deforestation, and Forest Degradation in Developing Countries (UN-REDD Program)⁶⁹.

Following this typology, it is possible to identify the main features of forests' regulation that are also provided in the literature, namely fragmentation, polycentrism and complexity. Fragmentation arose due to the impossibility to define a forest convention as an umbrella for hard law and soft law as well as for international and transnational actors (DLAMINI; MONTOUROY, 2017, p. 11). As instruments vary from public initiatives to private instruments that could be intermeshed, the situation can be analyzed as a fragmented and segmented governance of forests (DLAMINI; MONTOUROY, 2017, p. 7). Polycentrism is present in the decentralized institutional setting for the forest domain that goes beyond the UN level and encompasses, for example, the WTO⁷⁰ and the World Bank⁷¹. Polycentrism is also found on a variety of hard laws and soft laws that seek to support good and sustainable forest management

⁶⁹ This last instrument reflects climate change policies and was created in 2008 as a tool to allow developing countries, which are the most susceptible to climate change impacts, to act in an effective manner towards the reduction of carbon emissions and to be in conditions to integrate following REDD+ initiatives, which includes the qualification to receive results-based payments derived from the reduction or elimination of forest carbon emissions. Despite the final objective being the substantial reduction of carbon emissions, the means to achieve it is the significant lowering of arbitrary deforestation and excessive forest degradation to be fulfilled by regional and international partnerships. The REDD+ mechanism previously mentioned was created under the scope of the United Nations Framework Convention on Climate Change (UNFCCC) and fosters developing countries to preserve their existing forests through the offer of results-based payments for initiatives to lower or totally eliminate forest carbon emissions. In order to clarify the distinction between the UN-REDD Program and REDD+, it is correct to say that the UN-REDD Program supports nationally-created REDD+ initiatives and provides informed and significant involvement of all stakeholders, which includes indigenous peoples and forest-dependent communities.

⁷⁰ Even though the scope of this dissertation is not to provide an exhaustive analysis of the role of institutions in forests' regulation, the action of the WTO is here highlighted as it is the main pillar of the multilateral trade system. WTO members recognize that the international organization cannot provide the answers to environmental issues, but consider that trade and environmental policies can be complementary. This complementation can happen, for instance, by means of the implementation of sustainable ecosystem management that preserves natural resources that foster economic growth. In this scenario, trade liberalization stimulates economic growth in a manner coherent with a significant environmental protection. The WTO, thus, has the huge duty to keep liberalizing trade and, at the same time, reconcile environmental policies with trade rules.

⁷¹ Starting in 2001, the World Bank supported a range of regional dialogues on Forest Law Enforcement and Governance (FLEG). These dialogues gathered government representatives, the business sector and the civil society from timber-producer and consumer countries to debate internal and international measures whose objective is to face illegal logging and trade.

(DLAMINI; MONTOUROY, 2017, p. 7). Complexity is a primary characteristic as forest sustainability is neither clearly nor legally defined and remains a self-referential model that is redefined by each actor who seizes it (DLAMINI; MONTOUROY, 2017, p. 11).

Among the dedicated instruments, the emphasis of the analysis will fall on UNCED Agenda 21 International Forestry Principles briefly explained on the previous chapter and the ITTA. The first ones were chosen because they constitute an example of how principles can fail on the performance of its structural function of filling gaps and guaranteeing coherence and completeness of law. The second one was chosen, because it, on the other hand, addresses in practice SFM, a common objective of forest certification. The first ones emerged after the failure to conclude a binding treaty on forests and reflect a consensus on a variety of forest issues to guarantee the conservation and sustainable management of forests, as can be understood on the systematization of Kiss and Beurier explained on the previous chapter. Beyond this systematization, the International Forestry Principles affirmed States' sovereignty to exploit their own natural resources pursuant to their own environmental policies (DLAMINI and MONTOUROY, 2017, p. 18). The principles also capture States' responsibilities to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or areas beyond their national jurisdictions (DLAMINI and MONTOUROY, 2017, p. 18). Most importantly, the link between the Forest Principles and a binding forest regime was that they will determine the agreement for a future multilateral convention, and possibly form the basis for a common legal position (DLAMINI and MONTOUROY, 2017, p. 18). With the passage of time, however, these principles became dead letter on the construction of the international forestry regime. As there were no further developments arising from the principles, their analysis ends here.

The second one has as its main goals foreseen in article 1 of the agreement the fostering of sustainable management of forests that constitute the source of tropical timber and the improvement and diversification of tropical timber trade that arose from sustainably managed and legally harvested forests. The agreement also provides rules to the operation of ITTO, which manages the utilization of tropical forest sources and their trade. As foreseen in ITTO's action programme, SFM aspects are included as community forestry, reduced impact logging, fire management, biodiversity and transboundary conservation.

The forests regime constitutes thus a sub-system of global governance that comprises public and private rules of a hard and soft nature and is at the same time coherent and fragmented. Coherence is achieved through a legal spillover effect as any body of law, including soft law, can be precedent-setting and principles adopted in one legal instrument may subsequently influence others (HUMPHREYS, 2006, p. 192). The regime is fragmented due to two main reasons. First, the existence of several international institutions with forest-related mandates inevitably leads to inefficiencies, gaps and duplications (HUMPHREYS, 2006, p. 192). The second cause of fragmentation has its roots in the broad functioning of global governance, as the regime aims to guarantee durable viability of forest resources and at the same time continuous economic use of forest resources. Hence, while the regime promotes long-term forest public good enhancement, it also promotes continuing private good exploitation, including through new market mechanisms and new intellectual property rights that reflect neoliberal assumptions (HUMPHREYS, 2006, p. 192). A deep driver of deforestation is that international law promoting neoliberal values has been ascribed more coherence and greater normative force than international law promoting forest public goods (HUMPHREYS, 2006, p. 192).

The initiatives to address this fragmentation can be found on sparse efforts. One of them is the Collaborative Partnership on Forests (CPF) that seeks to coordinate international organizations and secretariats with considerable programs on forests. The skepticism shown by Humphreys towards CPF, who saw its coordination action as limited to institutions with shared values is overcome by its longevity and by its broad coverage. Established in 2001, CPF constitutes a creative voluntary partnership between agencies on forest issue. Its main functions are the support of the work of UNFF and its member countries; the provision of scientific and technical advice to the Forum and governing bodies of other CPF members; at their request, the enhancement of coherence, cooperation as well as policy and program coordination at all levels and the promotion of implementation of the UN Forest Instrument and the United Nations Strategic Plan for Forests together with the promotion of the contribution of forests and trees to the 2030 Agenda for Sustainable Development and other major forest-related agreements. Currently, CPF works on the implementation of its Strategic Vision towards 2030, approved on 27 January 2020, which supports global frameworks for forest action and provides an effective platform for the use of assembled capacities and

skills of members of the partnership and for the enhancement of reciprocal support of their corresponding programs towards this shared and worthy vision.

3.3.2. The limited reach of ITTA

The ITTA 2006 entered into force in 2011 and superseded the ITTA 1994. It has as its broad objectives the promotion of expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests and the promotion of sustainable management of tropical timber producing forests. The agreement provides a list of nineteen actions that can lead to the achievement of the objectives. Among the paths to achieve them, considering the object of this dissertation, the encouragement of information sharing for better understanding of voluntary mechanisms such as certification to promote sustainable management of tropical forests deserves to be highlighted. The agreement regulates SFM through the reference to the promotion of better understanding of the contribution of non-timber forest products and environmental services to the sustainable management of tropical forests and to the encouragement of parties to recognize the role of forest dependent indigenous and local communities in achieving SFM. In institutional terms, the agreement foresees the International Tropical Timber Council (ITTC), whose one of its main functions is the establishment of a forest action plan to guide policy activities and identify priorities and the thematic programmes.

A series of criticism to the agreement is, however, found on the literature. The agreement was criticized as being effectively little more than a commodity-market adjustment among consumer and producer States, with a commitment to increase international trade in tropical timber from sustainably managed and legally harvested forests (BIRNIE; BOYLE; REDGWELL, 2009, p. 694). A deeper criticism that targets the way international trade of tropical timber was regulated refers to the express pushing aside of lumber from the agreement's field of application even though it represents a non-negligible part of wood trade (KISS; BEURIER, 2010, p. 198). Another criticism falls on the poor definition of SFM in the agreement that merely refers to the relevant policy documents and technical guidelines of the organization according to which SFM shall be understood (PETERSON; DIAZ; BARRAL, 2006, p. 455).

Besides the doctrinal objections, the agreement presents a geographical limitation, in the sense that it is not applicable to temperate and boreal forests. This limitation is found on the text of the agreement previously mentioned at the beginning

of this subchapter according to which the treaty aims to promote the expansion and diversification of international trade in tropical timber from sustainably managed and legally harvested forests and to promote the sustainable management of tropical timber producing forests.⁷² The different regulation in tropical and temperate regions is followed by a different scenario on each of these forests. While the drivers for ecosystem change in the tropics are drivers for deforestation and degradation, forest ecosystem change factors in the temperate and boreal biomes seem to indicate an improvement of forest ecosystem conditions (EIKERMANN, 2015, p. 25). Thus, in reverse, when assessing temperate and boreal forests, drivers for increasing forest cover may be depicted as virtually positive drivers, which include techniques for agricultural intensification and the growing value of forest ecosystem services (EIKERMANN, 2015, p. 25).

3.3.3. A possible regional regulation: Forest Law Enforcement Governance and Trade (FLEGT) Action Plan in dialogue with forest certification standards

This European initiative was chosen to be analyzed due to two main reasons: the existing competition between this state-led forest regulation initiative with private certification ones and its potential to be the major instrument in the market and substitute private certifiers. FLEGT is operated by state agencies that, according to recent literature, can obstruct or support certification initiatives and, due to their formal mandate and ability to develop binding regulatory policy instruments, may even develop own certification schemes, as currently observed under the FLEGT process (WIBOWO; GIESSEN, 2018, p. 29).

Putting into clear terms, FLEGT constitutes an European action plan created in 2003 that establishes a variety of measures that can be applied by the EU and its member States in order to address illegal logging in worldwide forests. Like private certification itself, FLEGT arose from dissatisfaction with the lack of progress in tackling the problem of forest degradation through multilateral institutions (OVERDEVEST; ZEITLIN, 2014, p. 35). This observation provided in the literature complements the framework of alternatives to binding international regulation of forests that was partially analyzed on chapter 2 and that will be complementarily analyzed in this subchapter focused on a regional European binding regulation of forests.

⁷² Article 1 of ITTA.

The context in which FLEGT Action Plan was created is analyzed in the literature as a result of the dissemination of private certification schemes in the 2000s. By the early 2000s, private certification schemes had achieved high rates of coverage among industrial forest companies in developed economies (OVERDEVEST; ZEITLIN, 2014, p. 35). However, their take-up by developing countries remained limited, especially in the tropical forests whose deterioration sparked the original campaign for global regulation (OVERDEVEST; ZEITLIN, 2014, p. 35). In response, NGOs, governments and international organizations have focused increasingly on combating illegal logging, an endemic problem in many countries, which depresses prices for legally harvested wood and undercuts the adoption of sustainable forestry practices (OVERDEVEST; ZEITLIN, 2014, p. 35).

Moreover, the literature points out that the dissatisfaction with UN initiatives was behind the search of new paths of forest governance. Frustration by government officials with globally focused UN efforts have led to regional Forest Law Enforcement and Government (FLEG) processes that match wealthy developed countries with developing or countries in transition to work together to address forest enforcement and governance, including combatting illegal logging (CASHORE; AULD; BERNSTEIN; MCDERMOTT, 2007, p. 171).

The previously described FLEG processes, particularly in Asia and Africa, constituted a forum in which NGOs, governments and international organizations were active. These initiatives produced a growing political and epistemic consensus on the problem of illegal logging and appropriate policies to combat it, including improvements in domestic law enforcement and forest management capacity, involvement of stakeholders and local communities in forest decision-making, monitoring of forest resources and coordinated efforts to control international trade in illegally harvested timber (OVERDEVEST; ZEITLIN, 2014, p. 36). They also stimulated bilateral agreements between producing and consuming countries to implement some of the proposed measures (OVERDEVEST; ZEITLIN, 2014, p. 36). None of these processes, however, generated binding commitments among the participating countries, nor the creation of systematic mechanisms for monitoring progress toward their agreed aims (OVERDEVEST; ZEITLIN, 2014, p. 36). In these conditions, the EU acted in a unilateral manner by connecting the amelioration of forest law enforcement and governance (FLEG) to regulation of trade (T). This was done in a manner shaped by the need to be in conformity with WTO rules and to attain the

consent of developing countries. This overview of the action of international actors to tackle illegal logging allows a step forward to understand FLEGT measures to also face this issue.

Its seven measures consist on supporting timber-producing countries, promoting trade in legal timber, promoting environmentally and socially beneficial public procurement policies, supporting private-sector initiatives, financing and investment safeguards, using existing or new legislation and addressing the problem of conflict timber. Their main objectives are to avoid the importation of illegal timber inside the EU, upgrade the supply of legal timber and raise the demand for timber originated from sustainably managed forests. Inside its measures, the key elements pointed out by the literature are government procurement policies, financial due diligence, voluntary partnership agreements (VPAs) between the EU and timber-producing countries and legislation to control timber imports from non-VPA countries (DOOLEY; OZINGA, 2011, p. 166). The application of these elements under the scope of the plan and connected with forest certification will be analyzed below.

The analysis of the FLEGT Action Plan will not be exhaustive, but centered on key aspects connected to forest certification. The promotion of trade in legal timber allows the engagement of the main timber consumers and the mapping of paths of collective work towards a comprehensive multilateral structure that can limit the entry of illegally harvested timber in the EU market. In order to attain this objective, EU firstly seeks cooperation with countries to engage leading markets for timber and timber products in the enlargement of the FLEGT undertaking. Secondly, the EU created the legislation foreseen on the Action Plan to regulate imports of harvested timber and prohibit the illegal ones. This legislation, the EU Timber Regulation, as well as its connection with certification standards, will be analyzed below. Another legal instrument are the VPAs between the EU and countries that produce timber to foster trade in legal timber products and to contribute to shut the EU market to unlawful products. Each VPA contributes to upgrade forest governance and ensures the legality of timber and timber products destined to the EU. Features of a VPA are the definition of legal timber taking into consideration laws and regulations of an exporting-timber country, an open negotiation that encompasses the participation of the private sector and of NGOs in the creation of domestic legality standards and the establishment of a robust timber legality assurance system that assesses the legality of a shipment of timber and compliance conditions that can allow (or not) the attribution of a FLEGT license.

The elements provided on the previous paragraph will be analyzed in a train of thought that differs from the sequence in which they were provided. Firstly, a general analysis will fall on the creation of national legislation inside the EU, namely the government procurement policies. After, the support of private sector initiatives that ensure the legality of supply chains will be presented. The analysis will then be followed by a comprehensive description and understanding of VPAs, a centerpiece of the Action Plan according to the literature. The analysis then moves to further endeavors to complement the content of VPAs and to strengthen the legal structure of legal timber trade through cooperation with main timber importers. The initiatives in this sense that were identified are the EU Timber Regulation and the innovative recognition of private forest certification schemes as a proof of legality.

On government procurement policies, EU member countries are stimulated to promote environmentally and socially beneficial public procurement policies in order to address illegal logging. This promotion happens through the creation of public infrastructure projects financed by EU member States and the guarantee of the use of legal timber in these endeavors. Public procurement regulation also incorporates environmental considerations in buying decisions.

On the support of private sector initiatives as codes of conduct and impartial monitoring⁷³, FLEGT licensing has a key role. It facilitates technical and financial assistance by the European Commission to support the private sector to guarantee the legality of supply chains. The legality of timber and timber products is also ensured as well as their origin being a country where there was consensus regarding forest laws by stakeholders. The FLEGT license, moreover, guarantees the existence and implementation of a robust system in the issuing country that is subject to impartial audit that can refrain the presence of illegal timber in the supply chain.

Beyond these initial legislative initiatives, the positive aspects of the FLEGT Action Plan recognized by the literature refer to VPAs. The Action Plan was praised as an innovative approach of forest governance in a polycentric world and the plan, especially the voluntary partnership agreements (VPAs), can improve the coherence of the global governance of forests as VPAs catalyze the various instruments of the

⁷³ Besides these initiatives, this topic is foreseen on the Action Plan against the background of corporate social responsibility (CSR). The Action Plan (2003, p. 16) recognizes *in verbis* that the private sector has a key role to play in combatting illegal logging and can exert a direct and positive influence through a network of business relationships extending from the forest to the market place. A definition of CSR is also provided as when companies integrate social and environmental concerns in their business operations and in their interactions with stakeholders on a voluntary basis.

polycentric governance of forests in forests regions, within the countries and across different societal actors (DLAMINI; MONTOUROY, 2017, p .8). In concrete terms, a VPA can contribute to the achievement by an exporting-timber country of its development purposes as the guarantee of employment, the raise of government income, the consolidation of the rule of law and the protection of the rights of communities that depend on forests.

The literature also understands the negotiations of bilateral VPAs as a central element of the FLEGT Action Plan and details the considerations of Dlamini and Montouroy presented above. These negotiations are taken with developing countries to establish licensing systems for the export of legally harvested wood to the European market, where legality includes reference to the social and environmental conditions of production (OVERDEVEST; ZEITLIN, 2014, p. 36). Because they are voluntary and jointly agreed, such licensing systems were expected to be fully WTO-compatible, unlike the unilateral eco-labeling requirements for imported tropical wood proposed by some northern governments a decade earlier (OVERDEVEST; ZEITLIN, 2014, p. 36). Most FLEGT VPAs explicitly envisage recognition of private certification schemes in their export licensing system, provided that these incorporate the agreed legal definitions, and subject to regular monitoring and review of their operations and procedures (OVERDEVEST; ZEITLIN, 2014, p. 38). The VPAs, however, were also designed to win the active cooperation of developing country stakeholders by promoting equitable and just solutions for all concerned interests; engaging local communities and NGOs in forest sector governance reform; and providing capacity-building support for civil society and the private sector as well as for public fiscal, law enforcement and forestry authorities (OVERDEVEST; ZEITLIN, 2014, p. 36). These agreements, however, are also quite challenging, both politically and administratively, in terms of their demands for multi-stakeholder participation and reform of forest-sector governance (OVERDEVEST; ZEITLIN, 2014, p. 38). Negotiating FLEGT VPAs has been a “learning-by-doing process”, with transfer of knowledge and experience not only between countries, but also across regions (OVERDEVEST; ZEITLIN, 2014, p. 37-38).

Within the content of VPA, verification and monitoring deserve to be highlighted as tools to enhance forest governance. They are conceived as mechanisms for learning and continuous improvement of forest management and governance, as well as compliance enforcement (OVERDEVEST; ZEITLIN, 2014, p. 37). Thus, for example, the role of independent monitoring is understood as not just to find infractions

as they occur, but to investigate the root causes of the infraction by analyzing information channeled from various sources in a systematic manner and to document governance problems (OVERDEVEST; ZEITLIN, 2014, p. 37). Transparency and public disclosure of information on verification of the legality assurance system are likewise regarded as crucial provisions aimed at enabling civil society networks to participate actively in monitoring its operations at all levels (OVERDEVEST; ZEITLIN, 2014, p. 37).

Besides the VPA as an essential element of the FLEGT Action Plan, further endeavors are highlighted on it. The FLEGT Action Plan underlined the need for continuing efforts to build an effective multilateral framework for controlling illegal trade in collaboration with other major importers (OVERDEVEST; ZEITLIN, 2014, p. 36). But in the absence of multilateral progress, the European Commission would eventually consider further measures, including legislation to control imports of illegally harvested timber into the EU (OVERDEVEST; ZEITLIN, 2014, p. 36). Examples of these measures will be analyzed below.

A consequence on the European legal framework of FLEGT was the adoption of the EU Timber Regulation (EUTR) that entered into force on March 2013. This regulation foresees obligations of agents who introduce timber and timber products on the market. EUTR faces the trade of illegally harvested timber and timber products by means of three main obligations as follows: prohibition to insert on the EU market for the first time illegally harvested timber and products derived from it; requirement of EU traders who introduce timber products on the EU market for the first time to perform due diligence⁷⁴ and the keeping of records by economic agents of their suppliers and consumers. The regulation identifies certification as an applicable instrument during the risk assessment procedure when there is importation of timber in the EU. In what regards punishment, EU member States are responsible for setting and enforcing penalties on companies contravening the regulation, but the Commission will orchestrate a dialogue network among the national competent authorities to ensure that implementation does not vary too widely (OVERDEVEST; ZEITLIN, 2014, p. 38).

⁷⁴ Due diligence comprises the performance by agents of a risk management exercise in order to reduce the risk of introducing illegally harvested timber or timber products containing it on the EU market. When a risk of illegal timber in the supply chain is identified in the assessment, the mitigation of that risk occurs by requiring further information and verification from the supplier. Due diligence can also be revealed by ownership of a FLEGT VPA export license and participation in an acknowledged monitoring framework founded on an impartial assessment of compliance with forest legislation.

The contribution of the EUTR to the conclusion of VPAs was also analyzed in the literature. By making FLEGT export licenses a green lane into the European market, the new regulation significantly increases the incentive for developing countries to sign VPAs (OVERDEVEST; ZEITLIN, 2014, p. 38). For processing countries and export business, the cost per unit of legal verification and traceability is likely to be substantially lower under a national VPA scheme compared to importing licensed wood from another FLEGT country or certifying its legality independently (OVERDEVEST; ZEITLIN, 2014, p. 38). For each of these reasons, the number of VPA negotiations successfully concluded or nearing completion has spiked sharply since the legislation's passage (OVERDEVEST; ZEITLIN, 2014, p. 38).

Recent data reveal a successful enforcement of the EUTR. In October 2018, the European Commission published its second report on the implementation of the EUTR covering the period between March 2015 and February 2017 and drawing on information provided by 28 member countries and Norway (FAO/UNECE, 2019, p. 15). This report found that almost all countries have taken action to comply with the requirements of the EUTR, and the number of checks and sanctions for violations has increased significantly (FAO/UNECE, 2019, p. 15). Across all countries, more than 17700 checks were performed during the reporting period on operators placing domestic timber on the market and almost 2800 checks were made on operators placing imported timber on the market (FAO/UNECE, 2019, p. 15). For domestic timber, 20 countries performed 80% or more of their planned checks and, for imported timber, 22 countries achieved 80% or more of planned checks (FAO/UNECE, 2019, p. 15).

Another main unfolding was the increasing recognition by the EU FLEGT of private forest certification schemes as a demonstration of legality. Several certification schemes are developing legality assurance standards in response to the EU FLEGT and Timber Regulation, as well as member-state procurement policies (GULBRANDSEN, 2014, p. 83). This move is connected to the following FLEGT measures: exportation of legally logged timber and development of procurement policies to purchase timber from legal sources. The FSC works with government officials to ensure that its controlled wood standard, developed for non-FSC certified material used in FSC Mix products, is consistent with these regulations and that FSC certification meets the legality requirements in the EU (GULBRANDSEN, 2014, p. 83-84). At the 2011 General Assembly, the FSC membership unanimously approved a motion to strengthen the standard with the main objective of bringing the controlled wood standard in link with

EUTR, the North-American Lacey Act and other national legality legislation (GULBRANDSEN, 2014, p. 84). Hence, while tracking systems developed in non-state certification programs have proven central in advancing international efforts to eliminate trade in illegal wood, international legality requirements are influencing certification standards and creating opportunities for expansion into new areas of verification (GULBRANDSEN, 2014, p. 84).

The literature points out additional consequences of the previously mentioned recognition of forest certification schemes as proof of legality. As EU FLEGT subjects these schemes to a measure of public oversight, further productive interactions and a more coherent transnational governance regime can be expected to emerge, cutting across conventional distinctions between public and private authority (OVERDEVEST; ZEITLIN, 2014, p. 32). In concrete terms, as inside the EU public procurement is a member-state competence, which means that each individual member State has the final say on its regulation, Belgium, Denmark, France and Germany have implemented procurement policies on the purchase of timber from legal sources. Outside the EU, countries as UK, Japan, New Zealand and Norway have adopted such policies. Based on these facts, Overdevest and Zeitlin (2014, p. 32) understand that, in combination, public and private supply chains have thus proved an important conduit for partial and selective transnational forest regulation in the absence of a multilateral regime.

An opposite scenario of the relation between EUTR and forest certification and its respective unfolding was also analyzed in the literature. FLEGT and EUTR could have a negative impact on private certification schemes by spurring customers and suppliers to shift their energies toward meeting less demanding legal requirements (OVERDEVEST; ZEITLIN, 2014, p. 39). By reducing a major source of cost pressure on legitimate timber operations, however, these measures appear likely instead to encourage progression to more ambitious standards of sustainable forestry promoted by private certification schemes like the FSC (OVERDEVEST; ZEITLIN, 2014, p. 39). The FSC itself is developing a modular, step-wise system in which forest management units would first be certified for legality by accredited auditors, while committing to work toward certification to full sustainability standards at a subsequent stage (OVERDEVEST; ZEITLIN, 2014, p. 39). These FSC moves provide a partial answer to the proposed research question.

The enforcement of the EUTR together with the operation of forest certification can then produce fruitful outcomes. By placing private forest certification schemes

under ongoing scrutiny and review by national and European authorities, FLEGT and the EUTR should push them to ensure that illegal logging is actually detected and corrected on the ground, thereby addressing a key gap in their public accountability (OVERDEVEST; ZEITLIN, 2014, p. 39). Depending on how they are implemented, the procedures for recognizing monitoring organizations and reviewing their operations under the EUTR may also serve as a mechanism for improving the performance standards of private certification schemes through public comparison and benchmarking for equivalence (OVERDEVEST; ZEITLIN, 2014, p. 39).

Despite the distance from a multilateral regime, a transnational forest experimentalism regime is under construction. FLEGT and EUTR demonstrate how such a regime can emerge from unilateral regulatory initiatives by large developed country jurisdictions, subject to procedural constraints imposed by the rules of multilateral institutions like the WTO (OVERDEVEST; ZEITLIN, 2014, p. 39). The EU's approach to combating illegal logging appears likely to be accepted as legitimate not only by the WTO but also by developing countries, because it offers them an opportunity to participate in a jointly governed system of legality assurance, while imposing parallel obligations on European timber firms to exercise due diligence in respecting local legal standards (OVERDEVEST; ZEITLIN, 2014, p. 39). FLEGT VPAs and the inclusive, deliberative negotiation processes leading up to them have already had a major impact in a number of countries in terms of empowering civil society stakeholders, exposing inconsistencies and gaps in existing forest regulation, securing political commitments to legal and governance reform and measurably reducing illegal logging in anticipation of their implementation (OVERDEVEST; ZEITLIN, 2014, p. 39).

The joint governance systems created to oversee these agreements institutionalize key experimentalist principles, including regular review and revision of both the underlying legal standards and the assurance system designed to achieve them through recursive learning by monitoring of implementation experience (OVERDEVEST; ZEITLIN, 2014, p. 39). The EUTR enhances the incentives for developing country governments to sign VPAs and ensures that wood imports into the European market will not be diverted to countries with weaker legality enforcement standards (OVERDEVEST; ZEITLIN, 2014, p. 39). Its due diligence requirements are already encouraging importing firms to join private forest certification schemes, while promising to enhance the public accountability and performance standards of these

schemes by subjecting them to comparative review and benchmarking for equivalence (OVERDEVEST; ZEITLIN, 2014, p. 39-40).

3.4. The need of forest certification

Forest certification is an instrument that concretizes the promises arising from the concept of SFM and that demonstrates to the consumer the possible sustainable origins of a product. The move towards forest certification is also a change of efforts from the negotiation and conclusion of a treaty or consensual soft law to a market-related instrument. Market mechanisms are a response to the most influential critique of traditional regulation, which holds that it needlessly inefficient, costing more than necessary to achieve a given level of social benefits (MEIDINGER, 2002, p. 267). The analysis below of forest certification will fall on two of the certifiers chosen, FSC and PEFC, and will reveal the current stage of international forest certification 30 years after the certification wars and how it currently contributes to the filling of gaps existent in international forest regulation. The analysis, thus, demonstrates how the quest of forest certification after the failed negotiations to achieve a binding forest treaty, previously examined on chapter 2, was thickened by the benchmarks that guide the two forest certifiers that remain operational at the international level, FSC and PEFC.

The reasons that led to the choice of FSC and PEFC are their international reach and the worldwide coverage of a huge area of certified forests. SFI forest certification and CSA forest certification will not be analyzed due to specific reasons. SFI forest certification aims to achieve its broad objective of the amelioration of forestry practices only on forestlands in North America that encompass boreal forests or plantation forests, which were naturally renovated or planted. SFI forest certification system, moreover, is endorsed by PEFC. Similarly, CSA's forest certification activities are currently limited to the national territory of Canada, its applicable CAN/CSA Z809 SFM standard undergoes an endorsement by PEFC and the use of its own CSA on-product label was discontinued. One of the main reasons of the failed attempts of these programs to internationalize themselves was the absence of well-developed connections across political boundaries compared with the strength of their domestic and regional organizational capacity (AULD, 2014, p. 90).

Among forest management certification and chain of custody certification performed by FSC and PEFC, only the first one will be analyzed. Chain of custody certification is largely an accounting mechanism to manage the flow of certified

material with the purpose of tracking certified material. Forest management certification, on the contrary, involves economic, social and environmental issues that are comprehensively regulated on FSC principles and criteria for forest stewardship and on PEFC benchmark standards and sustainable forest management requirements.

3.4.1. Forest certification performed by FSC

FSC is currently an international institution that performs *inter alia* the activities of voluntary accreditation and independent third-party certification. In more precise terms, FSC administers a self-elaborated third-party certification system on wood and timber products that serves to verify whether products originate from sustainable forestry (PATTBERG, 2011, p. 266). FSC's main objective is the promotion of a management of the world's forests that is environmentally adequate, socially useful and economically practicable.

The tripartite institutional arrangement⁷⁵ mentioned in the previous chapter remains unchanged. Members can integrate one of the following chambers: the social chamber composed of organizations and individuals committed to socially beneficial forestry as development agencies, non-forestry unions, indigenous peoples and church groups; the environmental chamber composed of those interested in environmentally adequate forest stewardship as officers of environmental organizations and the economic chamber composed of organizations and individuals with an economic interest in forest management and forest goods as forest managers, consultants and certifiers. Inside each chamber there is a South sub-chamber and a North sub-chamber⁷⁶. At the national initiative level, the national FSC can create a governmental chamber that, besides the standard-setting activities, support and oversee local certification activities.

⁷⁵ A broad overview of FSC membership provided reveals that, inside the tripartite institutional framework and beyond it, FSC constitutes a multi-stakeholder framework open to organizations and individuals. The grant of an observer status is not needed inside FSC as the whole process is made public and can be followed by any individual who reveals an interest. A review provided by Villareal (2018, p. 24) reveals that organization members are, among others, nongovernmental organizations for timber, forestry and indigenous peoples' issues and associations; community forestry and forest certification groups; retailers and manufacturers; unions and academic institutions.

⁷⁶ This institutional arrangement aims to hold an equilibrium in voting power among diverse interests and thus avoiding the need to limit the number of members. In a comprehensive analysis, Cashore, Gale, Meidinger and Newson (2006, p. 13) provide that the total vote of each chamber is split evenly between developing and developed country members, regardless of their actual numbers, ensuring that the interests of the South are taken into account.

The operation of certification activities allows certificate owners to introduce in the market their goods and services after undergoing a forest management certification process that is qualified as environmentally sound, beneficial to the society and economically practicable. FSC, in addition, creates standards for the evolution and achievement of FSC Stewardship Standards, which are founded on FSC principles and criteria to be described and analyzed below. Moreover, FSC creates standards applicable to the accreditation of conformity assessment bodies that perform their functions in conformity with FSC standards. Founded on these standards, FSC makes available a certification system for entities that aim to sell their products with FSC certification.

Forest management certification and chain of custody certification constitute the certification activities performed by FSC. In the first one, the assessment aims to confirm that the forest management protects biological diversity, provides benefits to local inhabitants and workers and guarantees that the forest is economically exploited in a viable manner. In the second one, the assessment aims to assure that products traded in the market were manufactured with environmentally and socially responsible sources. Each FSC certificate is issued for a period of five years, after which a recertification must be performed. The paragraphs below will provide a description and an analysis of the first form of certification.

FSC management certification activities are guided by ten principles to which any forest undertaking must comply with before the attribution of FSC certification. Inside each principle, a variety of criteria address practical paths to determine whether they are being complied. The principles are applicable worldwide to a variety of forest biomes as well as to a broad scope of cultural, political and legal structures. The literal content of FSC principles encompass a wide variety of issues and reflect the four pillars of sustainable development, as they seek a forest management that is environmentally adequate, socially beneficial, economically feasible and committed to transparency and accountability. The principles and the criteria are the foundation of the FSC certification system and, together with the preamble and the glossary, constitute the core of a complete set of standards (FSC, 2015, p. 7). The principles and the criteria are reviewed by the General Assembly that is opened to all members and interested individuals. These principles are then transformed into national standards that serve as a basis for the on-ground certification of forest management units by independent, FSC-accredited auditing firms (PATTBERG, 2011, p. 266).

The environmental side of FSC is found on principle 6 about environmental impacts and values and on principle 9 about high conservation values. The first one requires the certified entity to maintain, keep and/or restore ecosystem services and environmental values of the management unit and to avoid, repair or mitigate negative environmental impacts. A comprehensive list of indicators is provided, which allows identification of fulfillment of the principle. For the sake of clarity, the indicators can be grouped as previous to the activities on the management unit⁷⁷ and as concomitant to the activities on the management unit⁷⁸. The second environmental principle imposes on the certified entity the duty to maintain and/or improve the high conservation values in the management unit through the application of a precautionary approach⁷⁹.

The social side of FSC is found on principle 2 about rights of workers and employment conditions and on principle 3 about rights of indigenous peoples. The first

⁷⁷ The indicators that integrate this group impose the following duties on the certified entity: evaluation of environmental values in the management unit and of those ones outside the unit, but that can be potentially affected by the management activities; identification and evaluation, before the beginning of activities with impact on the ground, of the scale, intensity and risk of potential impacts of management activities on identified environmental values; identification of effective action to be implemented to prevent negative impacts of management activities on environmental values and to mitigate and repair the produced impacts and prohibition to certify management entities that include plantations that were established in converted areas of natural forests after November 1994. This prohibition is qualified by the possibility of certification in cases in which there are clear and sufficient evidences that the certified entity was not direct or indirectly responsible for the conversion, the conversion reaches a very limited portion of the area of the management unit and is producing conservation benefits in the management unit that are clear, substantial, additional, safe and in the long term.

⁷⁸ The indicators inserted on the second group comprise the following obligations of the certified entity: protection of rare and threatened species, as well as their habitats in the management unit through conservation areas, protection and connectivity areas and/or other direct measures for its survival and viability, taking into consideration the geographic range and the ecological requisites of rare and threatened species besides the boundaries of the management unit; identification and protection of representative sample areas of native ecosystems and or restoration towards more natural conditions and, when these areas are inexistent or insufficient, restoration of a proportion of the management unit towards more natural conditions; maintenance in an effective manner of the continuous existence of species and native genotypes and avoid losses of biological diversity, specially through the management of the habitats in the management unit; protection or restoration of natural streams and bodies of water, riverside areas and its connectivity; management of the landscape to maintain and/or restore a variable mosaic of species, sizes, ages, geographical scales and regeneration cycles and the prohibition to convert natural forests in plantations and to convert natural forest or plantations into places converted directly from natural forest to other land use. The prohibition is qualified by the possibility of conversion when it reaches a very limited portion of the area of the management unit, allows the obtaining of conservation benefits that are clear, substantial, additional, safe and on the long term in the management unit and does not harm or threaten high conservation values nor spaces and resources necessary to maintain or improve these values.

⁷⁹ Its indicators obliges the certified entity to adopt the following measures: evaluation and registry of the presence and status of environmental values, namely diversity of species, ecosystem on the level of landscape and mosaic, ecosystems and habitats, critical services of the ecosystem, communitarian needs and cultural values; development of effective strategies to maintain and/or improve the high conservation values identified; implementation of strategies and actions that put in practice the precautionary approach to maintain and/or improve high conservation values identified; the demonstration of the performance of a periodic monitoring to evaluate changes in the status of high conservation values and the adaptation of its management practices to guarantee its effective protection.

one requires the certified entity to maintain or improve the economic and social wellbeing of workers⁸⁰. The second one obliges the certified entity to identify and support the legal and customary rights of indigenous people in what regards property, management and use of the land, territories and resources affected by management activities⁸¹.

The economic side is not foreseen in isolation in one specific principle, but is found in principles whose content is a synergy between pillars of sustainable development. Principle 5 about forest benefits provides an example, according to which a certified entity must manage efficiently a range of products and services of the management unit in order to maintain or improve its long-term economic viability and a group of environmental and social benefits. The indicators encompassed by this principle foresee economic measures⁸² that are constrained by environmental limits⁸³.

The commitment to transparency and accountability and thus the good governance side is found on principle 7 about management planning. This principle requires that each certified entity shall have a management plan. This plan shall be implemented and maintained up to date and aims to foster adaptive management. The

⁸⁰ The indicators of this principle are the following: support of labor rights and principles, promotion of gender equality, implementation of health and safety practices to protect the workers in face of risks against labor safety and health, payment of remuneration that comply with minimum rules of forest sector or exceed them, development of mechanisms to determine a minimum living wage when it and a legal minimum wage do not exist, demonstration that workers have specific training and supervision for each position and the implementation of mechanisms to resolve complaints and to award fair compensation to workers for losses and damages occurred while they work for a certified entity.

⁸¹ The indicators of the second principle are as follows: identification of indigenous people inside a management unit or affected by management activities; identification of the rights of indigenous people to possession, access and use of forest resources and ecosystem services, their customary rights and the rights and obligations applicable to a management unit; recognition and support of legal and customary rights of indigenous people to retain control over management activities inside a management unit; establishment of a binding agreement between the entity and the indigenous people, when they delegate control over management activities, through a process of informed, previous and free consent; recognition and support of rights, customs and culture of indigenous people; identification of spaces that are of special cultural, ecologic, economic, religious or spiritual importance to indigenous people or in which they own legal or customary rights and support of the rights of indigenous people to protect and use their traditional knowledge and to compensate indigenous people for the use of these knowledge and of its intellectual property.

⁸² The economic indicators comprise the identification, production or making production possible of benefits and/or diversified products based on a range of ecosystem resources and services existing in the management unit to strengthen and diversify the local economy; the harvest of products and services from the management unit, the demonstration that positive and negative externalities of operation are inserted in the management plan; the use of local processing, local services and local value adding to comply with the requirements of the certified entity and the demonstration of commitment to long-term economic viability.

⁸³ Environmental limits can be identified on the need to achieve the first indicator described on the previous footnote in a proportional manner to the scale and intensity of management units; the harvest foreseen on the second indicator at a level which can be permanently sustained or below it; the achievement of the fourth indicator in a manner proportional to scale, intensity and risks and the achievement of the fifth indicator also in a manner proportional to scale, intensity and risks.

indicators inside this principle provide the content of the management plan⁸⁴ and the measures to be taken to ensure its transparency and accountability towards stakeholders⁸⁵.

Synergies between the sides of sustainable development can be found on principle 1 about compliance with laws, principle 4 about relationship with the communities, principle 8 about monitoring and evaluation and principle 10 about the implementation of management activities. The synergies between the original dimensions of sustainable development will be firstly analyzed to then be followed by the examination of the synergy with the dimension of good governance. The first principle reflects a connection between the economic, the environmental and the social sides of sustainable development and requires the certified entity to comply with all applicable laws, regulations and nationally ratified international treaties, as well as applicable conventions and agreements. The set of indicators inside this principle covers economic⁸⁶, environmental⁸⁷ and social⁸⁸ measures that must be taken to reveal compliance with laws. The second principle reflects a synergy between the economic side and the social side of sustainable development and mandates the certified entity to

⁸⁴ The indicators in this first sub-group require the certified entity to take a series of measures. It must include in the plan policies and goals for management, which are environmentally adequate, beneficial to society and economically viable; implement a management plan that is fully coherent with its policies and objectives, that describes the existing natural resources in the management unit and that explains how the plan will comply with FSC certification requirements; provide how forest management planning and social management planning will be covered; insert verifiable targets that allow the evaluation of progress towards each prescribed management objective; update and periodically review the management planning and procedural documentation in order to incorporate results of monitoring and evaluation and to respond to changing environmental, social and economic circumstances.

⁸⁵ The indicators to be implemented in the second sub-group are the following: incorporation of the summaries of policies and objectives to the management plan and their publication; update and review processes to involve stakeholders or new scientific and technical information; make publicly available a summary of the management plan for free as well as other relevant parts of the management plan to affected stakeholders upon request and at a cost of reproduction and handling and promotion in a proactive and transparent manner of the engagement of affected stakeholders in its management planning and monitoring processes and of interested actors if they so require.

⁸⁶ The economic indicators constitute the provision for harvest of products and/or supply of ecosystem services from within the management unit, the payment of the legally foreseen amounts associated with such rights and obligations, compliance with all applicable national and local laws, ratified international conventions and mandatory codes of practice related to the transport and trade of forest products inside and from the management unit and/or until the first point of sale, the publication of the commitment not to offer or receive bribes in money or any other form of corruption and compliance with legislation on the fight against corruption, if existent. When it does not exist, the certified entity must implement other measures against corruption proportional to the scale and intensity of management activities and the risk of corruption.

⁸⁷ The environmental indicator is the following: development and implementation of measures and/or collaboration with regulatory entities to protect in a systematic way the management unit in face of the use of resources and illegal or unauthorized settlements as well as in face of other illegal activities.

⁸⁸ The social indicator consists on the demonstration that the legal status of the management unit, which includes the rights of possession and use and their limits, are clearly defined. Implicit in this indicator are the limits of the right to dispose of a good and the need to comply with the social function of property.

contribute to the keeping or improvement of the social and economic well-being of local communities. The group of indicators inside this principle covers the identification of existing conditions inside a management unit⁸⁹ and the implementation of positive measures by the certified entity of economic nature⁹⁰, social nature⁹¹ and that combine economic and social aspects⁹². The fourth principle reflects an interaction between the economic and social sides of sustainable development and requires the management activities to be selected and implemented according to economic, environmental and social goals and objectives of the certified entity and in conformity with principles and criteria as a whole. The indicators inserted on this principle provide economic⁹³ and environmental measures⁹⁴ to be undertaken during management activities.

⁸⁹ The indicators to be implemented by the certified entity inside this first sub-group are the following: identification of local communities inside a management unit and that can be affected by management activities to be followed by the identification of their tenure rights, access and use of forest resources and ecosystem services, as well as their customary rights, legal rights and obligations applicable inside a management unit; the identification of places of special cultural, ecological, economic, religious or spiritual importance and in which such local communities have legal or customary rights and the recognition of legal and customary rights of local communities applicable to keep control over management activities inside a management unit or related to it. The delegation of control to third parties by local communities must be done by means of a process of free, previous and informed consent.

⁹⁰ The economic indicators encompass the offering of reasonable employment and training opportunities and other services to communities, contractors and local providers; the implementation of additional activities, involving local communities, which contribute to their social and economic development and the compensation to such communities for the use of their traditional knowledge and the arising intellectual property.

⁹¹ The social indicators embrace the support of the legal and customary rights mentioned on the previous paragraph, the disposal of mechanisms to settle disputes and grant fair indemnities to local communities and individuals, the recognition of the places mentioned above together with their management and/or protection and the support of the rights of local communities to protect and use their traditional knowledge.

⁹² The indicator that provides economic and social measures to be undertaken together establishes the performance of actions to identify, avoid and mitigate significant negative impacts of economic, environmental and social character provoked by the management activities on the affected communities.

⁹³ The economic indicators comprise the management of the development of infra-structure, transportation activities and forestry in a way that hydric resources and the soils are protected and that any disturbance and damage to species, habitats and rare and threatened ecosystems, as well as landscape values are prevented, mitigated or repaired and the management of activities relative to exploitation of timber and non-timber forest products.

⁹⁴ The environmental indicators include the regeneration of the green cover through methods of natural or artificial regeneration to recover, in an adequate term, conditions that are previous to the exploitation or close to the natural ones; the use of species ecologically well adapted to a place and to management objectives; the use of exotic species only when the knowledge and/or experience have demonstrated that any impact produced by its invasive character can be controlled and that there are efficient mitigation measures; the prohibition of the use of genetically modified organisms in the management unit; the use of forestry treatments that are ecologically appropriate to vegetation, species, sites and management objectives; minimization or avoidance of use of fertilizers; the use of an integrated management of pests and forestry systems that avoids or tends to eliminate the use of chemical pesticides; the minimization, monitoring and strict control of the use of biological control agents according to scientific protocols internationally accepted; the evaluation of risks and the implementation of activities that reduce potential negative impacts of natural disasters and the elimination of waste materials in an environmentally adequate form.

A synergy between one side of sustainable development and the side of good governance is found in the aforementioned third principle. A connection between the environmental side and the good governance side is identified in so far as the certified entity must demonstrate that the progress towards compliance of management objectives, the impacts of management activities and the conditions of the management unit are monitored and evaluated with the objective of implementing adaptive management. The indicators foreseen on this principle encompass environmental measures⁹⁵ and measures on good governance issues⁹⁶ to be adopted.

Besides the understanding of FSC principles and criteria, the literature points out the need to interpret them accurately during a forest certification. Although certification bodies may employ FSC's generic standard to certify operations around the world, the principles and criteria are written at a high level of abstraction and need to be further elaborated in the form of indicators (and, sometimes, verifiers) to meet national and local requirements (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 14). Where no national or regional FSC standards exist, certification bodies use their own indicators (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 14). However, a core objective of FSC is to have national working groups undertake the development of indicators relevant to the state or provincial context (CASHORE; GALE; MEIDINGER; NEWSON, 2006, p. 14).

In this sense, FSC has sought to adapt and modify its principles and criteria to local conditions. FSC stimulated the participation of small forest landowners in a certification through the adoption of standards, requisites and simplified procedures adapted to their needs and capabilities and through group certification schemes that are less costly and more concretely feasible to them. These landowners are often agricultural producers and community forestry undertakings, whose property is not explored to industrial ends and are included on market-based mechanisms as certification with the support of intermediary entities. The literature identified the

⁹⁵ The environmental indicators encompass the monitoring and evaluation of environmental impacts arising from the activities undertaken in the management unit and changes in its environmental condition and the implementation of a tracking and tracing system to demonstrate the source and volume in proportion to projected annual output of all products from the management unit that are sold with the FSC certificate.

⁹⁶ The indicators to be implemented in this sub-group are the following: monitoring of the implementation of the management plan, which includes its policies and objectives, its progress with the activities planned and compliance with verifiable targets; analysis of the results of monitoring and evaluation as well as integration of the outcomes of this analysis back into the planning process and the public availability of a summary of the results of monitoring without confidential information and free of charge.

development by FSC of the Small and Low Intensity Managed Forest (SLIMF) protocols with streamlined administrative processes to enable the participation of small-holder foresters (BOAKYE-DANQUAH; REED, 2018, p. 154). Small-holder certification systems remain, however, a relatively new policy tool and their impacts and effectiveness are not well understood (BOAKYE-DANQUAH; REED, 2018, p. 154).

In an effort to clarify this form of certification, the literature co-related the following measures to an effective action of an intermediary: the capacity of an intermediary organization to address the challenges that limits the participation of small-holder foresters in certification (e.g. reduction of transaction costs of participation), improvement of benefits of certification for these foresters (e.g. enhancement of market access and price premiums) and contribution to broader local conservation efforts (BOAKYE-DANQUAH; REED, 2018, p. 155). This action of forest certifiers demonstrate a successful implementation of managerial measures to support small forest landowners that demonstrate the will to comply with forest certification standards.

After the performance of the two types of forest certification, it is up to the certification body to attribute an evaluation of the forest management and of the activities inside a chain of custody. Certification bodies can issue a certificate of SFM practice or chain of custody or remove such a certificate during an inspection in the circumstance in which the holders do not keep compliance with standards of a certification scheme.

Recent numbers about the operation of FSC certification are found on the literature. A study conducted by Ehrenberg-Azcárate and Peña-Claros (2020) focused particularly on the forest management certification performed by FSC collected data from public summaries of certification reports under the FSC scheme produced by third-party certification bodies from 1995 until November 2016 and relative to forest management units (FMUs) located in the tropics that at some point in time had their forest management certified under the FSC scheme and for which documentation was readily available. Among the 543 identified FMUs that had received FSC forest management certification between mid-1995 and late-2016 in the tropical region, covering more than 26 M ha of certified lands, only 59% of the certificates (321 FMUs) were valid at the end of the study periods, representing an area of approximately 15.83 M ha (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 3). Historically, most of

the certified forest area has been used for the production of timber and non-timber products (96%) (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 3). These production areas can be generally classified as natural forests (73%), plantations (21%) or a mix between the previous categories (2%) (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 3). Historically, areas set aside for protection amount to 1% of the total certified area (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 3).

Certified FMUs within the tropics have their forests pertaining to different biomes, ranging from tropical to temperate forests, the latter typically found in high altitude areas (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 3). Historically, most of the certified area has been in the tropical biome (391 certificates, 21.84 M ha), followed by the subtropical biome (66 certificates, 2.95 M ha) and the temperate biome (52 certificates, 0.34 Mha) (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 3). This broad reach of diverse biomes by forest certification allows the overcoming of the geographical limitation of the ITTA.

These data also allow the overcoming of the criticism by stakeholders in developing countries, who allege that FSC standards largely reflect the interests of foresters from the North and that FSC effects could be detrimental according to a development perspective. This criticism arises from the data that over four-fifths of the FSC-certificated wood still originates from Europe and North America, which implies that certification gives advantage to producers from countries whose legal requirements are already in line with the FSC standards (PATTBERG, 2011, p. 270). As the argument moves on, the situation for developing countries is different as timber-producing countries from the South and the North are hardly alike (PATTBERG, 2011, p. 270). Whereas industrialized countries have to make relatively few changes to their existing forestry practices as a result of already high standards in most Northern producer countries, developing countries have to make substantial investments in order to meet the certification requirements, often resulting in a comparative disadvantage vis-à-vis their competitors (PATTBERG, 2011, p. 270). A developing country company would then need to adjust its manufacturing processes and production methods, even though it is in conformity with its own domestic environmental laws. Companies from developing countries in foreign developed countries would also be hit by certification criteria that they are unable to comply with due to technological motives and by the inadequacy of the criteria to the companies' geographical or economic conditions.

The analysis of tropical natural forests reveals an increase of their certified areas. The period from 2003 to 2009 experienced a fast increase in the certified area, going from about 2 M ha to over 11 M ha, while from 2009 onwards the rate of increase in the net certified area dropped dramatically as many certificates were terminated during this period, particularly in the Americas (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 4). At a continental level different trends are identified. The Americas experienced a steady decrease in certified natural tropical forest area since 2008 as, in this region, 69 FMUs lost their certificates in 2008-2016, representing an area of almost 3.5 M ha (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 4). Conversely, the certified area in Africa increased dramatically since 2007, from less than one to nearly 5.5 M ha (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 4). Asia has sustained a steady growth in the certified area and is likely to surpass the Americas during the coming years if these patterns remain constant (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 4).

The study also sheds light on the continental distribution of FMUs integrated by production forests and natural forests that underwent forest certification. The study reveals that by the end of 2016 most of the certified forest area was located in Africa, followed by the Americas and Asia, as the tropics experienced a period of stagnation regarding certified area growth during the last decade, partly as a consequence of a pantropical wave of certificate terminations that started in 2008, having a severe impact in the Americas and a moderate one in Asia and Africa (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 1). The reduced number of certificate terminations in Africa was compensated by the acquisition of forest terrain during the last decade analyzed due to the certification of huge FMUs, notably in Gabon, Cameroon and Republic of Congo. Concomitantly, a large number of certificates were terminated in the Americas, considerably reducing the certified area in the region (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 4). Inside the Americas, most of the certificates that were active in 2016 belonged to FMUs in Mexico (51 certificates), followed by Brazil (19 certificates), Bolivia (8 certificates) and other countries (EHRENBERG-AZCÁRATE; PEÑA-CLAROS, 2020, p. 4).

3.4.2. Forest certification performed by PEFC

The forest certification conducted by PEFC is based on four main document types, namely international standards, benchmark standards, procedural documents and

guidance documents. The first ones have direct applicability and encompass the standards for chain of custody, trademarks and certification body requirements for chain of custody. The chain of custody standard underwent an adjustment of its elements and can be applied as a due diligence system. The second ones provide requisites to be complied by national standards and their development process in order to obtain PEFC endorsement, but are not applied directly. An example of benchmark standard is the SFM standard. The third ones regulate the operation of the PEFC system. The procedure for the assessment and endorsement of national standards and the administrative procedures for the national members are inserted in this category. The last ones foresee further guidance for users of PEFC standards. Despite the broad reach of the aforementioned documents, PEFC does not address directly illegal logging.

After the understanding of the documents that guide PEFC certification, it is possible to explain the operation of sustainable forest management certification. It guarantees the management of forests in conformity with environmental, social and economic requisites.

In its activities, PEFC establishes a globally applicable benchmark that national forest certification systems must meet or exceed, rather than a fixed set of requirements and criteria that apply everywhere in the same manner, irrespective of regional or national differences. PEFC's work together with national forest certification systems allows countries to shape their own SFM requirements according to their particular forest ecosystems, their legal and administrative systems, their social and cultural conditions and other key factors, provided that it adheres to the PEFC benchmark requirements. All important stakeholders contribute to the creation of a national system, in other words, they participate in ascertaining the meaning of SFM inside their country and in the identification of ways to implement it domestically. The presence of stakeholders from diverse backgrounds ensures that no one interest can dominate the process and there must be consensus on the final requirements. This aspect is essential to the PEFC's successful performance as the ones that manage forests are empowered to act in conformity with the standards that they contributed to create. The autonomy of stakeholders to create their national systems is limited by PEFC international requirements mentioned above that prescribe the coverage of national standards and the acts to be performed during the creation process. It is also possible that national systems go beyond PEFC international requirements through the inclusion of additional and domestically relevant requisites. After the creation of a national certification system,

they are subject to an independent assessment, including a public consultation, to verify their compliance with PEFC benchmark requirements. If compliance is verified, the PEFC Council General Assembly approves national forest certification schemes which comply with PEFC Council standards and addresses this point by incorporating national forest certification schemes and standards which are suitable and adaptable to local situations (DLAMINI; MONTOUROY, 2017, p. 25).

The third-party certification is performed by certification bodies that are independent from their customers and from PEFC. Another requirement of certification bodies is that they be “PEFC notified”, which means that they must have the required accreditation to demonstrate that they operate in conformity with PEFC and ISO requisites. This feature allows a high degree of certainty that PEFC certificates are provided by impartial certification bodies that comply with standardized ISO procedures and employ competent auditors that were qualified after continuous PEFC training. The activity performed by a certification body is an audit to verify compliance with all PEFC requirements. In a forest management certification, besides the audit, stakeholders must be consulted and the audit report must be published. When a certification body verifies during an audit that there is no compliance with certain requisites, a nonconformity will be issued. The elimination of all nonconformities is condition *sine qua non* to the granting of a PEFC certificate. An issued certificate remains valid for a maximum period of five years. During this validity period, the certification body must visit the certified entity annually to perform a surveillance audit to verify whether compliance with PEFC requisites remains. After five years, a renewal of the certificate is possible as a result of a successful recertification. The requisite of elimination of all nonconformities must be met before a certification renewal.

Besides certification, the compliance of PEFC international requirements by a national system is assessed through endorsement. Endorsement is PEFC’s process to ensure that national forest certification systems meet its international requirements (PEFC, 2020). Endorsement, thus, corresponds to an approval of national forest certification systems. Endorsement happens by means of a strict assessment procedure that takes place during around nine months and is performed by a third-party assessor. The assessment procedure comprises a sequence of steps and its main part consists on the evaluation of the degree of compliance of the national system with PEFC SFM

benchmark (ST 1003)⁹⁷ and of the compliance of the standard development process with PEFC standard-setting requirements (ST 1001)⁹⁸. A PEFC registered assessor is competent to evaluate whether national forest certification systems comply its international requisites. Each registered assessor is an independent consultant with appropriate competences and experience in the area of SFM whose tasks comprise new national systems as well as reviewed and reaffirmed systems. The evaluation conducted by an assessor constitutes a relevant professional and concrete basis to a decision of approval and endorsement of a system. The systems that undergo the aforementioned assessment procedure in a successful manner become PEFC-endorsed. The approval in the assessment procedure guarantees also the use of raw materials originated from sustainably-managed forests in the production of a good, the meeting of global expectations and a consistent application of international requisites at the domestic level. In practical terms, forest-based products certified to a PEFC-endorsed national system are considered PEFC-certified anywhere in the world and are eligible to carry the PEFC label (PEFC, 2020).

After the achievement of a PEFC endorsement of a national forest certification system, national standards undergo regular review, which aim to provide verification of continuous compliance with PEFC benchmarks. The review procedure allows the identification of the incorporation or not of up-to-date scientific research, practical experiences and best practices of the area, as well as values that undergo an evolutionary interpretation and society's expectations and aspirations towards SFM. Milestones to be accomplished by national systems to keep their endorsements are the beginning of a periodic review of a national standard five years after the preceding national approval, the conclusion of the national revision process during a period of two years and the successful approval of the system in the evaluation by the registered

⁹⁷ Among the content of the standard, it provides the following operational criteria: maintenance or appropriate enhancement of forest resources and their contribution to the global carbon cycle; maintenance of forest ecosystem health and vitality; maintenance and encouragement of productive functions of forests (wood and non-wood); maintenance, conservation and appropriate enhancement of biological diversity in forest ecosystems; maintenance or appropriate enhancement of protective functions in forest management (notably soil and water) and maintenance or appropriate enhancement of socio-economic functions and conditions.

⁹⁸ The standard provides PEFC's requisites to be applied by standardizing bodies during the development, review and revision of standards for forest management and system-specific chain of custody standards relative to forest products. The guiding principles to the standard-setting process are the following: stakeholder engagement, balanced representation, consensus, improvement and transparency. The standard-setting process comprises the following steps in a sequence: standard proposal, stakeholder mapping, public announcement and stakeholder invitation, establishment of a working group, drafting of the document, public consultation and pilot testing, consensus on final draft, formal approval of the standard and publication of the standard. The standard shall be reviewed and revised at periodic intervals.

assessor during a period of three years. The regular review thus allows the continuous monitoring of national systems and the guarantee that they undergo their national periodic review procedures and that they continue to comply with PEFC benchmarks.

The understanding of PEFC certification procedures allows a move towards the analysis of SFM certification benchmarks in more depth. PEFC sustainable management certification activities are guided by operation criteria and compliance requirements that must be followed before the granting of PEFC certification. Inside each criterion, a variety of sub criteria provide practical operational conducts to determine whether each criterion is being complied. The criteria are applicable at regional, national and sub-national levels to a variety of forest biomes aiming to ensure the alignment of the standards at these levels with PEFC's sustainability benchmarks. In the same sense, compliance requirements address issues to be considered on the planning of forestry activities. The literal content of PEFC criteria and compliance requirements gathers a broad variety of issues and reflects the four pillars of sustainable development, as they aim to achieve a forest management that is environmentally sound, with social benefits, economically practicable and in line with transparency and accountability.

The environmental side of PEFC is found on criterion 1 on maintenance or appropriate enhancement of forest resources and their contribution to the global carbon cycle, on criterion 2 on maintenance of forest ecosystem health and vitality, on criterion 4 on maintenance, conservation and appropriate enhancement of biological diversity and on criterion 5 on maintenance or appropriate enhancement of protective functions in forest management. Inside the first one, sub criteria require the maintenance or increase of forests and their ecosystem services, the safeguard of the quantity and quality of forest resources and of the capacity of the forest to store and sequester carbon in the medium and long term, the encouragement of climate positive practices in management operations, justified circumstances for forest conversion⁹⁹, justified circumstances for afforestation of ecologically important non-forest ecosystems¹⁰⁰ and the need of

⁹⁹ The justified circumstances foreseen are the following: the conversion is in compliance with national and regional policy and legislation applicable for land use and forest management and is a result of national or regional land-use planning governed by a governmental or other official authority including consultation with affected stakeholders; entails a small proportion (no greater than 5 %) of forest type within the certified area; does not have negative impacts on ecologically important forest areas, culturally and socially significant areas, or other protected areas; does not destroy areas of significantly high carbon stock and makes a contribution to long-term conservation, economic, and social benefits.

¹⁰⁰ The established justified circumstances are as follows: the conversion is in compliance with national and regional policy and legislation applicable for land use and forest management and is a result of

addition of economic, ecological, social and/or cultural value for the conversion of severely degraded forests to forest plantations together with the preconditions¹⁰¹ of adding such value.

The second one touches upon a variety of measures and its sub criteria provide obligations on the maintenance of the forest ecosystem and on the exploitation of the respective ecosystem. The first ones require the rehabilitation of degraded forest ecosystems wherever and as much as economically practicable and the encouragement or maintenance of adequate genetic species and structural diversity. The second ones require a limited use of fire where fire is an essential tool in forest management or a recognized practice of indigenous people, the application of forest management practices¹⁰², the avoidance of indiscriminate disposal of waste on forest land, the prevention of the spillage of oil or fuel during forest management operations, the presence of emergency procedures to minimize tree and/or soil damages, the implementation of integrated pest management and appropriate silviculture alternatives to minimize the use of pesticides, the documentation of use of pesticides, prohibition of highly toxic pesticides¹⁰³ and the application of fertilizers in a controlled manner and with due consideration for the environment.

national or regional land-use planning governed by a governmental or other official authority; is established based on a decision-making basis where affected stakeholders have opportunities to contribute to the decision-making on conversion through transparent and participatory consultation processes; does not have negative impacts on threatened (including vulnerable, rare or endangered) non-forest ecosystems, culturally and socially significant areas, important habitats of threatened species or other protected areas; entails a small proportion of the ecologically important non-forest ecosystem managed by an organisation; does not destroy areas of significantly high carbon stock and makes a contribution to long-term conservation, economic, and social benefits.

¹⁰¹ Preconditions are circumstances in which the conversion: is in compliance with national and regional policy and legislation applicable for land use and forest management and is a result of national or regional land-use planning governed by a governmental or other official authority; is established based on a decision-making basis where affected stakeholders have opportunities to contribute to the decision-making on conversion through transparent and participatory consultation processes; has a positive impact on long-term carbon sequestration capacity of forest vegetation; does not have negative impacts on ecologically important forest areas, culturally and socially significant areas, or other protected areas; safeguards protective functions of forests for society and other regulating or supporting ecosystem services; safeguards socio-economic functions of forests, including the recreational function and aesthetic values of forests and other cultural services; has a land history providing evidence that the degradation is not the consequence of deliberate poor forest management practices and is based on credible evidence demonstrating that the area is neither recovered nor in the process of recovery.

¹⁰² On this measure, the practices highlighted are reforestation and afforestation with tree species and provenances that are adequate to the site conditions and the use of tending, harvesting and transport techniques that minimize tree and/or soil damages.

¹⁰³ The subcriteria provide specifications on this issue. Pesticides such as chlorinated hydrocarbons whose derivatives remain biologically active and accumulate in the food chain beyond their intended use and any pesticides banned by international agreement shall be prohibited. Moreover, the use of pesticides shall follow the instructions given by the pesticide producer and be implemented with proper equipment by trained personnel.

Criterion 4 foresees sub criteria that imply an abstention or a positive action during harvesting and forestry. The first ones require that protected, threatened and endangered plant and animal species shall not be exploited for commercial purposes¹⁰⁴ and the non-use of genetically modified trees based on the precautionary principle. The second ones require that management planning shall aim to maintain, conserve or enhance biodiversity on landscape, ecosystem, species and genetic levels; that inventory, mapping and planning of forest resources shall identify, protect, conserve or set aside ecologically important forest areas; that successful regeneration shall be guaranteed through natural regeneration or planting that is adequate to ensure the quantity and quality of the forest resources; the promotion of afforestation, reforestation and other tree planting activities that contribute to the improvement and restoration of ecological connectivity; the promotion of a diversity of horizontal and vertical structures and of a diversity of species such as mixed stands; the support of traditional management practices that create valuable ecosystems on appropriate sites; the conduction of tending and harvesting operations in a way that does not cause lasting damage to ecosystems and, wherever possible, of practical measures to maintain or improve biological diversity; the planning and construction of infrastructure in a way that minimizes damage to ecosystems and that takes threatened or other key species; that measures shall be taken to control the pressure of animal populations on forest regeneration and growth as well as on biodiversity and that standing and fallen dead wood, hollow trees, old groves and rare tree species shall be left in quantities and distribution necessary to safeguard biological diversity.

Criterion 5 provides measures to maintain or appropriately enhance protective functions in forest management with a focus on soil and water. Its sub criteria require in broad terms that protective functions of forests for society¹⁰⁵ shall be maintained or enhanced, the mapping of areas that fulfill specific and recognized protective functions for society, that forest management plans and operations ensure the maintenance or enhancement of these functions, that techniques applied and the machinery used shall be suitable for such areas and that special measures shall be taken to minimize the pressure of animal populations on these areas. In what regards soil, there are requirements of

¹⁰⁴ This subcriterion also provides a positive measure, according to which, where necessary, measures shall be taken for the protection of endangered plant and animal species and, where relevant, to increase their population.

¹⁰⁵ The functions enumerated on this subcriterion are the potential role of forests in erosion control, flood prevention, water purification, climate regulation, carbon sequestration and other regulating or supporting ecosystem services.

special care to be given to forestry operations on sensitive soils and erosion-prone areas and of construction of infrastructure in a way that minimizes bare soil exposure. In what concerns water, the requirements fall on special care in areas where operations might lead to excessive erosion of soil into watercourses, to forestry operations in forest areas with water protection functions to avoid adverse effects on the quality and quantity of water resources, the avoidance of the inappropriate use of chemicals or other harmful substances or inappropriate silvicultural practices influencing water quality in a harmful way, the protection of downstream water balance and water quality, the avoidance of introduction of soil into watercourses and the preservation of the natural level and function of water courses and river beds.

The social side of PEFC is found on requirements about legal compliance; legal, customary and traditional rights related to forest land; fundamental ILO conventions and health, safety and working conditions. Considering the first topic, an organization shall comply with applicable local, national and international legislation on property, tenure and land-use rights for indigenous peoples, local communities or other affected stakeholders; health, labor and safety issues.

On the second topic, two requirements are foreseen. The first one refers to legal, customary and traditional rights related to the forest land that shall be clarified, recognized and respected. The second one refers to forest practices and operations that shall be conducted in recognition of the established framework of legal, customary and traditional rights such as outlined in ILO Convention n° 169 on Indigenous and Tribal Peoples and the UN Declaration on the Rights of Indigenous Peoples, which shall not be infringed upon without the free, prior and informed consent of the holders of the rights, with the provision of compensation where necessary.

On the third topic, a shorter one, there is the requirement that forest practices and operations be in compliance with fundamental ILO conventions¹⁰⁶. A note on this topic clarifies that in countries in which a fundamental convention has not been ratified and its content is not foreseen by applicable legislation, specific requirements shall be inserted in the forest management standard.

¹⁰⁶ The fundamental ILO conventions listed on PEFC standard are ILO Convention n° 29 on Forced Labor, ILO Convention n°87 on Freedom of Association and Protection of the Right to Organize, ILO Convention n° 98 on the Right to Organize and Collective Bargaining, ILO Convention n° 100 on Equal Remuneration, ILO Convention n° 105 on Abolition of Forced Labor, ILO Convention n° 111 on Discrimination; ILO Convention n° 138 on Minimum Age, ILO Convention n° 169 on indigenous and tribal peoples and ILO Convention n° 182 on the worst forms of child labor.

On the fourth topic, in what regards health, there must be the planning, organization and performance of forest operations in a manner that enables the identification of health and accident risks and the application of all reasonable measures to protect workers from work-related risks. Moreover, workers shall be informed about the risks involved with their work and about preventive measures. In terms of safety and working conditions, there must be the provision of guidance and training in safe working practices to all those who were attributed to a task in forest operations. On working conditions, firstly, working hours and leave must be in conformity with national laws or applicable collective agreements. Secondly, wages of local and migrant forest workers as well as of contractors and other operators operating in PEFC-certified areas must meet or exceed at least legal, industry minimum standards or, where applicable, collective bargaining activities. Thirdly, there must be a commitment by an organization to equal opportunities, non-discrimination and freedom from workplace harassment. Fourthly, there must be promotion of gender equality.

The commitment to good governance is found in sparse terms of the PEFC standard. On support measures, the standard requires effective communication and consultation with local communities, indigenous peoples and stakeholders on sustainable forest management. On criterion 1, sub criterion 5 must be highlighted as it provides that afforestation of ecologically important non-forest ecosystems shall happen in the condition in which there is a decision-making framework where affected stakeholders can contribute to the decision-making on conversion by means of transparent and participatory consultation processes.

A synergy between the environmental side of sustainable development and its economic side is found on criterion 3 about the maintenance and encouragement of productive functions of forests. The synergies can be found on sub criteria with multiple requirements. Initially, the maintenance of the capability of forests to produce a range of wood and non-wood forest products and services is required. Following it, the additional requirements fall on the practice of harvesting and forestry. They establish the pursuit of sound economic performance with the consideration of possibilities for new markets and economic activities in connection with goods and services of forests, the carrying out of management, harvesting and regeneration operations at a time and in a way that does not reduce the productive capacity of the site, the harvesting of wood and non-wood forest products at levels that do not exceed a rate that can be sustained in the long term, optimum use of harvested products and the planning, establishment and

maintenance of adequate infrastructure to guarantee efficient delivery of goods and services while minimizing negative impacts on the environment.

A synergy between the economic side of sustainable development and its social side is present on criterion 6 about the maintenance or appropriate enhancement of socio-economic functions and conditions. The synergies can be found on sub criteria that require forest management planning respectful of all socio-economic functions of forests; conditions for public access to forests as respect for ownership rights, safety and the rights of others; management or protection of sites with recognized historical, cultural or spiritual significance and of areas essential to the needs of indigenous people and local communities in a manner that takes due regard of the significance of the site; promotion of long-term health and well-being of communities within or contiguous to the forest management area¹⁰⁷; the best use of forest-based experience and traditional knowledge, innovations and practices as those of forest owners, NGOs, local communities and indigenous peoples and due regard to the role of forestry in local economies with special consideration to new opportunities for training and employment of local people.

3.4.3. Comparison between FSC and PEFC

Before the comparison between FSC and PEFC founded on the literature based on the information analyzed above, it is worth mentioning the similarities between the two schemes provided by the literature. Both FSC and PEFC are similar certification systems which focus on source-oriented standards in an effort to achieve SFM and sustainably produced wood (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 155). They have the same primary goal, which is to maintain and sustain the ecosystem integrity and its social functions (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 155). Their mission is, quite simply, sustainable tropical forest management and, therefore, their proposed solution is developing a set of global sustainable forestry principles and criteria, engaging national and sub-national multi-stakeholder committees to develop regionally appropriate standards, inviting third parties to audit forestry operations for compliance, and finally, certifying those who pass the test (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 155). Another similarity is found on the parameters adopted to the certification. Both PEFC and FSC publish global benchmark

¹⁰⁷ Where appropriate, this promotion can be supported by engagement with local communities and indigenous people.

standards that need to be adapted at the national level. In FSC, principles and criteria remain largely unchanged and indicators can be adapted. In PEFC, the entire standard can be adapted. However, as analyzed since chapter 2, they compete against each other and these competitive elements will be revealed on the comparison below.

The comparison between the two main international forest certifiers will fall on the activity closest to the sustainability issues, forest management certification. In both schemes, forest owners and companies, once certified, can insert in the market their goods and services that are qualified as environmentally adequate, useful to the society and economically feasible.

A comparison of the content of FSC principles and criteria and of PEFC sustainability benchmarks reveals also a thematic similarity. This can be concluded from the literature on forest certification, which demonstrates that FSC principles and PEFC principles refer both to the following forest management components: compliance with laws and satisfaction of financial obligations, implementation of reduced-impact logging, social impact assessment and community development programs, environmental management and monitoring plans, biodiversity conservation, worker rights, health and safety and yield of sustainability and silviculture (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 149).

The literature reveals, however, that the depth of the way in which each component is addressed by each forest certification scheme differs. The comparison provided by Kartika, Hariyadi and Cerdikwan (2020, p. 149) falls on the following forest management components: compliance with laws and satisfaction of financial obligations, implementation of reduced-impact logging, social impact assessment and community development programs, environmental management and monitoring plans, biodiversity conservation, worker rights, health and safety and yielding of sustainability and silviculture.

In terms of compliance with regulations and satisfaction of financial obligations, PEFC and FSC resemble. Examples of similarities are concessions that have to abide with national legislations, pay all of the financial obligations to the government and state explicitly their commitment to SFM (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 149). In addition, PEFC has some additional requirements such as to identify an adequate infrastructure for delivery of goods and protection of ecosystem, and to carry out R&D activities (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 149).

With regard to implementation of reduced-impact logging (RIL), resemblances are also found. The PEFC requirement is similar to that of FSC as it includes criteria, e.g. on tree felling, bucking and log yarding, as well as soil and water protection functions (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 149).

As for environmental management and monitoring plan, PEFC requires concessions to provide documentation of measures relating to land use, forest protection functions and forest fire prevention and an R&D plan (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 153). In this regard, the PEFC requirement is in line with those of FSC (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 153). However, the FSC requirement is more detailed than that of PEFC as it lists examples of particular activities that have to be mentioned in the evaluation report if those activities are to be conducted by concessions in the future and requires concessions to include particular measures such as water flow management in their plan (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 153).

Regarding biodiversity conservation and protection, PEFC provides two significant emphases in comparison to FSC. The first one falls on the importance of not only maintaining the (key) protected flora and fauna, endemic, rare, threatened and endangered species and their habitats in accordance with the national regulations and international conventions but also repairing their habitat and features of special biological interests (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 153). The second one falls on the obligation to carry out the environmental impact assessment indicated in the previous point and to incorporate measures to mitigate those impacts and disruptions (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 153). In the framework of forest management components, the PEFC requirements reinforce the existing ones and provide more comprehensive parameters compared to FSC (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 153).

On social impacts and community development, in comparison to FSC, PEFC establishes more comprehensive parameters to the accomplishment of certification requisites relative to indigenous people's rights. Several specific aspects of the PEFC scheme are as follows: (i) the strengthening of the credibility of conflict resolution within the framework of forest management, which is closely related to the customary and legal rights of the indigenous people, through a participatory and equitable agreement and institutionalized mechanism; (ii) the ambitious obligation to carry out a social impact assessment of forest management activities regarding indigenous people

and/or local communities, prior to their implementation and (iii) the obligation for the holder of the forest concession to identify the forest resources that have an important value for recreation purposes and to protect them from the negative impacts of recreation activities (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 154).

Considering workers' normative rights similarities are found between the certifiers analyzed. Both the FSC and the PEFC set more or less comparable requirements regarding the obligation of the forest concession holders to fulfill all related normative rights of workers employed in these sectors in compliance with national regulations and the international conventions, both in their operations and workplace infrastructure (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 154). However, compared to the FSC scheme, PEFC requirements seem to be slightly more imperative in this case in terms of the workers' rights to collective bargaining with their company (KARTIKA; HARIYADI; CERDIKWAN, 2020, p.154).

Lastly, on yielding sustainability and silviculture, the certifiers' parameters differ. PEFC requirements are very general, only requiring that silviculture techniques be included in the management plan and that the harvest rate of forest products not exceed the rate of sustainable production (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 154). FSC, in turn, requires regular monitoring of harvest rates and logging cycles as well as their revision if the rates are not appropriate (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 154).

The literature extracts some conclusions from the comparison provided above. It seems that PEFC does not add important requirements for SFM (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 154). Both FSC and PEFC show many similarities for each forest management component and therefore, even though FSC and PEFC may not complement each other, both of them complement government regulations (KARTIKA; HARIYADI; CERDIKWAN, 2020, p. 154).

An additional comparison can be extracted from the assessment of timber certification systems performed by the Dutch Timber Procurement Assessment Committee (TPAC). Before the start of the comparison, it is worth highlighting that the performance of this assessment confirms the application of forest certification schemes on public procurement policies. The goals of the Committee, through this assessment, are to contribute to the achievement of the government's compromise to procure only sustainable timber and to give advice to the State Secretary on which certification systems can be admitted. FSC International system was evaluated for the last time in

2015, when the Dutch TPAC concluded that FSC is in conformity with the Dutch procurement criteria for timber. The version 5.0 of FSC Principles and Criteria applicable to forest management certification was assessed by the committee, which concluded that it meets Dutch requirements and attributed to all its principles the highest score. TPAC also evaluated PEFC International more recently in 2020, when it attested PEFC International's conformity with Dutch sustainability requirements. PEFC International received top marks for its benchmarks applicable to the sustainable management of forests. The top scores attributed by TPAC to, as written on the summary reports of the final judgment written by TPAC, version 5.0 of FSC principles and criteria and PEFC international standards, reveal that, inside certified areas, conformity to economic, environmental, social and good governance aspects of forests is found.

The comparison of different certification procedures and of the standards and parameters that underlie them is enlightening, but has limitations. Benchmarking generates positive interactions and upward convergence of standards among private certification schemes (OVERDEVEST; ZEITLIN, 2014, p. 33). In other words, through benchmarking for equivalence, the standards of the weaker industry schemes' standards have been raised, although inadequate attention has been paid to comparisons of on-the-ground performance (OVERDEVEST; ZEITLIN, 2014, p. 35). Comparisons mainly based on analyses of written standards are, thus, limited. As such, they lack the capacity to generate disciplined assessments of how well the schemes are working on the ground, which could feed into public accountability, recursive learning, and external pressure for improvement (OVERDEVEST; ZEITLIN, 2014, p. 35).

3.5. Partial conclusions

The starting point of certification regulation is found on the regulatory element that underlies forest certification, standards. The comprehension of the concept of private standards as voluntary documents created by non-governmental entities that are used in a continuous manner and that seek to assure product quality and to protect human, animal and plant life and health permitted the recognition of their application in forest certification. Performance-based standards provide accurate management measures that must be implemented with the objective of achieving compliance as the establishment of a 50 meter buffer zone on each side of a stream that crosses a forest. Management standards attribute discretion to organizations to create management

planning on forest measures as riparian conservation. Beyond this dichotomy that, as analyzed, can be blurred, the international standard ISO 14001 constitutes a parameter to the creation of standards that underpin forest certification and can embrace, for example, the manner through which a product is made as the undertaking of logging together with reforestation and elements of a management system as a group of environmental goals that can embrace reforestation and the maintenance of the native forest.

The analysis of conformity assessment on the multilateral and regional levels demonstrated the existence of a variety of goals to be achieved. The multilateral trade system seeks to avoid new forms of regulatory protectionism and provides on article 5.1.1 of the TBT agreement a MFN obligation applicable to conformity assessment. Protectionism is present when suppliers of like products originating in the territories of other members are granted access under less favorable conditions than those accorded to suppliers of like products of national origin or originating in any other country in a comparable situation. An exception to the MFN obligation is possible, however, instead of demonstrating a legitimate regulatory distinction, a necessary procedural distinction must be demonstrated, which aims to achieve a legitimate objective and which could not be better created or applied to achieve that goal.

On the European level, conformity assessment encompasses first party activities and third party activities. The first ones are mainly applied to products with low risk. The second ones are conducted by third parties with a particular technical skill to evaluate complex and high risk products whose conformity assessment requires tests or trials. Analyzing its functions, conformity assessment firstly establishes a requirement for the manufacturer to sell products on the European market. Secondly, considering the insertion of conformity assessment in the European New Approach, its objective is to make it mandatory for products that are reached by EU harmonization to undergo an assessment of conformity with safety, health and other public interest requirements.

This introductory regulatory perspective of conformity assessment regulation permits a move ahead towards the regulation of sustainable fragments. EMAS, one of the fragments identified, is compulsorily regulated by a European regulation that allows its interaction with other environmental management systems, which can even not integrate the EU, and thus allow a widening of its reach. This connection is partially foreseen in EMAS regulation that establishes a procedure to the recognition of an environmental management system and inside such procedure an essential requisite is

the demonstration of equivalence with the regulation of all important characteristics of the environmental management system to be appreciated. The analysis of Eco-Lighthouse certification scheme revealed that both EMAS and Eco-Lighthouse mutually learned and that a balance was achieved in which Eco-Lighthouse's objective seemed to coincide with the one of the Directorate-General of the Environment. The emphasis on the broad and shared goal of fostering environmental management and certification in general was essential when the Eco-Lighthouse staff and the EMAS committee met each other and also a warning that competition between schemes in which one aims to be prevail over the other would only turn certifiers distant from the concrete problem of environmental degradation.

In an opposite sense to the broad and detailed environmental regulation provided on sustainable fragments, the international regulation of forests is scant and limited. Inside the UN, UNFF was created to be an international platform on forests and forestry topics, but, on experts' meetings to attempt to create a definition of sustainable forestry and on countries' suggestions of national forest programs, it was not possible to deal in an effective manner with political interests behind forest regulation. Also at the UN level, FAO tried to stimulate SFM only by means of planning with a voluntary nature. An examination of hard law and soft law on the issue shows the existence of dedicated instruments that are hard and soft law that seek to address a specific issue as ITTA and CITES and that involve nuclear elements of forest preservation and species protection – and of cross-cutting instruments – hard and soft law that address forest issues as one on a broader spectrum of other issues and whose causes and consequences integrate a broader environmental problem as climate change policies.

These characteristics denote that the international forest regulation sphere is fragmented and polycentric. Fragmentation can be found on the impossibility to create a forest convention as a framework treaty for hard law and soft law and for international and transnational actors. ITTA, an agreement that resembles a framework treaty, has as its shortcomings the limitation to tropical forests and a poor definition of SFM whose references are only to ITTO policy documents and technical guidelines, and was effective solely as a commodity-market adaptation amid timber consumer and producer States. In terms of non-binding tools as certification, it only fostered information sharing for its easier understanding. Polycentrism is identified in a decentralized institutional framework for forest regulation that embraces the UN sphere and Bretton

Woods institutions as the WTO and the World Bank and in a multiplicity of hard law and soft law instruments that seek to support sustainable forest management.

On the regional EU level, the FLEGT Action Plan consists on a possible regulation. Embracing a variety of measures to address illegal logging throughout the world, it emerged from dissatisfaction with the lack of ability to address the issue of forest degradation at the multilateral level and from the soaring political and epistemic consensus gathered on FLEG processes on this topic and on the acknowledgement of necessary policies to combat it. In these circumstances, the EU unilaterally connected the improvement of forest law enforcement and governance (FLEG) to trade (T), which led to the FLEGT Action Plan. Aiming to achieve the goal of limiting the entry of illegal timber within its territory, the EU sought to cooperate with countries that are leading producers of timber and timber products, aiming to to expand the scope of the Action Plan, and created the legislation provided on it, the EU Timber Regulation, to regulate imports of harvested timber and outlaw the illegal ones. VPAs between the EU and producing timber countries are another instrument that stimulates trade of legal timber products and that contributes to close the EU market to illegal products.

The connection between the FLEGT Action Plan and forest certification can be found a specific function of private forest certification schemes. These schemes can be incorporated in sustainable public procurement policies promoted at the EU level and be recognized as a proof of legality and as a measure that addresses illegal logging. In practical terms, as inside the EU public procurement is a competence attributed to each member State, Belgium, Denmark, France, Germany and Netherlands are examples of countries that have adopted public procurement policies on timber acquisition from legal sources. In the same sense, the EU Timber regulation recognizes certification schemes as developing legality assurance standards. A mutual interaction between certification and legality requirements can then be identified in the following way: while monitoring structures creates in voluntary certification programs have been essential to move forward international measures to eliminate illegal wood trade, international legality requirements exert an influence on certification standards and open paths for the reach of certification into new fields. Additional outcomes of the recognition of forest certification schemes as a demonstration of legality are the exposure of these schemes to public surveillance and an increased coherence of the transnational forest governance regime, going beyond the formal dichotomy between public and private authority.

Further benefits can arise from FLEGT licensing and VPAs. The first one guarantees not only the legality of timber and timber products, but also their origin being a country in which there was consensus on forest laws by stakeholders. Besides, the FLEGT license ensures that the issuing country implements a robust forestry system that undergoes an impartial audit that can avoid the insertion of illegal timber in the supply chain. The second ones can enhance the coherence of global forest governance by means of fostering the presence of a variety of instruments of polycentric governance applicable in forest regions and inside countries. Moreover, VPAs can allow the achievement in wood producing areas of collaboration of developing country stakeholders through the promotion of fair solutions for all present interests, the participation of on-site communities and NGOs in forest governance reform and the creation of capacity-building backing that reaches the civil society, the private sector and public authorities.

The sparse and limited international regulation of forests and the initial implementation of the FLEGT Action Plan, a promising regulation, reveal the need of a change of path towards forest conservation. The efforts that in the beginning of the 1990s fell on the conclusion of an international treaty or on a consensual soft law are now on a market-related instrument, certification. Forest certification can attribute concrete effects to the concept of SFM and reveal to the consumer a possible sustainable source of a product. Years after the certification wars, FSC and PEFC are the forest certifiers with an international reach and that encompass a broad area of certified forests.

FSC manages a self-created third-party certification framework on timber and timber products that aims to assess whether products come from sustainable forestry. In its forest management certification, FSC acts guided by ten principles, its certification benchmarks, to which compliance must be demonstrated by a forest undertaking to the attribution of FSC certification. These principles, as explained, provide criteria and indicators that reflect the sides of sustainable development either alone, either in synergies. Moreover, as they are written in abstract terms, they must be formulated in the form of indicators to be in accordance with national and local requirements.

PEFC, on its turn, created a worldwide applicable benchmark which must be met or exceeded by national forest certification systems instead of a permanent group of requirements and criteria applicable in each place and in the same manner. The interaction between PEFC and national forest certification systems allows the creation

in each country of the own SFM requirements and the participation of important stakeholders that represent diverse interests once there is adhesion to PEFC benchmark requisites. These prescribe the coverage of domestic standards and the acts to be undertaken along this creation process. Once created, each national certification system must undergo an independent assessment to determine whether compliance with PEFC benchmarks remains. This assessment, a forest management certification, comprises an audit, the consultation of stakeholders and the audit publishing. In addition to certification, endorsement is a procedure that guarantees that national forest certification systems comply with PEFC international requisites. In practical terms, a certification system to which a PEFC certification was granted is recognized by other systems that bear the same certification.

4. Effectiveness of forest certification: an analysis founded on accreditation and mutual recognition agreements

The issue of how to design regulatory systems that are effective and also reduce expenditure from public funds on public enforcement authorities has become highly relevant for contemporary public policy (HODGES, 2015, p. 463). The cost of public regulation and of private law instruments in times of reducing regulatory burden and the ability of appropriately-designed self-regulation to provide a better method of solving problems of market failure and information asymmetries than conventional public regulation have supported the case for self-regulation and the desirability of maximum feasible self-regulation (HODGES, 2015, p. 464). The general use of standards and certification constitute approaches that can be identified under a broad heading of self-compliance (HODGES, 2015, p. 464).

This chapter aims to analyze the degree to which international forest certification was effective towards the solution of problems to which they were created. The analysis will not be based on a static assessment¹⁰⁸ of the existence of compliance with technical regulations and standards during the performance of a conformity assessment. On forestry issues, this analysis is based on a narrow conception of effectiveness that would consider forest certification as effective in circumstances in which it promotes a direct contribution to settle the issue to which it was created to address. The parameters chosen for the evaluation of the effectiveness of a conformity assessment procedure and for the identification of its shortcomings, in an opposite sense to the aforementioned narrow analysis, are the accreditation of these procedures and mutual recognition agreements on conformity assessment. These parameters are broadly applicable to conformity assessment procedures and contrast with particular variables that can influence the effectiveness of a certification as a country's development level and a commercial sector. These variables were tangentially addressed in this dissertation and deserve further research in future papers and books. The conceptual clarification of these parameters will be followed by their assessment on the field of forest certification.

¹⁰⁸ On this issue, which falls beyond the object and the delimitation of the dissertation, there has been a shift on the effectiveness literature from compliance and effectiveness to influence documented by Bernstein and Cashore (2012, p. 586). The literature is motivated by the attempt to determine whether international or transnational undertakings that constitute paths of governance influence behaviors to solve the problems for which they were created. This objective indicates that analyzes that go beyond static evaluations of compliance, which are mainly focused on hard law rules, can be necessary. Bernstein and Cashore understand that the aforementioned shift facilitates the analysis of the combined effects of these international and transnational efforts on domestic or firm policies and practices.

4.1. The distance between the concept of sustainable development and its realities

A holistic analysis of sustainable development elements in current international legal theory reveals how far their implementation is from the reality. Inner-level¹⁰⁹ SDGs focused on individual and collective outcomes have similar governance and institutional structures. These stem predominantly from the historical role of the State in relation to the provision of health, education and welfare, the initiatives of the 1990s and the experience with the Millennium Development Goals (MDGs) (WAAGE et al, 2015, p. 84). Government instruments may, however, not operate efficiently or equitably. Whilst the formal institutional structures may be in place, many developing countries will require continued support to strengthen structure and institutions for inner-level goals in order to govern effectively (WAAGE et al, 2015, p. 84). At this inner-level, the alignment of comparable goals and their implementation across many of these sectors points to broadly synergistic governance opportunities (WAAGE et al, 2015, p. 84-85). However, such alignment is often far from politically feasible; it is strongly dependent upon transforming existing social norms and conditions, which are entrenched by political and economic relations and will require change over generations (WAAGE et al, 2015, p. 85).

In this context, the lowest-common-denominator approach and the synthetic approach to standardization described in previous chapters may, however, undermine the goal of improving governance in countries with less well-developed institutions (MILHAUPT; PISTOR, 2010, p. 216). In order to be effective, laws need local constituencies with an interest in and understanding of the laws (MILHAUPT; PISTOR, 2010, p. 216). This is a prerequisite for new law – whether home-grown or transplanted from abroad – to become part of the continuous process of legal and market change, without which the law will remain largely irrelevant as a governance device (MILHAUPT; PISTOR, 2010, p. 217). Yet the standardization of best practices or “higher-quality” law as actually implemented may replace a Schumpeterian rolling relation between markets and law with an idealized conception of law unfamiliar to local constituencies (MILHAUPT; PISTOR, 2010, p. 217). Thus, standardization and legal harmonization, far from being means for building effective legal systems around

¹⁰⁹ The inner level proposed by Waage et al includes *in verbis* “people-centred” goals that aim to deliver individual and collective outcomes, such as health, education and nutrition, which directly pertain to welfare and well-being and their equitable distribution within and between individuals and countries.

the world, are to be approached with considerable caution (MILHAUPT; PISTOR, 2010, p. 217).

The movement outward towards other goals reveals that State mechanisms shatter, conflicts emerge and soft law becomes the main source of regulation. The outer level comprises goals relating to land, sea, air and biodiversity, whose governance and management raise unique challenges (WAAGE et al, 2015, p. 86). As analyzed on chapter 2, governance at this level is highly fragmented as well as the institutional landscape that comprises non-binding international agreements and treaties. Outer-level goal governance is currently weak and its structures consist largely of monitoring and convening processes only, while incentives for stronger governance at this level are poor (WAAGE et al, 2015, p. 86). Goals relating to global public goods and shared common resources represent significant challenges, as they rely on greater levels of cooperation and investment in sectors in which the outputs/rewards are less obviously apparent to the electorate in any single country and/or are over longer time horizons; often a generation or more, and certainly beyond an electoral cycle (WAAGE et al, 2015, p. 86). The challenge of governing within levels is about building new relationships and new mechanisms that overcome sectorial and ministerial silos (WAAGE et al, 2015, p. 86). Despite the existence of numerous specialized bodies that act on the protection of values connected to the concept of sustainable development, difficulties are found on the creation and implementation of effective international norms due to high differences in conditions within countries and their unwillingness to identify together pressing sustainability issues and reach a common basis on them that could lead to international codification.

On account of this reality, the international legal process is often viewed as not moving quickly enough and this has motivated a distinct trend towards promoting the role of non-State actors in order to achieve the ideal of sustainable development and to avoid the ills of unsustainable practices (ERITJA; VAN DER GRIP; GUPTA, 2004, p. 30). This view was clearly present in the aftermath of UNCED, which failed to produce a binding forest treaty and only created soft law instruments that failed to deepen forest regulation as was explained and analyzed on chapter 2. Consequently, sustainability is nowadays a common subject on the agenda of the business community and NGOs; entities which are seeking to shape the transition towards sustainable production and consumption patterns (ERITJA; VAN DER GRIP; GUPTA, 2004, p. 30). An analysis of the effectiveness of forest certification, an alternative regulation to binding

international instruments, allows one step beyond the identification of pressing issues in current global governance.

4.2. Assessment of the effectiveness of conformity assessment

The mere identification of the performance of one type of conformity assessment and of the conformity with standards and technical regulations that constitute the benchmarks of the assessment does not allow a precise evaluation of the effectiveness of various conformity assessment procedures. In theory, an effective certification rearranges incentives through the increase of advantages derived from standard implementation and the punishment of defection. Examples of such incentives identified in the literature are the promise of price premiums on certified products, greater market access or prevention of boycott campaigns (GULBRANDSEN, 2010, p. 22). Auld, Gulbrandsen and Mcdermott (2008, p. 188), following the same line of thinking of the previous quotation, conceive the effectiveness of forest certification as the degree to which this instrument modifies on-the-ground practices in ways that are likely to reverse or alleviate environmental deterioration and socioeconomic harm resulting from forestry.

Reality reveals that certifications are not infallible as can be seen on the following examples outside the realm of sustainable development: the ratings attributed to complex securities by credit rating agencies led to the 2008 financial crisis and the lack of the normally required diligence and care by TuV Rheinland, an independent inspection services provider that, as examined on the previous chapter, allowed the availability on the market of defective breast implants. In the environmental field that is also inserted on the sustainable development realm, the Dieselgate is emblematic, as, during the tests of emissions of pollutants, a device kept the levels of emissions in conformity with the German legislation, but, in the daily use, the device was switched off and the engine released more pollutants than what was legally allowed.

Further problems inherent to conformity assessment were also systematized in the literature, being the ones relative to the sustainable development realm to be explained. The first one is related to credibility. Besides the previously mentioned possibility of mistakes by certifiers, there is the possibility of deceiving certifiers when there is a will to incur fraud¹¹⁰. Since certifiers aim to make profit, they seek to reduce

¹¹⁰ The ISEAL Assurance Code establishes guidelines that seek to settle this problem on clause 5.1.13, The clause encourages scheme owners to comply with the requirement to guarantee that monitoring

their costs and are likely to do so to the detriment of controls (WOUTERS, 2020, p. 110). This phenomenon is exacerbated by a great competition: certain certifiers would be tempted to lower the level of requirements in order to attract customers (WOUTERS, 2020, p. 110). The second one refers to political legitimacy. Certification allows private and commercial actors, detached from the political world and generally from any democratic constraint, to impose standards that they themselves developed (WOUTERS, 2020, p. 110). The third one corresponds to a possible problem of equity, as certification procedures may not be truly fair and there may not be a mechanism to contest the results¹¹¹ (WOUTERS, 2020, p. 111). Lastly, a key problem posed by certification is the one of costs: they are borne by the certified party and are passed to the end consumer (WOUTERS, 2020, p. 111). Certified products are often of higher quality, but they are equally more expensive, which impedes the impoverished parts of the population to afford this extra cost and to have access to these more qualitative products (WOUTERS, 2020, p. 111). In the same way, the certification cost provokes the market exclusion of the smallest producers¹¹² that cannot finance it (WOUTERS, 2020, p. 111).

Among the problems explained above, the trade tools of accreditation and mutual recognition agreements allow the solution of the first three ones. The accuracy and reliability of conformity assessment can be increased through accreditation procedures that, in few words, consists on the formal recognition that the certifying entity was evaluated according to national and international benchmarks and has technical and managerial competence to perform third party conformity assessment, and

activities are in place, which include actions to identify and mitigate misrepresentation or corruption. The minimum threshold of these actions shall include the follow-up of suspended clients to monitor cessation of claims and a publicly available mechanism for stakeholders to report instances of potential misrepresentation or corruption. A guidance on how to implement this requirement is also provided. Actions can encompass market surveillance to detect fraudulent claim use. The mechanism for stakeholders could be the scheme's complaints process but this should then specifically accommodate informal and confidential allegations of corruption. Monitoring activities can be implemented by assurance providers or by oversight bodies in the case of monitoring assurance providers' performance.

¹¹¹ The ISEAL Assurance Code also provides guidelines that aim to solve this problem on clause 5.1.12. The clause provides requirements to scheme owners, who shall have in place a publicly available and accessible complaints resolution procedure and shall require this also of its assurance providers and oversight bodies. The proposed features of the complaint procedure foreseen on the clause are as follows: investigation and taking of appropriate action regarding relevant complaints within defined timelines; review and taking of any necessary corrective actions and maintenance of a record of all complaints and resulting actions to be made available for internal audits and management reviews.

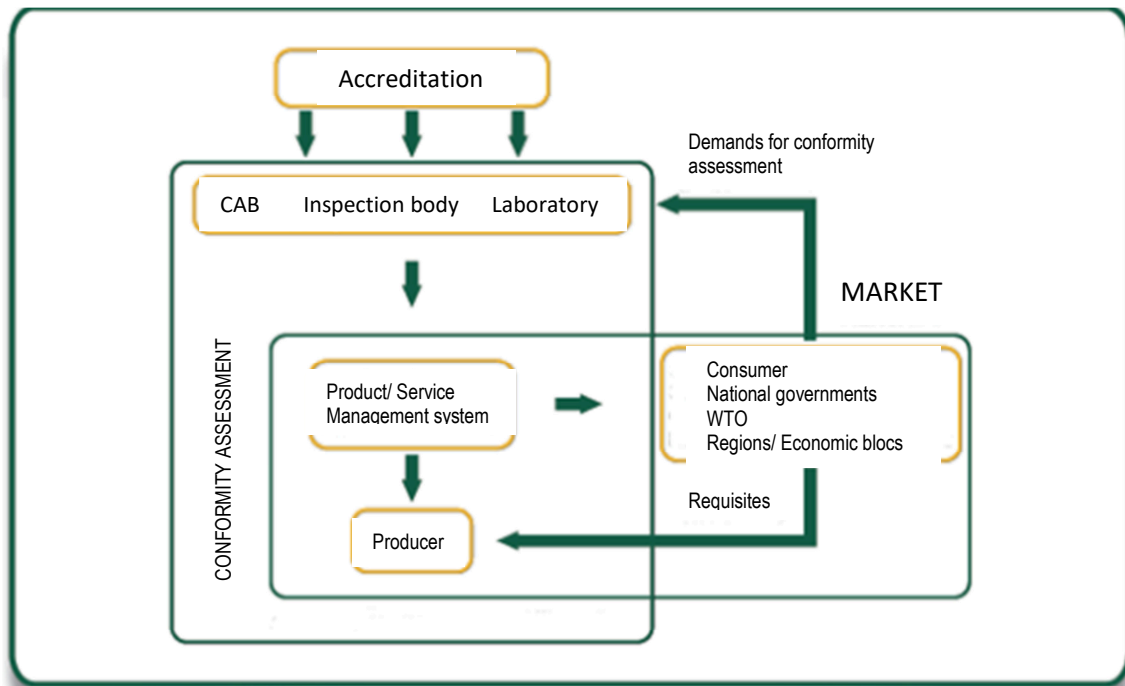
¹¹² An unfolding of this sub-problem was identified in the literature. A company that was certified after the assessment of conformity with standard ISO 14001 can mention in a publicity that obtained the respective certificate and, in doing so, generates the impression that does not pollute and consequently is privileged over another company in the same industry that, sometimes, has a much more satisfactory performance, but does not have the certificate (D'ISEP, 2009, p. 171).

through the achievement of mutual recognition agreements which concretize the principles of equivalence and mutual recognition.

Considering the first problem, accreditation provides a further venue to check if the certifier incurs in fraud. As regards the second problem, mutual recognition avoids the imposition of standards by certifiers and allows a dialogue between them who are inserted on the practices of international trade. Concerning the third problem, accreditation constitutes also a venue to contest the fairness of the results attested by the certifier. The last problem can be better addressed by measures to be analyzed on future researches as the creation of digital databases that accurately and comprehensively not only relate to a certificate the measures taken by a company in order to obtain it, but also measures taken by a small company in order to enforce environmental goals. These databases can then clarify to the consumers what are the real and effective environmental practices taken by whom.

4.2.1. Accreditation of conformity assessment procedures

Accreditation consists on the formal recognition conferred by an authorized body that an institution was assessed according to national and international guidelines and rules and is technically and managerially competent to perform specific tasks of third party conformity assessment. In this structure, the accreditor accredits conformity assessment bodies that, on their side, recognize the conformity with a technical regulation or a standard of a management system, a product, a process or a service. A clear benefit derived from an accreditation is the reduction of risks for companies and their corresponding consumers that reveal the will to pay a higher price for labeled products through the guarantee that accredited certification bodies are competent to perform the activities they undertake. Accreditation also minimizes the risk of certifiers' shopping by entities to be certified by them, in other words, the risk of capture by targets of their certifiers is reduced. A reaccreditation is possible, which comprises an assessment undertaken to renew the previous accreditation granted and aims to reaffirm the competence of a conformity assessment body and to encompass all the requisites of the standard or technical regulation according to which the conformity assessment body is accredited. The framework can be better understood in the picture below.



Source: Inmetro

An accredited certification that can be identified by a label in a product can lead to positive and negative environmental consequences. Negative environmental effects can appear on the market when a successful eco-labeling scheme provokes the reduction of prices of unlabeled products and, as a result an increasing demand for these products. In the long-term, however, higher sales of labeled goods can lead to higher economies of scale in the manufacturing of these products, which would in its turn provoke reduced prices for labeled products.

The accreditation bodies are inserted on international forums that seek to foster information exchange and cooperation among accreditors. The International Accreditation Forum (IAF) oversees arrangements between accreditation bodies that foster the recognition of products and services through national borders, which create a structure to support international trade by means of elimination of technical barriers. Accreditors that integrate IAF benefit from the operation to a high standard and from the capacity to require certification bodies accredited by them to act in conformity with applicable international standards and the IAF Guidance on the application of those standards. Besides accreditors, companies that bear an accredited conformity assessment certificate, which was granted by IAF accreditation body members and underwent steady peer evaluations to guarantee the equivalence of their accreditation programs, can have its certificate recognized in every other place worldwide. The

International Laboratory Accreditation Cooperation (ILAC) encompasses accreditation entities that act on the accreditation of the following conformity assessment bodies: calibration laboratories, testing laboratories, medical testing laboratories, inspection bodies and proficiency testing providers. ILAC's main function consists on the management of international arrangements between accreditors¹¹³ in the areas of calibration, testing, medical testing, inspection and proficiency testing providers' accreditation. ILAC cooperates with IAF and together they coordinate their actions to foster accreditation and conformity assessment throughout the world.

Inside IAF, a key instrument applicable to forest certification is the IAF Multilateral Recognition Arrangement (MLA) whose members are accreditation bodies and regional accreditation groups. It is only possible to be admitted to the MLA after a strict assessment of their operations by a peer evaluation group which is competent to guarantee the full compliance by an applicant with international standards and IAF requisites. After being a signatory of the IAF MLA, an accreditation body must acknowledge certificates issued by certifiers that underwent accreditation by all remaining signatories of the IAF MLA inside the proper scope.

Regional forums on accreditation procedures also aim to achieve the same aforementioned objectives of the corresponding international ones. This dissertation does not aim to be exhaustive on the identification of regional structures on accreditation procedures¹¹⁴ and emphasis will be attributed to the InterAmerican Accreditation Cooperation (IAAC) that can provide tools to the refinement of conformity assessment and accreditation as it is done in Brazil. IAAC gathers accreditation bodies in Latin America and in North America and other institutions that work towards the goal of the application of a single test or certification to achieve market recognition throughout the world. Its activities consist on the creation of conformity assessment frameworks throughout the Americas with the goal of attainment of improved products, processes and services and on the facilitation of trade between countries of the Americas as well as other schemes. Inside this forum, multilateral

¹¹³ These arrangements aim to support the supply of local or national services as the supply of safe food and potable water, the supply of energy, the distribution of health and social care and the maintenance of a healthy environment. Moreover, the arrangements concretize the principle of mutual recognition to be analyzed below through the fostering of acceptance of goods and services that cross national frontiers.

¹¹⁴ Additional examples of regional forums on accreditation are European Accreditation (EA) in Europe, Asia Pacific Accreditation Cooperation (APAC) in the Asia-Pacific, IAAC in the Americas, African Accreditation Cooperation (AFRAC) in Africa, Southern African Development Community Cooperation in Accreditation (SADCA) in Southern Africa and Arab Accreditation Cooperation (ARAC) in the Arab region.

recognition arrangements (MLAs) were concluded for accreditation of food safety management systems' certification bodies and information security management systems' certification bodies.

Beyond the didactic distinction between international forums and regional forums, cooperation between the two levels exists. Representatives of regional cooperation bodies participate on the ILAC and IAF Executive Committees. Moreover, ILAC operates in close connection with regional cooperation bodies, namely EA in Europe, APAC in the Asia-Pacific, IAAC in the Americas, AFRAC in Africa, SADCA in Southern Africa and ARAC in the Arab region.

The accreditation is not, however, performed without criticism. In circumstances in which there are doubts about the veracity and the accuracy of a certificate, an accreditation can dispel these doubts. When the suspicion in the market is great enough, the chain of accreditors of certifiers becomes endless and, in reality, this is of course not possible (VAN WAARDEN; VAN DALEN, 2015, p. 190). All these levels of control add to the transaction costs of the original product and when these become prohibitive, one of two things occur: either transactions may no longer take place, or the buyer will have to take some risk (VAN WAARDEN; VAN DALEN, 2015, p. 190).

4.2.1.1. Accreditation of forest certification

This subchapter aims to analyze the different structures for the accreditation of forest certifiers adopted by FSC and PEFC. While FSC designated the accreditation function to an impartial and independent international assurance institution to be explained below and trusted on the epistemic knowledge of the experts of this institution, PEFC follows strict requirements aligned with ISO requirements to be explained below, which are considered the cornerstones of independence and impartiality, on its work with accreditors. Examples of these requirements are the acceptance of accreditations conducted by accreditors inside IAF or one regional accreditation group and the performance of accreditations in conformity with standards created by ISO and IEC.

FSC provides a framework to the accreditation of certifiers, in which it confirms or determines that certification bodies are capable to undertake conformity assessment activities and can certify companies and forest owners for compliance with the respective issued standards. This accreditation process encompasses field and office audits and is designed to ensure that certifiers comply with the stipulated rules and

procedures and work to uniformly high standards (FAO, 2020, p. 5). FSC's accreditation body is Assurance Services International (ASI). ASI constitutes an assurance institution that aims to lead sustainability standard structures and initiatives worldwide. It was designated by FSC to supervise the integrity and reliability of its certification scheme around the world and the claims made under it. Inside ASI, its only shareholder is Forest Stewardship Council®, Asociación Civil (FSC AC), subscribed as an international non-profit membership organization in Mexico, whose objective is the promotion of responsible management of forests throughout the world. FSC AC holds 100% of the ASI shares, but does not participate in its operational tasks or decisions. In order to ensure the impartiality and independence of ASI as an assurance provider, it has signed a control transfer agreement with FSC in 2017, which delegates full business controls (within legal limits) to the ASI Supervisory Board (ASI, 2020). FSC is limited to the provision of services and does not fund ASI as well as makes no claims over ASI's financial surpluses.

Inside ASI's organizational structure, the Accreditation Committee (AC) is the body tasked with accreditation decisions for each conformity assessment body that regulate granting, renewal, extension and reduction of technical scope, suspension and withdrawal of accreditation. AC's members are internationally well-known experts on accreditation and standardization that collectively detain the required expertise to take adequate accreditation decisions. Additional accreditation decisions of other nature are delegated to the ASI Operations Director (OD) or to the ASI Program Managers (PMs).

The accreditation steps available in FSC's website and followed in a sequence are the following: submission of an accreditation application and entering into a contractual accreditation agreement¹¹⁵, insurance that an appropriate certification management system is in place¹¹⁶, undergoing on-site audits by ASI¹¹⁷ and becoming accredited¹¹⁸. These steps are in conformity with the general ones established by ASI in its accreditation procedure, which are the following applied in a sequence: application

¹¹⁵ The certification body can submit an online application on ASI's website and mention a fee schedule for an estimate of costs. Upon approval of the application the certification body is invited to enter into a contractual accreditation agreement with ASI.

¹¹⁶ This insurance consists on compliance with FSC's assurance requirements of standard FSC-STD-20-001. According to their scope of accreditation, additional requirements may be necessary for forest management accreditation and chain of custody accreditation. ASI may also impose additional requirements.

¹¹⁷ ASI will perform initial assessments of the applicant certification body to evaluate compliance with relevant assurance requirements.

¹¹⁸ The FSC accreditation is granted upon a positive accreditation decision by ASI.

and review¹¹⁹, application approval¹²⁰, document review¹²¹, initial assessments¹²², report and sign-off¹²³ and granting of accreditation¹²⁴. When granted, the accreditation remains valid for 5 years.

PEFC implements another approach and adopts strict requisites when working together with accreditors. It clearly states that the only accepted accreditations must be performed by accreditors that integrate the IAF MLA or one regional accreditation group as EA or APAC and that follow procedures required on the standard ISO/IEC 17011:2017 and on other documents recognized by the organizations mentioned above. The sample of accreditors of chain of custody certifiers and of forest management certifiers is smaller as the accreditors inside a regional accreditation group integrate IAF MLA or one of the IAF's regional accreditation groups. The parameters for the accreditation of a certification body that performs forest management certification or chain of custody certification against a scheme specific chain of custody standard must be based on standard ISO/IEC 17021-1:2015 on requirements for bodies providing audit and certification of management systems or standard ISO/IEC 17065:2012 on requirements for bodies certifying products, processes and services. This last standard also constitutes the parameter for the accreditation of a certification body that performs chain of custody certification against requirements of chain of custody of forest based products.

¹¹⁹ The contents of this step and of the following ones were extracted from the ASI website. The conformity assessment body completes and submits the application form, which is reviewed by ASI to guarantee that it is complete.

¹²⁰ The conformity assessment body is invited to enter (with applicant status) into a contractual accreditation agreement with ASI.

¹²¹ ASI reviews the procedures and other documents submitted by the applicant including its quality management system (QMS).

¹²² ASI generally conducts one head office assessment and one witness assessment per accreditation scope. An office assessment is conducted onsite and/or remotely to determine the competence of the conformity assessment body to carry out conformity assessment activities in accordance with all accreditation requirements by reviewing and evaluating implementation of its management system and documented procedures. During an office assessment, the ASI assessment team checks whether certification processes are in line with the requirements of the standard, properly implemented and whether the conformity assessment body has the resources to credibly deliver the accredited certification program. In a witness assessment, ASI observes and evaluates a conformity assessment body through the performance of conformity assessment services within its scope of accreditation. In other words, the ASI assessment team observes and evaluates the conformity assessment body's audit team (including subcontractors) performing audits.

¹²³ The assessment team prepares a report for each assessment, which is technically reviewed and signed off.

¹²⁴ The Accreditation Committee reviews the process and the managing director makes the final decision.

4.2.2. Mutual recognition agreements on conformity assessment procedures

Before the analysis of mutual recognition agreements, the concept of mutual recognition must be understood. In broad terms, mutual recognition means that products produced according to a regulatory framework in country A have unobstructed market access in country B, probably having a different regulatory framework. When there is uniformity of safety, health, environment and consumers (SHEC) requirements or when such requirements are similar in A and B, these requirements will not impede market access (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 16). However, when SHEC requirements differ, mutual recognition may help address the trade frictions that such differences may generate by promoting the notion of equivalence of SHEC levels or of relevant aspects or procedures ensuring such equivalence (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 16). If founded or trusted to be equivalent, the SHEC objectives are fulfilled and the mission of the regulator is not affected¹²⁵ (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 16). After this initial clarification, MRAs will be analyzed based on the report written by Correia de Brito, Kauffmann and Pelkmans under the auspices of the OECD that complements the MRAs' analysis on the previous chapter through the lenses of WTO law.

A MRA consists on an agreement between two or more parties in which there is the recognition of the equivalence of each party's technical regulations, standards or conformity assessment procedures in one or more than one specific sector of goods. A MRA on technical regulations authorizes products which are in conformity with technical regulations of one party to be traded in the market of another party (and vice versa), in a condition in which products are in conformity with the second party's technical regulation. A MRA on standards allows the acceptance of products that are in conformity with standards of another party as if they conformed with one's own standards. A MRA on conformity assessment procedures allows the approval by the importing country of results of conformity assessment undertaken by testing institutions in the exporting country. Hence, the regulatory requirements, standards and results of conformity assessment applied in one country are recognized as yielding functional equivalence for SHEC protection of consumers and workers in another country and vice versa (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 16).

¹²⁵ The quoted paper clarifies moreover that the frequently different technical requisites for an equivalent level of safety, for instance, can be affected, but these requisites quite often are not critical.

The literature ratifies the three types of mutual recognition previously presented that can be the mutual recognition of technical regulations, mutual recognition of standards and mutual recognition of conformity assessments and deepens the analysis of the last type. This one can be divided into a method according to which the testing institution of the importing country recognizes the results of conformity assessments performed by the testing institution of the exporting country and grants certification on that basis (acceptance of test results) and a method according to which the testing institution of the exporting country grants certification on the basis of the results of its conformity assessments and the importing country accepts the certification unconditionally (acceptance of certification results) (NAKAGAWA, 2011, p. 111-112).

Another key feature of mutual recognition of conformity assessment is its reduced ambition. In this option, there is neither acceptance of equivalence, nor is it needed as what underlies this mutual recognition option is the confidence that the technical infrastructure in country A is of sufficiently high quality and that the conformity assessment bodies in A carrying out the conformity assessment are competent to do so and knowledgeable about the requirements in country B (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 16-17). In most cases, the conformity assessment bodies in A will be designated only after B has been reassured of their competence (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 17). Once designated, goods assessed by conformity assessment bodies in A will enter B's market without further testing or certification in B, which implies lower trading costs for their producers (and vice versa for producers of B) (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 17). Depending on the intrusiveness of their conformity assessment procedures, which in turn depends on the sector, authorities may require more or less time to build up the confidence that conformity assessment bodies from other countries with developed infrastructures can be trusted to deliver the same quality of conformity assessment as domestic accredited bodies (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 17).

Mutual recognition agreements are structured with a framework agreement and sectorial annexes. The framework agreement provides principles and procedures of mutual recognition. Sectorial annexes, in general, detail, for each sector covered, the scope in terms of products and operations, the respective legislation involved, any specific procedures, designated conformity assessment bodies, the procedures and authorities responsible for designating these bodies and, if applicable, transitional

periods (BEYNON, 2003, p. 238). Additional sectorial annexes can be progressively inserted on mutual recognition agreements in conditions and at the time deemed appropriate. For each mutual recognition agreement, a Joint Committee has been set up to oversee its functioning and, in practice, the mutual recognition agreements become operational generally when proposed conformity assessment bodies are confirmed by the individual joint committees (BEYNON, 2003, p. 239). It is also up to the committee to debate issues relative to the interpretation, performance and implementation of a MRA. When MRAs are multi-sectorial, the Committee can appoint sectorial committees or working groups competent to monitor the implementation of the corresponding sectorial annexes.

This structure constitutes the backbone of a stand-alone MRA and of a variety of MRAs. A traditional MRA on conformity assessment is an agreement concluded by two or more governmental bodies, with the aim of facilitating the acceptance of the results of conformity assessment procedures undertaken by the other party's or parties' conformity assessment bodies in accordance with the importing country regulations (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 17). The scope of government MRAs of conformity assessment is limited to products which are subject to regulation by government authorities and which involve some form of mandatory third-party intervention (conformity assessment) prior to the product allowed to be placed in the market (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 17). Besides traditional MRAs, conformity assessment bodies and national accreditation bodies have organized non-governmental agreements of a multilateral nature recognizing each other's competence, based on a high quality world (ISO) standard for such bodies (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 17). Non-governmental mutual recognition arrangements are typically voluntary agreements, through which the conformity assessment bodies or accreditation bodies agree to recognize each other's processes for testing, certification, inspection and/or accreditation, with the aim of facilitating the acceptance of the results of conformity assessment (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 17).

The consequent respective advantages of these MRAs can be identified in broad terms. The clearest ones are the exemption of imported products from the application for conformity with national technical regulations and an automatic recognition of the outcomes of conformity assessment procedures performed at their place of origin. These benefits concretize the principle "certified once, accepted everywhere" proposed by

IAF. Consequences of these advantages are the reduction of costs of accredited certification and the reduction of risks of non-compliance with shared standards and requisites and of rejection of goods or services by international trade corresponding parties as decisions will be founded on trustworthy results. Duplication is reduced as well as test, calibration and inspection information that are added in requirements for product approvals are assessed without another test or another inspection. The last advantage, however, can violate the principle of non-discrimination, as will be analyzed below.

Specific advantages can also be verified and are favorable to governments, to regulators, to industry users, to manufacturers and to consumers. The first ones are provided with a reliable and technically robust structure that constitutes the basis to create bilateral and multilateral international trade agreements and to increase the number of governments that become parties to them. In the long-term, the objective pursued is the broadly accepted implementation and recognition of inspection bodies and accredited laboratories, which encompass the outcomes produced by inspection bodies and accredited laboratories in different countries. The second ones are benefited by the function performed by a MRA in the sense of providing a worldwide recognized label of approval that attests compliance with recognized standards and requisites. Regulators are also helped to achieve their legislative responsibilities through the existence of an internationally recognized framework of acceptance of accredited tests and inspection reports founded on a MRA. The third ones that are most benefited are businessmen that depend on data derived from test, calibration and inspection. The MRA guarantees greater reliance in the accuracy of test, calibration and inspection reports that are purchased, due to their creation by facilities evaluated as competent to perform these particular activities. The fourth ones can obtain greater margins of savings as they can, instead of establishing internal conformity assessments, opt to defer to assessments of internationally acknowledged qualified accreditation bodies that integrate accreditation forums. They can also benefit from increased market access arising from a MRA. The fifth ones are provided by a MRA with greater confidence when buying goods or services that were tested, calibrated or inspected and whose calibration, test or inspection were undertaken by an accredited facility.

A common output of the compliance with the rules of a MRA is the possibility of an accredited certifier or an accreditation body¹²⁶ to use a MRA mark together with the own accreditation body label, also known as combined MRA mark. Examples of combined MRA marks are the ILAC MRA mark and the IAF-MLA mark. Certifiers can then demonstrate an immediately identifiable link to the MRA mark on their information report and certificates bearing the results of calibrations, tests and inspections performed within the scope of their accreditation. An intrinsic feature of a combined MRA mark is its voluntary use, which implies that certified sites reports and the corresponding certificates issued by accredited certifiers can be seen without the combined MRA mark. The benefits derived from the use of a combined MRA mark are, for accredited certifiers, the promotion of their accreditation as recognized on the international level and, for accreditors, the immediate promotion of their status as being internationally recognized and of being capable to provide the same condition to their accredited certifiers.

The value and the integrity of a MRA are maintained through notifications by the signatories about any important alterations. The content of these notifications comprises the condition or operation of the accreditor; alterations in the name or legal/corporate status; creation, review, suspension or termination of any agreement and alterations in the main senior personnel or organizational framework. Inside ILAC and IAF, each party to the MRA must moreover appoint a liaison officer that must guarantee a solid and effective means of communication between accreditors.

Before advancing to the analysis of mutual recognition agreements, a conceptual clarification of the principle of mutual recognition must be provided. Besides its basic idea provided at the beginning of this subchapter, its basic function common to all areas of international relations is the attribution of effect to foreign legal rules or acts that take place in another State. Mutual recognition is used in the commercial sphere to overcome any hindrances to the international movement of natural and juridical persons, goods and services that may be posed by the coexistence of multiple national jurisdictions (ORTINO, 2007, p. 309). MRAs, then, allow the achievement of trade facilitation by means of regulatory cooperation. The principle is however applied to other functions in public international law and in private international law. On the first field, the principle

¹²⁶ Inside ILAC, accreditation bodies make use of the Combined MRA Mark, while certifiers make use of the Accredited CAB Combined MRA Mark. Inside IAF, accreditation body members of the forum that are parties to the forum's MRA known as MLA can conclude a sub-license agreement with their accredited certifiers for them to also use the IAF-MLA mark together with the accreditation mark.

allows the recognition of determinations of foreign nationality as far as they are in conformity with international standards. On the second field, the principle foresees the recognition by a civil court of foreign obligations or of a contract regulated by foreign norms.

The aforementioned MRAs that were concluded either between conformity assessment bodies, either between accreditation bodies, known as non-governmental MRAs and between countries, known as governmental MRAs can be analyzed in more depth. The first type of MRA inserted in the first category constitutes arrangements between conformity assessment bodies placed in different countries by means of which the quality of each other's conformity assessment processes. A clear-cut concept of the second type inside the first category provided in a OECD report establishes that mutual recognition arrangements between accreditation bodies are arrangements concluded by national or regional accreditation bodies or international accreditation organizations representing national and regional accreditation bodies, through which they mutually recognize that the conformity assessment bodies accredited by them or by its members have a pre-specified degree of quality and use similar quality standards to accredit their respective conformity assessment bodies (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 37). They seek to increase the acceptance of goods and services that cross national frontiers and to develop an international structure to support international trade by means of removal of regulatory barriers. The ILAC MRA¹²⁷, for example, allows accreditation bodies to make use of a global network of testing and calibration laboratories and inspection bodies that have been accredited to provide accurate and reliable results (ILAC, 2020, p. 2).

The support of international trade derives from fomenting international trust and admission of data produced by accredited conformity assessment bodies and from the advice of regulators to acknowledge and admit data that is driven by regulatory structures in specific fields as health and environment. As these MRAs were created by international actors according to the needs and the practice of international trade, it is not applicable to them the distinction of functions performed by the principle of mutual recognition in public international law and in private international law.

¹²⁷ Besides the description and the analysis of this MRA, it underwent two recent updates. In May 2019, its extension was broadened to encompass the accreditation of proficiency testing providers. In May 2020, the accreditation of reference material producers was included in the agreement.

The second ones can be bilateral or multilateral and constitute a reciprocal commitment among countries to accept goods that are legally distributed in the other country as goods that can be legally distributed in one's own, even when proper standardization and certification systems are maintained in each country. On the bilateral ones, the regulatory authorities of both parties in the MRA recognize the test reports and certificates issued by conformity assessment bodies deemed by both parties to be competent to assess whether products from a single sector or from more than one sector conform to the standards and regulatory requirements of the other party (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 29-30). The multilateral ones, also known as regionals, are non-binding arrangements concluded by inter-governmental forums that provide for the mutual acceptance of the results of testing and certification undertaken by conformity assessment bodies located in the exporting country in assessing the conformity of products to the technical regulations of the importing countries (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 33).

Considering the bilateral agreements, their usual features concern the way the recognition of certificates and certification reports is performed and their composition. Usually, MRAs of conformity assessment neither require harmonization of each party's standards or technical regulations nor do they require that the parties recognize their regulations as equivalent (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 29). Moving to the second feature, in multi-sector MRAs, the different annexes are considered an integral part of the MRA, which means that, for an amendment of an annex, the parties have to follow the normal procedure for the revision of a treaty that is often not done (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 29).

These MRAs are commonplace mainly in the European level as, due to the successful outcomes of the New Approach, the EU and other countries began to make use of mutual recognition in international trade as a tool that facilitates market access. In a communication about the Community external trade policy in the field of standards and conformity assessment of 1996, the Commission recognized mutual recognition agreements as a strategy to pursue two basic objectives, the reduction or prevention of the emergence of new standards and conformity assessment barriers for industrial products in other markets and the promotion of the adoption in foreign countries of standards and regulatory approaches based on or compatible with international and European practices. The Commission stipulated, moreover, the following prerequisites

of mutual recognition agreements¹²⁸ that can functionally lead to increased market access: full confidence in the other party's conformity assessment procedures that encompasses the establishment by the Commission that the then European Community and its MRA partner have comparable concepts of testing and approval and an agreement on accreditation or other conformity assessment procedure that ensures trust in the competence of a conformity assessment body to perform assessments to an adequate standard, comparable or at least mutually acceptable systems of certification and underlying technical infrastructures and a sufficient high level of trade with the targeted third country to justify the cost involved in setting up an agreement. It is due to these factors that developing countries are absent of the EU's priority country list of possible mutual recognition partners.

In this sense, the literature also analyzed the difficulties faced by developing countries to enter in MRAs. Southern countries can be bullied into accepting less favorable terms in order to give their small producers access to lucrative Northern markets (ALAM, 2015, p. 311). Furthermore, even when the terms of MRAs are mutually beneficial, Southern countries may not possess the necessary regulatory frameworks to ensure compliance with MRAs, nor the technical infrastructure to undertake scientific assessments (ALAM, 2015, p. 311). There is huge pressure on Southern countries to develop these regulatory frameworks, which can be facilitated by promoting good manufacturing practices (GMPs) within industries, establishing a suitable administrative base with qualified staff and scientific laboratories and appointing advisory bodies to provide insight regarding constantly changing industry practices and technology (ALAM, 2015, p. 311).

Inside the regional European level, the notion of mutual recognition is characterized as formalized due to two different aspects and presents particular features. Firstly, in the EU internal market, free movement goes much further than free trade, it is right-of-market-access for all economic agents in the EU be it with derogations for member States (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 19). The second form of mutual recognition is a derivative of the judicial action of the ECJ, which introduced the concept of equivalence of objectives that cannot be easily determined. This "regulatory mutual recognition" combines harmonization and judicial

¹²⁸ The prerequisites are foreseen on the aforementioned communication on the Community external trade policy in the field of standards and conformity assessment of November 13, 1996 and on the Commission's staff working paper on the implementation of a policy for external trade in the fields of standards and conformity assessment of September 28, 2001.

mutual recognition by first enacting a minimum harmonization directive on the equivalence of the objectives: they are set in common and thereby doing away with any uncertainty in this respect (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 19). Beyond that, little is harmonized (hence, is subject to mutual recognition by implication) and practical certainty for companies is provided via reference to (voluntary) harmonized European standards written such that the SHEC objectives are adhered to (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 19).

In order to better grasp the European regulatory framework on mutual recognition, implications of mutual recognition in the EU must be understood. Firstly, when judicial mutual recognition is applicable, EU regulation is absent, national regulation exists and technical barriers to trade are eliminated. Secondly, when regulatory mutual recognition is applicable, a reduced harmonization of objectives exists, but the pertinent European standards make market access easier insofar as adherence enables the attachment of a CE mark on the package of a product. Given the previous implications, MRAs inside the EU are not necessary as notified bodies are conformity assessment bodies which are accredited by the EU's EA system, and the underlying rules, standards and procedures are identical (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 19). For the old approach regulating higher risks sectors, all detailed specifications tend to be included in directives, and procedures for conformity assessment (including inspection or type approval) are identical and then no MRAs are needed inside the EU (CORREIA DE BRITO; KAUFFMANN; PELKMANS, 2016, p. 19).

The regulation of mutual recognition agreements is uncertain as, despite the fulfillment of the national treatment obligation, the application of the MFN obligation, a core obligation of the multilateral trade system, is questionable. As regards the first obligation, while regulatory requirements for domestic products remain unaltered, the mutual recognition partner receives a more favorable treatment (ZAMPETTI, 2000, p. 317). Since third countries' products would still have to fulfill the same requirements as domestic like products, the national treatment obligation is respected (ZAMPETTI, 2000, p. 317). As concerns the second obligation, when two parties accept the equivalence of any regulatory requirement, they are in effect mutually waiving the application of otherwise mandatory requirements that would need to be fulfilled in order to market a specific product or group of products (ZAMPETTI, 2000, p. 317). On a MFN ground, such a more favorable treatment, accorded to the mutual recognition

partner, would have to be extended (ZAMPETTI, 2000, p. 317). However, in light of the very technical work that needs to precede and underpin the decision to accept the equivalence of any regulatory requirement, the unconditional application of the MFN treatment would render mutual recognition virtually impossible (ZAMPETTI, 2000, p. 317).

Emphasis will be attributed to the MFN obligation, because its violation can imply the illegality of a mutual recognition agreement and its practical unfeasibility. Concerns with compliance with the MFN obligation were already present when GATT 1947 was in force, as in EEC – Beef from Canada, a panel decided that the European Economic Community (EEC) had violated the MFN obligation foreseen in article I:1 of the GATT through the attribution of favored treatment to goods which had been evaluated on conformity assessment procedures in the United States, but not in any other country. Concerns persisted until currently as the prohibition of recognition of similar conformity assessment procedures of other WTO members can create a situation in which there is a violation of article I:1 of the GATT.

The uncertainties surrounding the circumstances of the application of mutual recognition agreements and their conformity to the multilateral trade system's rules are partially clarified on the TBT agreement. As previously explained in chapter 3, according to article 6.1 of the agreement, members are required to accept the results of other members' conformity assessment procedures, provided they are satisfied that those procedures offer an assurance of conformity with applicable technical regulations or standards equivalent to their own procedures.

Article 6.3, on its turn, constitutes the foundation for mutual recognition agreements that are currently being negotiated. It provides that members are encouraged, after the request of other members, to be willing to enter into negotiations for the conclusion of mutual recognition agreements of each other's conformity assessment procedures. Members may also require that such agreements fulfill the criteria of the aforementioned paragraph 1 and give mutual satisfaction regarding their potential to facilitate trade in products concerned. Article 6.3 has created huge trade potential by encouraging mutual recognition of conformity assessment across the globe (BEYNON, 2003, p. 248). The non-obligatory nature of the terms used militates against a finding that once the Community (or any other WTO member) has concluded a mutual recognition agreement of the type envisaged with one other member, it should automatically have to do the same with every other member (BEYNON, 2003, p. 246).

This is the understanding of part of the literature, as article 6.3 is devoid of MFN language and, in order to apply the most favorable treatment to all members, the content of that treatment and the resulting benefit must be ascertained (BEYNON, 2003, p. 246).

Article 6.4 thickens the encouragement of members to negotiate mutual recognition agreements of conformity assessment procedures. It encourages members to permit participation of conformity assessment bodies located in the territories of other members in their conformity assessment procedures under conditions no less favorable than those accorded to bodies located within the territory of any other country. Article 6.4 MFN's language is interpreted as soft in nature, in the sense that MFN treatment in this area is discretionary, for the same reasons behind the softness of many of the TBT agreement provisions: regulatory systems and technical infrastructures vary from country to country, so the automatic extension of an MFN obligation is often unrealistic (BEYNON, 2003, p. 247). A consequence of this interpretation is that mutual recognition agreement negotiations do not have to include the extension of conformity assessment bodies' participation in third countries and if they do include such provisions, this does not have to be framed or applied on a MFN basis (BEYNON, 2003, p. 247).

4.2.2.1. Mutual recognition agreements on forest certification

The previous analysis reveals that mutual recognition is an institute that can be applied in different ways. In the forest sector, FSC competitor schemes were created to weaken the FSC and one way in which they have done this is by confusing customers (HUMPHREYS, 2006, p. 130). After the generation of confusion, key competitors as SFI, CSA and PEFC supported a proposal for mutual recognition among schemes which aimed at eliminating this confusion. In this topic, the analysis of mutual recognition between international schemes will fall initially on the proposal of mutual recognition by the International Forest Industry Roundtable (IFIR) and will then move to the reaction of FSC, PEFC and the international relations' actors analyzed on chapter 2 of this dissertation to the respective proposal. This analysis allows the identification of the interests behind each conception of mutual recognition.

IFIR made a proposal of a mutual recognition structure that would encompass all plausible certification schemes, which would be recognized as equivalent. Its features and objectives were analyzed in the specific literature on forest certification. Criteria

and indicators would define the elements of a credible scheme and it was proposed that the criteria would include conformity of a certification scheme with sustainable forest management principles, participation and a commitment to continual improvement (HUMPHREYS, 2006, p. 131). The schemes that complied with an established threshold would be recognized as equivalent and credible. Certifiers that backed the proposal were SFI, CSA and PEFC. The proposal was not an attempt to create a unified global scheme, although it was suggested that an international mutual recognition system could have a single global trademark (HUMPHREYS, 2006, p. 131). IFIR hoped that mutual recognition would provide a critical mass of credibly certified wood products by recognizing that different certification systems can provide substantively equivalent standards of sustainable forest management (AULD, 2014, p. 89).

The understanding of IFIR's proposal can go in two ways according to the analysis proposed by Humphreys. The first is as an honest endeavor to reduce customer confusion and to provide a more stable policy environment by eliminating the uncertainties caused by competing schemes (HUMPHREYS, 2006, p. 131). The second is that as mutual recognition would only be as strong as its weakest scheme, the proposal was a forest industry attempt to outmanoeuvre the FSC (HUMPHREYS, 2006, p. 131). This perception was shared by FSC supporters, who saw mutual recognition as a threat. The acceptance of schemes that aim to attain different levels of forest protection could lead to a low-bar standard and create minimum or no incentive for future upgrading. A cynical retailer, through the appropriation of mutual recognition, could state that operates through the selling of timber in conformity with the scheme bearing the highest requisites and at the same time store timber certified by the weakest scheme that was considered credible on the mutual recognition framework. In short, under mutual recognition there would be no incentive for retailers to sell timber produced according to the higher standards (HUMPHREYS, 2006, p. 131).

FSC reacted first through the identification of IFIR's definition of mutual recognition as reciprocal arrangements under which one standards body or system recognizes and accepts other standards and certification systems as being substantively equivalent in intent, outcomes and process. IFIR's suggestion of a single global trademark was rebutted by the interpretation of the trademark's elements as corresponding to a complete description of the FSC system. The FSC opposed the IFIR's proposal, but declared its willingness to work with any certification scheme that met FSC standards (HUMPHREYS, 2006, p. 131).

Before understanding PEFC reaction, it is important to point out the application of the mutual recognition principle on PEFC internal activities. Mutual recognition is a consequence of an endorsement that was granted and allows a member of the PEFC Council to recognize one another's system under the PEFC Council mutual recognition framework. PEFC refused IFIR's proposal mainly with the argument that it already had an operational mutual recognition program in force and with the argument that it was at the time of the proposal the then dominant forest certification recognition scheme in the world (HUMPHREYS, 2006, p. 131). Curiously, the facts reveal that PEFC was reintroduced as an international scheme few moments after FSC stated that would not be a member of an international mutual recognition framework.

The reaction of the civil society was also systematized in the literature. WWF stated that "only certification under the FSC system can be considered to reach satisfactory performance levels and thus provide an adequate incentive for improving forest management worldwide (HUMPHREYS, 2006, p. 132)". Fern, Friends of the Earth, the German group Robin Wood and the Forest Peoples Programme argued that the weakest scheme in a mutual recognition framework would constitute a liability that would extend to all other schemes, and that no certification scheme "is likely to intentionally sacrifice its credibility by accepting, as its own, the serious weaknesses of other programs (HUMPHREYS, 2006, p. 132)". Greenpeace argued that "Mutual recognition must not become a process for weakening standards. We reject the IFIR ... proposal as fundamentally flawed and a significant step backwards for forests, forest certification and consumers (HUMPHREYS, 2006, p. 132)". Another argument advanced by the civil society was the complete elimination of forest certifiers' actions towards higher environmental standards when all of them were inserted on a mutual recognition system. Auld (2014, p. 89) recalls a declaration of an official from the Global Forest Policy Project, a group that represented a coalition of NGOs, who explained that as soon as a mutual recognition system embraces all certification schemes in the world, the competition stops and there are no more incentives.

The business sector supported mutual recognition and the reasons for this reaction were identified in the literature. Mutual recognition would have entitled transnational corporations that currently use different schemes in different countries to claim that they operate a consistent worldwide policy on forest certification (HUMPHREYS, 2006, p. 132). Another reason for business support was a wish to further weaken the normative pull of FSC standards, as the IFIR search to frame mutual

recognition as a technical process to be agreed using criteria and indicators was best seen by FSC's competitor schemes as a thinly disguised political move to rout the FSC (HUMPHREYS, 2006, p. 132). The idea was supported by FSC main competitors, but it wrecked when FSC revealed that would not support it. Without the involvement of the FSC, a mutual recognition framework would not eliminate customer confusion; indeed it would bring the differences between the FSC and other schemes into sharper focus (HUMPHREYS, 2006, p. 132).

As previously explained in the succession of facts on chapter 2 and deepened in this chapter, the hesitation on mutual recognition led attention back to the main forest certifiers. PEFC, designed as an umbrella program, was well suited to slowly take the lead as the producer-backed global initiative with moves to include Chile, Australia, Canada, the United States and other non-European countries and to expand its scope beyond its regional origins (AULD, 2014, p. 89-90). This shift began around 2003 after it adopted guidelines for endorsing national schemes that were more inclusive than the pan-European guidelines the program had started with (AULD, 2014, p. 90). In addition, the PEFC produced accreditation processes, which it released in 2002 (AULD, 2014, p. 90). FSC remained the leading forest certifier on strict sustainable requirements and gathered the support of a significant parcel of the civil society that acts on forestry issues. To recap, the FSC was a pivotal force behind producers' efforts to globalize a program, which had their attempts slowed by the absence of well-developed connections across political boundaries compared with the strength of their domestic and regional organizational capacity (AULD, 2014, p. 90).

4.3. Partial conclusions

Accreditation, the first parameter to evaluate the effectiveness of conformity assessment procedures, presents particular features. It consists on the formal acknowledgement attributed by an accreditor body that an entity was assessed according to national and international guidelines and rules and has technical and managerial competence to perform activities that constitute a form of third party conformity assessment. Accreditation allows the reduction of risks for companies that sell labeled products and for their respective consumers through the guarantee that accredited certification bodies are competent to perform activities attributed to them and the minimization of the risks of certifiers' capture by entities to be certified by them. Accreditation bodies integrate regional and international forums that aim to stimulate

information exchange and coordination among accreditors through, for example, the guarantee of equivalence of each accreditation program. On the other hand, criticisms directed to accreditation refer to the impossibility of the chain of accreditors to dispel great suspicions of a false certificate in the market and the excessive increase of transaction costs of the original products that can lead to a situation in which transactions do not occur or the buyer takes some risks.

In the forest sector, differences between the accreditation structures of FSC and PEFC were identified. FSC established a structure to the accreditation of certifiers to evaluate compliance with FSC standards. ASI is FSC's accreditation body, an assurance entity that seeks to lead sustainability standard frameworks and initiatives around the world. Its impartiality and independence derive from a control transfer agreement with FSC, which empowers ASI Supervisory Board with full business control and from the lack of ASI funding by FSC and of claims over ASI's financial surpluses. PEFC, on its turn, adopted stringent requisites and claims according to which accepted accreditations must be undertaken by accreditors that are members of IAF MLA or of one regional accreditation group. Moreover, accreditors must adopt procedures foreseen on standard ISO/IEC 17011:2017 with requirements for the competence, consistent operation and impartiality of accreditation bodies and on documents recognized by aforementioned organizations.

A MRA, an agreement between two or more parties in which the principle of mutual recognition addresses trade frictions that arise from differences in product SHEC requirements by the promotion of equivalence of these requirements' levels or of relevant aspects, is applicable to conformity assessment procedures. The results of conformity assessment in one country are thus recognized as providing functional equivalence for SHEC requirements in another country and vice versa. Another core feature of mutual recognition of conformity assessment is the underlying confidence by one country that the technical infrastructure of another country is of sufficiently high quality and that its conformity assessment bodies are competent to perform their tasks.

Non-governmental multilateral agreements based on a high quality world standard were also conceived by conformity assessment bodies and national accreditation bodies. They recognize each other's competence and processes for conformity assessment and/or accreditation. If expanded, the confidence on another countries' technical infrastructure or on a conformity assessment body or accreditor's

competence can contribute to the creation of an international structure that supports international trade through the removal of regulatory barriers.

Advantages that arise from these MRAs can be favorable to specific actors. Governments are benefited with a trustworthy and technically robust framework that establishes the basis for the creation of bilateral and multilateral international trade agreements. Regulators are favored with the promotional function performed by a MRA through the provision of a globally recognized label that confirms compliance with acknowledged standards and requisites and are supported to perform their legislative competences by a framework of recognition of accredited tests and inspections reforms founded on a MRA. Industry users can reveal greater reliance in the precision of test, calibration and inspection reports. Manufacturers can have greater values of savings as they show deference to evaluations of internationally recognized accreditation bodies that are members of accreditation forums and enter markets more easily. Consumers have greater confidence when buying products that underwent an accredited conformity assessment. Lastly, accredited certifiers can promote their conditions of having their accreditation recognized on the international level.

In the forest sector, a mutual recognition structure was proposed, but after negotiations and deliberations, mutual recognition remained circumscribed to PEFC. Key FSC competitors backed a proposal for mutual recognition among schemes when consumers were confused about the degree of environmental protection assured by each certifier. IFIR proposed a mutual recognition framework that would embrace all plausible certification schemes to be recognized as equivalent. Criteria and indicators would establish the components of a credible scheme and criteria would determine whether a certification scheme is in conformity with sustainable forest management principles, participation and a compromise to continuous improvement. This proposal was understood either as a valid endeavor to decrease consumer confusion and create a more stable forest certification framework, either as an effort to weaken FSC in a scenario in which the strongest scheme and the weakest scheme would be equivalent.

The literature identified the reaction of a range of actors to the structure introduced by IFIR. FSC identified IFIR's proposal as aiming to attain reciprocal arrangements in which one body or system recognizes and accepts other standards' and certification systems as equivalent in terms of intent, outcomes and process and rebutted it with the argument that the structure proposed would correspond to a full description of the FSC system, a distortion inside the mutual recognition framework. FSC,

however, expressed its will to work with certification schemes that comply with FSC standards. PEFC, another international forest certifier refused the proposal arguing that it already had in place an operational mutual recognition program and that it was at the time of the proposal introduction the main forest certification scheme in the world.

The civil society's contrary arguments to IFIR's proposal and the corporations' arguments favorable to the respective proposal can be systematized. Contrary arguments are as follows: only certification based on FSC benchmarks could be understood as attaining satisfactory fulfillment levels and thus providing an appropriate stimulus to the improvement of forest management worldwide, the institutional design of the framework proposed would lead to a situation in which the weakest scheme would represent a burden that would fall on all other schemes and in which certifiers would not give up their reliability through the acceptance of severely weak programs and, considering the standards that underpin forest certification procedures, mutual recognition could weaken standards and constitute a framework in which forest certifiers' moves towards higher environmental standards would be completely eliminated and all certifiers apply the same standard. Supportive arguments by businesses are the following: the attribution, derived from mutual recognition, to transnational corporations that follow diverse certification schemes of the status of operators of a convergent global policy on forest certification and the will to undermine FSC that exerted a normative pull to high and strict standards through a mutual recognition framework based on common criteria and indicators whose sustainable content remained dubious.

The gridlock on mutual recognition negotiations turned the spotlight to the main forest certifiers. PEFC, as previously explained, slowly became the territorial leader as the producer-backed global initiative. This shift happened after the adoption of guidelines to the endorsement of national schemes worldwide. FSC, on its turn, continued as the leading forest certifier on stringent sustainable requirements and maintained the support of a significant part of the civil society focused on forestry issues.

5. Conclusion

This chapter is centered on the systematization of the answers provided by the literature to the question proposed. This systematization will follow the sequence of the chapters and analyze the possibility of environmental certification to establish a high level of forest protection respectively in terms of its presence on global environmental governance, of its international regulation and of its effectiveness. Afterwards, new topics on the research agendas on sustainable development and international environmental protection will be identified and proposed to be studied.

The maturation of the concept of sustainable development was followed by the insertion on it of the dimension of good governance by current legal theory. Good governance means that the public sector and the private sector must act in conformity with the rule of law with accountability, transparency, consideration of the needs of stakeholders and the active participation of the public on key issues. Still on the abstract level, SDGs constitute the lodestar for the future development of the planet from 2015 to mid-century. Bearing an interdependent character, these goals are conceived with the aim to be implemented as a whole because of their interrelationships demonstrated throughout chapter 2. On the other hand, a weakness of these goals that was identified consists on the limited tools to provide a solution to possible clashes among them. On the forest sector, the sustainable management of forests foreseen on SDG 15 was recognized as a core concern by UNFF and was thickened through six GFGs. Examples of benefits derived from the implementation of GFGs are better maintenance of forest carbon stocks, improvement of livelihoods for forest-dependent people, improvement of effective area-based conservation measures and new forms of conservation and of manufacture, storage, packaging and transport of forest products in a way that protects the environment.

Against the background of the concept of good governance, NSMD governance revealed that the behavior of international relations' actors in a central position and of States in a peripheral position can lead to win-win outcomes or to conflict scenarios. The first output can be verified when the State acts in a manner consistent with NSMD, for example, through providing advice to the creation of written rules and through economic actions that can alter market-driven dynamics as procurement policies and multinational corporations and the civil society perceive that their conducts must follow dialogue, cooperation and coordination of interests in order to attain successful outcomes. On the other hand, conflicts arise when multinational corporations compete

for market access and market share and the civil society act as a key stakeholder that supports companies with a high environmental and social performance and at the same time publicly criticize companies with a corresponding poor performance. On forest issues, conflicts took shape of certification wars.

The analysis of certification wars from the starting point of the FSC creation and followed by the reaction of opposing forest certifiers against the background of the moves of civil society and multinational corporations allowed a clear identification of the wars' results. Instead of additional fragmentation, competition among forest certification schemes provoked a mutual adjustment after the learning from experience and the augmented accountability of schemes to the adversary ones and to the broad public. NGOs performed the key function of stimulating economic actors to identify each one's rationality and to adopt higher environmental standards in order to attenuate forest campaigns against them until their end. With the passage of time, as revealed by the ISEAL narratives, these standards have acquired the nature of a commonplace good business practice.

The main actions of the certifiers, the protagonists of the certification wars, their interactions with competitive standards, their respective competitors and their stakeholders were more clearly understood in light of the RIT framework. This framework makes possible the enlargement of the regulatory analysis through the presence of intermediaries in conditions in which regulators are not in direct contact with their targets and there are neither resources to regulate them neither necessary means to gather information. Regulation as analyzed in this dissertation involves private actors as regulators, intermediaries and targets, operates in the international and transnational levels in which a variety of actors act as intermediaries and encompasses informal arrangements that replace or complement formal arrangements. As previously explained in greater details, the creators of standards and technical regulations occupy the place of regulators, certifiers, the place of intermediaries and consumers, corporations and the civil society, the place of targets.

In terms of interactions between the agents inside the framework, intermediaries can provide feedback to regulators. During rule-making, regulators can consider and potentially implement rule-reformulation based on the information received from intermediaries. In the forest sector, this feedback can foster a change in the regulation that can then provide a higher level of forest protection through certification and consider issues that were previously disregarded. The performance of the intermediation

feedback embraces the attribution of competences to auditors who transform them into practical forms and can contribute to the creation of a competitive environment, in which auditors compete mainly when there are a high number of potential targets and a soaring demand for certification. On forestry issues, competition between certifiers during certification wars took place in a scenario in which there was an increasing demand for legal timber because of the increasing consumer awareness of the environmental harm provoked by deforestation and illegal logging. At the same time, when practiced to achieve the public interest, regulatory stewardship can put away the possibility of regulatory capture that consists, inside the framework, on the domination of one actor by another, which limits the autonomy of the captured actor to undertake its regulatory function. This happens through the attribution of mutual-monitoring and support competences among intermediaries that aim to protect against capture and improve performance. Moreover, intermediaries, as a result of the mutual-monitoring, can verify the occurrence of captures and act as whistleblowers and turn regulators and targets accountable.

The analysis of the certification wars revealed, however, the existence of a multiplicity of forms of regulatory capture. Starting with the classical regulatory capture in which the target captures the regulator, it is worth recalling that rule-making on certification has been coveted mainly by companies that seek rules favorable to them. In the forestry area, in 1995, Canadian agents were lobbying for a forest ISO standard to be directly applicable to forests and proposed the application of their CSA-sponsored program as a bottom line.

A deeper analysis of the actions inside the framework reveals, moreover, that the intermediation feedback can go in the direction of regulatory capture. Intermediaries can take advantage of regulatory rules to put ahead their interests, to appropriate regulatory authority and to create regulatory rules according to their self-interest. As explained above, PEFC performs the roles of regulator and intermediary inside the framework and its producer-backed nature can lead PEFC certifiers to pressure regulators in the sense of tailoring standards that do not provide SFM requirements adequate enough to a specific forest ecosystem.

Intermediaries can also be captured in a variety of conditions recognized in the literature. Firstly, targets frequently pressure for the insertion of intermediaries to interpret rules and assist in implementation or monitoring in an effort to raise regulatory efficiency through the expansion of expertise concomitantly with the reduction of costs.

Secondly, targets can take ownership of the intermediaries to capture the regulator by means of influencing the intermediary to propose alterations in the rules that are favorable to the target. Thirdly, the target can capture the intermediary itself through the influence on him to interpret or implement rules in a favorable manner to the target. On the forest sector, activists attempt to influence procedures applicable to monitoring and oversight of rule implementation through benchmarking of standards and ranking systems on the sector.

These possibilities of capture explained on the paragraph above can occur more easily in two specific circumstances. These are when the target reveals a supposed trust on the intermediary and when the intermediary cooperates with the regulator in an effort to spur a change of behavior of the target, but the regulator lacks operational resources to defend the intermediary from interference, leaving him in a vulnerable position. On forestry issues, ISO creates standards applicable to forest protection as ISO 14001 that can be voluntarily followed by companies, but makes it clear that does not perform certification and emphasizes that it is performed by outer certification bodies, which reveals the independence of certifiers and their vulnerability to capture.

On the certification wars, the capture of an intermediary happened in a scenario of multiple intermediaries. The multiple forest certifiers that emerged to counterbalance FSC had conflicting interests and competed for market share and for a safe position in the emerging market of certification. In these circumstances, the target needs to capture only one intermediary after the choice of the certification body to be employed. On the forest sector, motives to the choice of PEFC by corporations as the certifier to counterweigh FSC can be found on weaknesses of CSA and SFI, its main competitors and on the alignment of PEFC characteristics with businesses' interests. CSA certification provided very burdensome benchmarks that kept companies distant from it. SFI, despite producer-backed, could not establish clear and predictable rules and, in the period of certification wars, created measures that comprised social and environmental objectives which raised objections to it by corporations. PEFC features that pleased the business sector were the possibility of countries to adopt their own standards in a path contrary to that followed by FSC, which created ten strict principles, and the attribution of flexibility on the endorsement of national certification schemes in reason of the lack of tools that can guarantee that a variety of national schemes can provide similar standards. In broader terms, when intermediaries follow dissonant interpretations of a rule, targets can argue that compliance is excessively costly or impossible.

The moves of certifiers, the civil society and multinational industry corporations can be better understood in light of certification regulation. It establishes limits to these moves and reveals institutions that design paths to be taken by the aforementioned actors. The starting point of certification regulation fell on the regulatory element that underpins forest certification, standards. The understanding of the concept of private standards as non-binding documents created by non-governmental entities to be used continuously and that aim guarantee product quality and to protect human, animal and plant life and health allowed the identification of their application in forest certification. Performance-based standards establish precise management measures that must be undertaken in order to achieve compliance as the creation of a 50 meter buffer zone on each side of a stream that crosses a forest. Management standards leave discretion to organizations to implement management planning on forest measures as riparian conservation. Besides this dichotomy that, as was previously analyzed, can be blurred, the international standard ISO 14001 constitutes a reference to the creation of standards that underlie forest certification and can comprise, for instance, the way through which a product is made as the performance of logging together with reforestation and components of a management system as a program of environmental goals that can encompass reforestation and the keeping of the native forest.

The analysis of conformity assessment on the multilateral and regional levels reveals the existence of different objectives to be attained. The multilateral trade system aims to avoid new forms of regulatory protectionism and foresees on article 5.1.1 of the TBT agreement a MFN obligation applicable to conformity assessment. Protectionism occurs when access for suppliers of like products originating in the territories of other members is granted under less favorable conditions than those accorded to suppliers of like products of national origin or originating in any other country in a comparable situation. An exception to the MFN obligation is possible, but instead of the demonstration of a legitimate regulatory distinction, a necessary procedural distinction must be demonstrated, which seeks to attain a legitimate objective and which could not be better crafted or implemented to achieve that objective.

On the European level, conformity assessment comprises first party activities and third party activities. The first ones are chiefly applied to low risk products. The second ones are performed by third parties with a specific technical competence to complex and high risk products whose conformity assessment requests tests or trials. Moving to its functions, conformity assessment firstly provides a requisite for the

manufacturer to sell products on the European market. Secondly, as conformity assessment is inside the European New Approach, it aims to oblige products that are reached by EU harmonization to undergo an assessment of conformity with safety, health and other public interest requirements.

This initial regulatory overview of conformity assessment regulation allows a following move towards the regulation of sustainable fragments. EMAS, one of the fragments identified, is mandatorily regulated by an European regulation that allows EMAS interaction with other environmental management systems, which can even be outside the EU, and thus lead to an increase of their reach. This connection is partially structured in EMAS regulation that provides a procedure to the recognition of an environmental management system and inside the procedure an essential requisite consists on the demonstration of equivalence with the regulation of all important features of the environmental management system to be appreciated. The analysis of the example of Eco-Lighthouse certification scheme revealed that both EMAS and Eco-Lighthouse learned from each other and the achievement of a balance in which Eco-Lighthouse's objective appeared to coincide with the one of the Directorate-General of the Environment. The emphasis on the broad and shared objective of stimulating environmental management and certification in general was fundamental when the Eco-Lighthouse staff met the EMAS committee and a warning that competition between schemes in which one aims to be predominant would only distance certifiers from the real-world problem of environmental degradation.

Contrary to the broad and comprehensive environmental regulation found on sustainable fragments, the international regulation of forests is sparse and limited. Inside the UN, UNFF was created to constitute an international platform on forests and forestry issues, but on experts' meetings to define sustainable forestry and on countries' proposals of national forest programs could not deal effectively with political interests behind forest regulation. Also at the UN level, FAO attempted to foster SFM only through planning with a non-binding nature. A look at hard law and soft law on the issue reveals the existence of dedicated instruments – hard and soft law aimed at a specific problem as ITTA and CITES and that imply core elements of forest conservation and species protection – and of cross-cutting instruments – hard and soft law that understand forest issues as one among others and whose causes and consequences are inserted on a wider environmental problem as climate change policies.

These features reveal that the international forest regulation domain is fragmented and polycentric. Fragmentation can be identified as it was not possible to establish a forest convention as a framework treaty for hard law and soft law and for international and transnational actors. ITTA, an agreement close to the position of a framework treaty, is limited to tropical forests, provides a poor definition of SFM with references only to ITTO policy documents and technical guidelines, was effective merely as a commodity-market adaptation among timber consumer and producer States, and, in terms of voluntary mechanisms as certification, only encouraged information sharing for its better understanding. Polycentrism can be found in a decentralized institutional arrangement for forest regulation that encompasses the UN level and Bretton Woods institutions as the WTO and the World Bank and in a plurality of hard law and soft law instruments that aim to back sustainable forest management.

On the regional EU level, the FLEGT Action Plan constitutes a possible regulation. Comprising a diversity of measures to address illegal logging worldwide, it arose from discontentment with the inability to face the issue of forest degradation at the multilateral level and from the increasing political and epistemic consensus accumulated on FLEG processes on this issue and on the recognition of the need of policies to combat it. In this scenario, in a unilateral action the EU linked the improvement of forest law enforcement and governance (FLEG) to trade (T), which gave rise to the FLEGT Action Plan. In order to attain the objective of narrowing the entry of illegal timber inside its territory, the EU sought to cooperate with countries that are leading producers of timber and timber products, aiming to to expand the scope of the Action Plan, and created the legislation provided on it, the EU Timber Regulation, to regulate imports of harvested timber and outlaw the illegal ones. VPAs between the EU and producing timber countries are another instrument that stimulates trade of legal timber products and that contributes to close the EU market to illegal products.

The connection between the FLEGT Action Plan and forest certification can be found on a specific function of private forest certification schemes. These schemes can be incorporated in sustainable public procurement policies promoted at the EU level and be recognized as a proof of legality and as a measure that addresses illegal logging. In practical terms, as inside the EU public procurement is a competence attributed to each member State, Belgium, Denmark, France and Germany are examples of countries that have adopted public procurement policies on timber acquisition from legal sources. In the same sense, the EU Timber regulation recognizes certification schemes as

developing legality assurance standards. A mutual interaction between certification and legality requirements can then be identified in the following way: while monitoring structures created in voluntary certification programs have been essential to move forward international measures to eliminate illegal wood trade, international legality requirements exert an influence on certification standards and open paths for the reach of certification into new fields. Additional outcomes of the recognition of forest certification schemes as a demonstration of legality are the exposure of these schemes to public surveillance and an increased coherence of the transnational forest governance regime, going beyond the formal dichotomy between public and private authority.

Further benefits can arise from FLEGT licensing and VPAs. The first one guarantees not only the legality of timber and timber products, but also their origin being a country in which there was consensus on forest laws by stakeholders. Besides, the FLEGT license ensures that the issuing country implements a robust forestry system that undergoes an impartial audit that can avoid the insertion of illegal timber in the supply chain. The second ones can enhance the coherence of global forest governance by means of fostering the presence of a variety of instruments of polycentric governance applicable in forest regions and inside countries. Moreover, VPAs can allow the achievement in wood producing areas of collaboration of developing country stakeholders through the promotion of fair solutions for all present interests, the participation of on-site communities and NGOs in forest governance reform and the creation of capacity-building support that reaches the civil society, the private sector and public authorities. The instruments inside FLEGT Action Plan constitute, thus, a valuable tool to Brazil to improve its domestic forest governance and, by means of addressing illegal logging, to reduce significantly the deforestation and the fires that increased in the last years.

The sparse and limited international regulation of forests and the initial implementation of the FLEGT Action Plan, a promising regulation, reveal the need of a change of path towards forest conservation. The efforts that in the beginning of the 1990s fell on the conclusion of an international treaty or on a consensual soft law are now on a market-related instrument, certification. Forest certification can attribute concrete effects to the concept of SFM and reveal to the consumer a possible sustainable source of a product. Years after the certification wars, FSC and PEFC are the forest certifiers with an international reach and that encompass a broad area of certified forests.

FSC manages a self-created third-party certification framework on timber and timber products that aims to assess whether products come from sustainable forestry. In its forest management certification, FSC acts guided by ten principles, its certification benchmarks, to which compliance must be demonstrated by a forest undertaking to the attribution of FSC certification. These principles, as explained, provide criteria and indicators that reflect the sides of sustainable development either alone, either in synergies. Moreover, as they are written in abstract terms, they must be formulated in the form of indicators to be in accordance with national and local requirements.

PEFC, on its turn, created a worldwide applicable benchmark which must be met or exceeded by national forest certification systems instead of a permanent group of requirements and criteria applicable in each place and in the same manner. The interaction between PEFC and national forest certification systems allows the creation in each country of the own SFM requirements and the participation of important stakeholders that represent diverse interests once there is adhesion to PEFC benchmark requisites. These prescribe the coverage of domestic standards and the acts to be undertaken along this creation process. Once created, each national certification system must undergo an independent assessment to determine whether compliance with PEFC benchmarks remains. This assessment, a forest management certification, comprises an audit, the consultation of stakeholders and the audit publishing. In addition to certification, endorsement is a procedure that guarantees that national forest certification systems comply with PEFC international requisites. In practical terms, a certification system to which a PEFC certification was granted is recognized by other systems that bear the same certification. Inside PEFC, the point is not that standards are high, or robust or leading, but that certification bodies operate in compliance with the standards.

Reality reveals, however, that certifications are not infallible and that their accuracy and reliability can be increased through accreditation procedures and through the achievement of mutual recognition agreements. In light of these findings, the effectiveness of forest certification is analyzed according to the parameters of accreditation and mutual recognition agreements.

Accreditation, the first parameter to evaluate the effectiveness of conformity assessment procedures, presents particular features. It consists on the formal acknowledgement attributed by an accreditor body that an entity was assessed according to national and international guidelines and rules and has technical and managerial competence to perform activities that constitute a form of third party conformity

assessment. Accreditation allows the reduction of risks for companies that sell labeled products and for their respective consumers through the guarantee that accredited certification bodies are competent to perform activities attributed to them and the minimization of the risks of certifiers' capture by entities to be certified by them. Accreditation bodies integrate regional and international forums that aim to stimulate information exchange and coordination among accreditors through, for example, the guarantee of equivalence of each accreditation program. On the other hand, criticisms directed to accreditation refer to the impossibility of the chain of accreditors to dispel great suspicions of a false certificate in the market and the excessive increase of transaction costs of the original products that can lead to a situation in which transactions do not occur or the buyer takes some risks.

In the forest sector, differences between the accreditation structures of FSC and PEFC were identified. FSC established a structure to the accreditation of certifiers to evaluate compliance with FSC standards. ASI is FSC's accreditation body, an assurance entity that seeks to lead sustainability standard frameworks and initiatives around the world. Its impartiality and independence derive from a control transfer agreement with FSC, which empowers ASI Supervisory Board with full business control and from the lack of ASI funding by FSC and of claims over ASI's financial surpluses. PEFC, on its turn, adopted stringent requisites and claims according to which accepted accreditations must be undertaken by accreditors that are members of IAF MLA or of one regional accreditation group. Moreover, accreditors must adopt procedures foreseen on standard ISO/IEC 17011:2017 with requirements for the competence, consistent operation and impartiality of accreditation bodies and on documents recognized by aforementioned organizations.

Moving to the second parameter, a MRA, an agreement between two or more parties in which the principle of mutual recognition addresses trade frictions that arise from differences in product SHEC requirements by the promotion of equivalence of these requirements' levels or of relevant aspects, is applicable to conformity assessment procedures. The results of conformity assessment in one country are thus recognized as providing functional equivalence for SHEC requirements in another country and vice versa. Another core feature of mutual recognition of conformity assessment is the underlying confidence by one country that the technical infrastructure of another country is of sufficiently high quality and that its conformity assessment bodies are competent to perform their tasks.

Non-governmental multilateral agreements based on a high quality world standard were also conceived by conformity assessment bodies and national accreditation bodies. They recognize each other's competence and processes for conformity assessment and/or accreditation. If expanded, the confidence on another countries' technical infrastructure or on a conformity assessment body or accreditor's competence can contribute to the creation of an international structure that supports international trade through the removal of regulatory barriers.

Advantages that arise from these MRAs can be favorable to specific actors. Governments are benefited with a trustworthy and technically robust framework that establishes the basis for the creation of bilateral and multilateral international trade agreements. Regulators are favored with the promotional function performed by a MRA through the provision of a globally recognized label that confirms compliance with acknowledged standards and requisites and are supported to perform their legislative competences by a framework of recognition of accredited tests and inspections reforms founded on a MRA. Industry users can reveal greater reliance in the precision of test, calibration and inspection reports. Manufacturers can have greater values of savings as they show deference to evaluations of internationally recognized accreditation bodies that are members of accreditation forums and enter markets more easily. Consumers have greater confidence when buying products that underwent an accredited conformity assessment. Lastly, accredited certifiers can promote their conditions of having their accreditation recognized on the international level.

In the forest sector, a mutual recognition structure was proposed, but after negotiations and deliberations, mutual recognition remained circumscribed to PEFC. Key FSC competitors backed a proposal for mutual recognition among schemes when consumers were confused about the degree of environmental protection assured by each certifier. IFIR proposed a mutual recognition framework that would embrace all plausible certification schemes to be recognized as equivalent. Criteria and indicators would establish the components of a credible scheme and criteria would determine whether a certification scheme is in conformity with SFM principles, participation and a compromise to continuous improvement. This proposal was understood either as a valid endeavor to decrease consumer confusion and create a more stable forest certification framework, either as an effort to weaken FSC in a scenario in which the strongest scheme and the weakest scheme would be equivalent.

The literature identified the reaction of a range of actors to the structure introduced by IFIR. FSC identified IFIR's proposal as aiming to attain reciprocal arrangements in which one body or system recognizes and accepts other standards' and certification systems as equivalent in terms of intent, outcomes and process and rebutted it with the argument that the structure proposed would correspond to a full description of the FSC system, a distortion inside the mutual recognition framework. FSC, however, expressed its will to work with certification schemes that comply with FSC standards. PEFC refused the proposal arguing that it already had in place an operational mutual recognition program and that it was at the time of the proposal introduction the main forest certification scheme in the world.

The civil society's contrary arguments to IFIR's proposal and the corporations' arguments favorable to the respective proposal can be systematized. Contrary arguments are as follows: only certification based on FSC benchmarks could be understood as attaining satisfactory fulfillment levels and thus providing an appropriate stimulus to the improvement of forest management worldwide, the institutional design of the framework proposed would lead to a situation in which the weakest scheme would represent a burden that would fall on all other schemes and in which certifiers would not give up their reliability through the acceptance of severely weak programs and, considering the standards that underpin forest certification procedures, mutual recognition could weaken standards and constitute a framework in which forest certifiers' moves towards higher environmental standards would be completely eliminated and all certifiers apply the same standard. Supportive arguments by businesses are the following: the attribution, derived from mutual recognition, to transnational corporations that follow diverse certification schemes of the status of operators of a convergent global policy on forest certification and the will to undermine FSC, which exerted a normative pull to high and strict standards, through a mutual recognition framework based on common criteria and indicators whose sustainable content remained dubious. An analysis of all identified arguments reveals that a mutual recognition structure that comprises all forest certifiers would put on the same level serious forest certifiers and less serious ones and would weaken certification initiatives towards higher and more rigorous standards.

The gridlock on mutual recognition negotiations turned the spotlight to the main forest certifiers. PEFC, as previously explained, slowly became the territorial leader as the producer-backed global initiative. This shift happened after the adoption of

guidelines to the endorsement of national schemes worldwide. FSC, on its turn, continued as the leading forest certifier on stringent sustainable requirements and maintained the support of a significant part of the civil society focused on forestry issues. The creation of a mutual recognition framework that could move upward forest conservation and protection remains, thus, wishful thinking.

Beyond the content analyzed in the dissertation, the research agenda on forest certification reveals the existence of further proposals and measures that can support upward certification standards towards greater environmental protection and deserve to be studied. The ones identified are an experimentalist approach to the benchmarking of forest certification standards that involves interviews with auditors and can reveal on the ground work of certification schemes, the granting of fiscal and other incentives to forest certification when there is a clear and demonstrable connection to SFM and the punishment of illegal logging and the arbitrary practice of deforestation. The first proposal can constitute an accountability mechanism relative to the work performed by auditors. Benchmarking contributes to open reflection on achievements and failures that generates mutual accountability through the obligation of auditors and certifiers to provide persuasive considerations of their performance. The introduction of a higher systematic benchmarking inside every element of the forest regime as forest certification schemes and national timber regulations and between them could in this sense contribute to the institutionalization of a platform from which emerges a continuous prolific adaptation and elaboration of a nascent experimentalist governance framework.

The second proposal comprises fiscal and non-fiscal incentives that are granted when there is a verified practice of forest management certification. The reasoning behind them reveals that the incentives deepen the idea analyzed in chapter 2 that, when conventional regulation fails to fulfill environmental and social goals, other approaches founded on differences in relative prices could in a better way change the consumer's behavior and contribute to line up private and public interests. Forest management certification can constitute a parameter to differentiate the amount of tax applied to forest products. In a bonus-malus mechanism, for instance, a reduced tax attributed to sustainable products, in other word, the bonus is in part financed by a higher tax attributed to unsustainable products, in other word, the malus. It would then be possible to distinguish between certified and uncertified timber in order to allow the granting to the first one of a bonus concerning a forest-related tax. A troubling aspect of this

mechanism, however, are the difficulties to determine the capabilities of consumers and producers to be aware of the tax differential derived from the bonus-malus structure and in this sense alter their behavior. There can be then difficulties to guarantee that the bonus attributed to producers of certified products is wholly financed by the malus that arises from other products.

These incentives can generate investment in harvested forests to the creation of deforestation-free landscapes and of value chains that implement environmental measures in tropical areas. In practical terms, discounts of up to 5% relative to the royalties due to the Brazilian Forest Service are awarded in Brazil to certified forest concessions in which forest products are obtained from public forests. Certification, thus, constitutes a stimulus to SFM in concession zones.

The third proposal could initially be implemented through a clear definition of prohibited practices. The crafting of this definition can focus on the arbitrary deforestation and the illegal logging currently practiced and on measures that would generate significant firm level support in the sense that corporations would change their behavior towards a more sustainable path. These efforts could generate substantial outcomes if they ambition the creation of policies that forbid the entry of illegally harvested wood on the market and in this sense deepen the FLEGT measures. Logging corporations' strategies that seek to take advantage of lax or unenforced environmental or social regulations on developing or least developed countries could come to an end and the interaction of these corporations with environmental and social groups could change towards cooperative actions that search an understanding of environmental and social standards to be fulfilled and assessed by certifiers. This proposal, moreover, partially answers the research question of this dissertation as activist environmentally centered communities could keep their search of high forest environmental and public policy standards and be inserted in a plausible venue of dialogue of forest corporations that are present in markets that operate under high standards.

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