Article

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Transnational Private Regulation of Environmental Sustainability through Commercial Contracts. Reassessing Contractual Governance in Global Supply Chains

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Abstract: Sustainability standards are integrated and applied in global supply chains through transnational commercial contracts that have come to play a regulatory function in addition to the conventional exchange task. The design of the architecture of contracting, the coordination among contracts, and the content of sustainability terms along the chain is the result of the cooperation of different actors, led by one or more transnational corporations. The paper describes the distribution of private regulatory power according to the structures of the chains-hierarchical, relational, market -and its impact on the compliance with sustainability standards. It considers the qualification system that regulates entry, exit, and permanence in the chain and the Suppliers codes and General principles of sustainability specified in the general terms and conditions. These represent complementary direct and indirect private regulatory instruments that can be deployed to ensure compliance. The choice of instruments depends on the distribution of regulatory power among the private actors and their exercise. Privity of contract makes it often difficult if not impossible direct regulation by the chain leader and obliges decentralization of regulatory power. The analysis shows that only the complementarity between the two sets of instruments enables control of compliance in complex chains whose actors operate across different jurisdictions with the use of sanctioning and remedial powers. The article analyzes how

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principles of effectiveness, proportionality and dissuasiveness may contribute to a fair and non discriminatory exercise of private regulatory power related to the implementation of sustainability standards through contracts.

Résumée: Les normes de durabilité sont intégrées et appliquées dans les chaînes d'approvisionnement globales par le biais de contrats commerciaux transnationaux qui en sont venus à jouer une fonction de régulation qui s'ajoute à la traditionnelle fonction d'échange. La conception de l'architecture des contrats, la coordination entre les contrats, et le contenu des stipulations relatives à la durabilité tout au long de la chaîne sont le résultat de la coopération de différents acteurs, dirigés par une ou plusieurs sociétés transnationales. Le document décrit la répartition du pouvoir réglementaire privé en fonction des structures des chaînes – hiérarchique, relationnelle, de marché – et son impact sur le respect des normes de durabilité. Il examine le système de qualification qui régit l'entrée, la sortie et la permanence dans la chaîne, ainsi que les codes des fournisseurs et les principes généraux de durabilité spécifiés dans les conditions générales. Il s'agit d'instruments réglementaires privés complémentaires, directs et indirects, qui peuvent être déployés pour garantir le respect des normes. Le choix des instruments dépend de la répartition du pouvoir réglementaire entre les acteurs privés et de leur exercice. Le caractère privé du contrat rend souvent difficile, voire impossible, la régulation directe par le leader de la chaîne et oblige à décentraliser le pouvoir de régulation. L'analyse montre que seule la complémentarité entre les deux ensembles d'instruments permet de contrôler la conformité dans les chaînes complexes dont les acteurs opèrent dans différentes juridictions en utilisant des pouvoirs de sanction et de réparation. L'article analyse comment les principes d'efficacité, de proportionnalité et de dissuasion peuvent contribuer à un exercice équitable et non discriminatoire du pouvoir réglementaire privé lié à la mise en œuvre de normes de durabilité par le biais de contrats.

Zusammenfassung: Nachhaltigkeitsstandards werden in globale Zulieferketten durch transnationale Handelsverträge eingebracht, so dass neben die herkömmliche Austauschfunktion zunehmend auch eine Regulierungsfunktion tritt. Die Vertragsarchitektur, die Koordinierung zwischen den Verträgen und die Nachhaltigkeitsinhalte resultieren aus einer Zusammenarbeit verschiedener Akteure, wobei eine oder mehrere transnational positionierte Unternehmen die Leitungsrolle übernehmen. Bei der Beschreibung des jeweiligen Einflusses auf die Regulierung unterscheidet der Beitrag zwischen Organisationsstrukturen – hierarchisch, relational, Marktbeziehung – und nach der Frage, wie sehr sich diese auf Nachhaltigkeitsbemühungen auswirken. Zusätzlich unterscheidet er danach, wie Eintritt in, Austritt aus und Dauer des Verbleibens in der Zulieferkette (in den AGB) geregelt

sind. Denn hierin sind flankierende direkte und indirekte Einflussfaktoren bei der Durchsetzung von Nachhaltigkeitsregelungen zu sehen. Die Wahl des jeweiligen Instruments hängt maßgeblich von der Verteilung und der Nutzung von Regulierungsmacht zwischen Privatrechtssubjekten ab. Die Wirkung von Verträgen allein zwischen den Parteien erschwert es und schließt es teils aus, dass der Systemkopf direkt durchgreift, dezentrale Arrangements dominieren. Die Analyse belegt, dass eine Durchsetzung in komplexen grenzüberschreitenden Zulieferarrangements nur bei einer Kombination der genannten Regelungsinstrumente mit Sanktionspotential gewährleistet werden kann. Der Beitrag analysiert, wie Effektivität, Verhältnismäßigkeit und Abschreckungswirkung erreicht werden und zu einem diskriminierungsfreien Einsatz privater Regulierungsmacht führen können bei einer Setzung von Nachhaltigkeitsstandards auf vertraglicher Grundlage.

1 Introduction

Over the last fifteen years, sustainability requirements have become relevant both to access global chains and to trade within them. Sustainability affects both production and consumption. The sustainability principles define standards related to products and processes that may determine both (1) access and exit from the chain and (2) specific contractual obligations concerning both processes and products. The growing importance of sustainability and fundamental rights protection in supply chains has imposed a radical change in transnational commercial contracting, moving from a dominant commercial logic into a regulatory perspective.[1]

The implementation of sustainability requirements along the chain has a significant distributional impact.[2] Who bears the cost of standards' implementation? Who decides how costs are allocated along the chain? Which legal principles affect the distribution of power and the contractual terms that define who bears the costs of implementation and the costs of remediation when sustainability violations occur? The new proposed contractual terms indicate that these costs should be shared according to a cooperative process between the chain leader (usually the Buyer) and the suppliers.[3]

1 See F. Cafaggi, 'Regulation through contracts: Supply-chain contracting and sustainability standards' *European Review of Contract Law* 2016, 218–258 (hereinafter Regulation through contracts).

2 See S. Ponte, 'The hidden costs of environmental upgrading in global value chains' *Review of International Political Economy* 2022 (29) 818–843. Ponte contends that 'In the name of sustainability, a massive and stealthy transfer of value is taking place from the global South to the global North, from producers to global buyers and consumers, and from labour to capital' (819).

3 See European model clauses on due diligence obligations third draft: 'Buyer and Supplier shall collaborate to agree on a price [, taking into account the size of the contract,] that accommodates the

Implementation of transnational standards requires collaboration among the firms and especially the involvement of small and medium enterprises whose financial and cognitive resources might be extremely limited. Practices and the most recent legislation on due diligence obligations establish a chain leader's legally enforceable duty to assist suppliers, that is the premise of the cooperative relationships in supply chains.

Global supply chains significantly contribute to the implementation of transnational sustainability standards.[4] This contribution is often overlooked both by the students of transnational private regulation and by those of transnational commercial contracts. This paper, building on previous work, assesses the scope and effectiveness of private regulatory instruments regulating sustainability in global chains. It examines, in particular, how transnational commercial contracts can contribute to regulate cross-border sustainability standards concerning both products and processes, and implement them along global chains. It shows that the private regulatory power, exercised by the chain leader(s), often in collaboration with other participants in the chain, is wide but limited and subject to risks of abuse. It contends that the exercise of private regulatory power should be correlated to the introduction of accountability regimes and more specifically to legal liability.

Private actors regulate environmental and social factors affecting global production and distribution. Within transnational private regulation, a prominent role is played by transnational enterprises for their influence on global supply chains governance. Chain leaders bear responsibility to prevent, mitigate, and repair environmental harms occurring within the chain. The chain leader is the firm with the strongest contractual and market power that defines the economic and legal requirements, including sustainability, to access, remain, and exit from the chain.[5] The leadership in the chain may be exercised by more than one firm, thereby shifting from a unipolar to a multipolar chain.[6] In multipolar chains the private regulatory

costs associated with implementing and upholding Human Rights and Environmental Due Diligence.' (Erasmus University Rotterdam) available at www.eur.nl. Last visited 30 November 2023.

4 See J. Humphrey, 'Internalisation theory, global value chain theory and sustainability standards' *International Business and Sustainable Development*, 91, 114 part 103 *et seq*.

5 See F. Cafaggi, 'The regulatory functions of transnational commercial contracts: new architectures' *Fordham International Law Journal* 2013, 1558 *et seq* (hereinafter New architectures). Lead firms are not homogeneous entities and there are divergent views about the role sustainability should have in the firm's policies and in the governance of the chain. These divergences translate into different governance models and architectures of contracting.

6 See S. Ponte and T. Surgeon, 'Explaining governance in global value chains: A modular building effort' *Review of International Political Economy* 2014, 195 *et seq*. Distinguishing between uni and multipolar chains and driving, linking and normalizing. See S. Ponte, T. Sturgeon and M. Dallas,

power is distributed between lead firms and suppliers.[7] But even in unipolar chains, the power is distributed between the lead firm and, especially, tier one suppliers. Distribution of power influences the choice of instruments to implement sustainability standards and the allocation of costs and additional value stemming from the improvement of environmental performance.

The chains may present various regulatory power distributions with different degrees of asymmetry of power and liabilities among participants.[8] In some chains the centralized control of the chain leader is very strong, in others there is a significant degree of delegation and discretion to define the modes of standards' implementation. Regulatory power distribution influences the architectures of contracting within the chain. We shall examine different contractual architectures depending on the distribution of private regulatory power along the chain.

The governance of the chain requires a supply chain management that is not limited to the leader and its internal organization but includes the entire chain.[9] Sustainable supply chain management includes (1) mapping the chain, (2) formulating the suppliers' access requirements through a qualification system, (3) assessing the environmental impacts of production, processing, packaging, and distribution, (4) identifying the regulatory gaps in the chain, (5) defining the measures necessary to fill them out, (6) evaluating suppliers' performances on environmental issues, (7) reporting the results of the adopted measures, (8) solving conflicts among chain's participants and providing remedies (9) sanctioning and remedying for infringements.

Changes of governance have occurred for the use of digital technologies and the transformation of the role of intermediaries shortening the length of chains.

The performance of the outlined functions involves a very large number of participants and constitutes a form of transnational private regulation (TPR). Private regulation of supply chains deploys both legal and social norms, formal and informal

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'Governance and power in global value chains', in G. Gereffi, S. Ponte, G. Raj-Reichert (eds), *Handbook on global value chains* (Cheltenham: Edgar Elgar, 2021) 120 *et seq*.

7 See G. Raj-Rachert, 'The role of transnational first tier suppliers in GVC governance', in Gereffi, Ponte, Raj-Reichert (eds), n 7 above, 354 *et seq* part. Describing how power is distributed in multipolar chains.

8 See UN Global compact strategy 2021/2023 available at www.unglobalcompact.org.

9 See G. Gereffi, J. Humphrey and T. Sturgeon, 'The governance of global value chains' *Review of International Political Economy* 2005, 78–104. They identify five governance modes, ranging from market, modular, relational, capitive, and hierarchy, which result from different combinations of three transactional characteristics: the complexity of information exchange, the codifiability of knowledge, and the supplier's capabilities. The degree of power asymmetry is determined by the complexity of the transactions within the chain the ability to simplify the complexity and codify the transactions, and the capability of suppliers to meet the buyers' specifications.

governance.[10] It regulates entry, exit and the role of suppliers within the chain. Whether TPR is effective and what is the degree of compliance with the standards deserve careful empirical scrutiny.

The field of sustainability implementation concerns not only private but also public and hybrid standards, among which stand out the UN Guiding principles on business and human rights, UN sustainable development goals and the ESG.[11] Guidelines on sustainable management and responsible conduct have been issued by international organizations to implement the development goals.[12] Transnational private regulation of sustainability interplays with international and national environmental regulations and due diligence obligations.

Legal standards related to sustainability have to go beyond the thresholds of public mandatory regulations set in the countries where the firms participating in the chain operate. Hence, usually, the private environmental standards are stricter than local public mandatory standards.[13] To access the chain, enterprises have to meet and comply with those mandatory standards.[14] In most cases these standards are obligatory for the firms belonging to the chain.[15]

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10 On the relationship between formal and informal instruments in contract see G.K. Hadfield and I. Bozovic, 'Scaffolding: Using Formal Contracts to Support Informal Relations in Support of Innovation' (2016) *Wisconsin Law Review* 981, F. Cafaggi, 'Custom and law in transnational commercial contracts: a co-evolutionary perspective' *Transnational Commercial Law Review* 2022, 1–33; M. Jennejohn, 'Do networks govern contracts?' 47 *Journal of Corporation Law* 2022, 101 *et seq*.

11 See United Nations Guiding Principles on Business and Human Rights https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_en.pdf.

12 See OECD Guidelines for multinational enterprises on responsible business conduct, latest edition 2023 available at www.oecd.org

'76. Enterprises have an important role in contributing towards net- zero greenhouse gas emissions and a climate-resilient economy, necessary for achieving internationally agreed goals on climate change mitigation and adaptation. During the process of transitioning to net-zero greenhouse gas emissions, many business activities will involve some level of emissions of greenhouse gases or reduction of carbon sinks. Enterprises should ensure that their greenhouse gas emissions and impact on carbon sinks are consistent with internationally agreed global temperature goals based on best available science, including as assessed by the Intergovernmental Panel on Climate Change (IPCC).

13 See CDP, 'Scoping out tracking nature across the supply chain' 2022 available at www.cdp.net. And more broadly S. Light and M. Vandembergh, 'Private environmental governance', in *Elgar Encyclopedia of Environmental Law* (Cheltenham: Edgar Elgar, 2019).

14 See for example IBERDROLA that has adopted a sustainability assessment model where the assessment includes several dimensions. Supplier evaluation includes the supplier's performance in wide ranging areas: identification of goals linked to the Sustainable Development Goals (SDG), management of risks resulting from climate change, circular economy strategy, due diligence in human rights, etc. Iberdrola has assigned percentages and allocated 40 % to environment, 30 % to social and 30 % to governance.

15 This is not the case for the commercial aspects of the transactions where parties have the possibility to craft their specific rules and the GTC are not mandatory. For the distinction between

The production of transnational sustainability standards presents different features and geographical specificities. Increasingly southern and eastern chains have defined their own sustainability standards which may not coincide with the more established western standards.[16] Standards' differentiation can increase regulatory fragmentation and increase governance costs across the globe.

The supply chain is one of the vehicles through which implementation occurs. Standards can be implemented with transnational commercial contracts. Regulatory provisions in the contracts require a high level of inter-firm collaboration to implement and report sustainability performances.

The modes of implementation of sustainability through commercial contracts depend on the structure of the chains.[17] Chains' structures differ and strategies of implementation have to adjust accordingly.[18] The adjustment of implementing instruments is driven by economic and institutional factors and the culture of the business community. The differences among chains concern distribution of contractual power, information asymmetries, technological capabilities. The standards' implementation may require adaptation to the chain's structure and to the specific regulatory regimes of the countries where the chain's participants operate.[19] Hierarchical chains require different instruments from relational chains; in particular, the degree of contractual standardization and completeness differs. The rules can be defined centrally by the leader or co-designed with suppliers and stakeholders. Distribution of power influences the contractual architectures of the chain. It shapes the modes of coordination and the instruments of cooperation among chains' participants when implementing environmental obligations concerning for example product eco-design, CO_2 emissions, waste disposal.

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mandatory and default rules defined by the chain leader in global chains contracting see F. Cafaggi and P. Iamiceli, 'Regulating Contracting in Global Value Chains. Institutional Alternatives and their Implications for Transnational Contract Law' *European Review of Contract Law* 2020, 44 *et seq* (hereinafter Institutional alternatives).

16 See N.J. Langford, K. Nadvi and C. Braun-Munzinger, 'The shaping of "Southern" sustainability standards in a value chain world: comparative evidence from China and India' *Review of International Political Economy* 2022.

17 These structures are dynamic; they change over time. See G. Gereffi, Global value chains and development redefining the contours of XXI capitalism (Cambridge: Cambridge University Press, 2018).

18 See on the different structures of value chains and the factors determining their modifications over time Gereffi, Humphrey and Sturgeon, n 10 above; M. Sako and E. Zylberberg, 'Firm level strategy and global value chains', in Gereffi, Ponte, Raj-Reichert (eds), n 7 above, 340 *et seq*; Ponte, Sturgeon and Dallas, n 7 above, 120 *et seq*.

19 According to the taxonomy developed by Gereffi *et al.* See Gereffi, Humphrey and Sturgeon, n 10 above; Ponte and Surgeon, n 7 above, 195 *et seq*.

The level of suppliers' awareness and resources to comply with demanding environmental standards significantly differs within and between chains. Global problems often require local solutions that reflect legal, socio-economic, and cultural specificities. Local regulatory solutions are the product of decentralization of decision-making power. Decentralization of regulatory power calls in turn for regulatory delegation. Delegation to first tier suppliers influences the instruments' choice to regulate sustainability and the architecture of contracting. In particular, the relevance of coordination increases with delegation of regulatory power to suppliers and their subcontractors and to third parties. Usually, power concentration is combined with standardization of contractual relationships, whereas delegation is associated with a more intense use of relational contracts.

Chain leaders regulate through a wide range of instruments. The qualification systems and the architecture of contracting represent the most relevant ones.

Transnational commercial contracts play a pivotal role when outsourcing and offshoring are significant. Their role is more limited when chains are vertically integrated and located within the same jurisdiction. In these instances, domestic contract laws define the dominant pillars of the architecture of contracting within the chain.

Transnational commercial contracts have come to perform a significant regulatory function.[20] Not only do they regulate trade by way of regulating exchanges of goods and services when firms are located in different jurisdictions, but they also regulate environmental, social and labor, data protection standards, to name a few areas. Often in the latter case the standards designed by transnational private regulators are the expression of multiple stakeholders, including international organizations (IOs). Contracts can regulate both processes and products.[21]

Contractual relationships along the chain are collaborative and a duty of fair collaboration features in every contract. Contracting along the chain usually occurs among repeat players who develop their social norms together with those defined by the chain leader. The essential ingredient is mutual trust among chain's participants, necessary to support long-term collaborative relationships.

The regulatory turn in transnational commercial contracts reflects a wider transformation of a chain's risk management that includes not only business risks but also the management of environmental and social risks. Violation of environmental and social obligations can lead to contractual termination suggesting that

20 See Cafaggi, New architectures, n 5 above, 1558 *et seq*. For a general introduction to transnational contracts see R. Goode, H. Kronke, E. McEndrick, *Transnational commercial law* (2nd ed, Oxford: Oxford University Press, 2015).

21 On the regulatory functions of international commercial contracts and its interplay with the conventional commercial functions see Cafaggi, New architectures, n 5 above, 1558 *et seq*; Cafaggi, Regulation through contracts, n 2 above.

these obligations have gained importance and relevance in the contractual regulation;[22] they can no longer be considered ancillary to the main obligations about price and quantity. This integration has had a relevant impact on due diligence and compliance instruments within chains.[23]

Such regulatory function is (1) partly driven by endogenous factors e.g. the information flow and the asymmetry among the parties responsible for the implementation, the coordination of standards implementation related to processes and products along the chain, and (2) partly related to exogenous factors, like the increasing parental liability for violations of human rights and specifically failure to monitor application of suppliers' compliance with human rights.[24] Unlike the domestic domain, where contract and regulatory law have so far remained quite separated, in transnational law they are blended, partly for the lack of transnational public regulators, partly for the complexity of global chains, spread across several countries.[25]

Contracts allocate environmental risks, costs of prevention and costs of remediation, when environmental harms occur.

The use of transnational commercial contracts to perform regulatory functions needs adaptation of the doctrines developed in transnational commercial law. Especially the notions of breach and remedies differ since the commercial and the regulatory objectives related to sustainability do not coincide. Violations of environmental and social standards create negative externalities; they affect third parties' interests: the environment, the employees, and the communities. Hence, regulating environmental externalities through contracts may require specific rules to measure performance, to evaluate violations, and to combine remedies with private sanctions.

The focus of this paper is on the contractual governance of supply chains determined not only by the architecture of contracting but also by the increasing role of due diligence obligations defined by both international and national legislation.[26]

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22 See below text and n 0.

23 See A. Beckers, 'Chaines de valeur mondiales: Theorie et dogme de l'obligation de l'entreprise' *Review Journal for Digital Editions and Resources (RIDE)* 2022, 123 *et seq*.

24 See Directive 2019/1937 and Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 (hereinafter Proposal).

Before the directive see C. Bright and N. Bueno, 'Implementing human rights due diligence through corporate civil liability' *International and Comparative Law Quarterly* 2020.

25 See F. Cafaggi, 'The many features of transnational private rule making: unexplored relationships between custom, jura mercatorum and global private regulation' *University of Pennsylvania Journal of International Law* 36 (2015) 875 *et seq*.

26 See Organisation for Economic Co-operation and Development (OECD) (2011), OECD Guidelines for Multinational Enterprises, OECD Publishing and the EU proposal on sustainability due diligence.

The paper proceeds as follows: section II describes the features of private regulatory powers in the supply chain, section III analyzes the regulatory functions of transnational commercial contracts in supply chains, section IV examines the qualification system and the rules concerning entry and exit from the chain, especially in relation to environmental thresholds and standards, section V addresses the enforceability of sustainability contractual terms, section VI analyzes the remedies concerning environmental harms. Section VII discusses the functions of private contractual sanctions, section VIII concludes.

2 Private Regulatory Power in Global Chains – Concentration versus Delegation – Agency Costs and Incentives' Design

Sustainability standards are often the outcome of a multistakeholder process where NGOs and international organizations cooperate with transnational enterprises to define and select the most appropriate regimes for the chain. The regulatory power can be shared among various chains' participants and between firms and stakeholders. Standards are implemented through contractual terms.

The expansion of transnational private regulation is partly driven by the shortcomings of local public regulation in the field of social and environmental sustainability. Global chains have transnational scope whereas local public regulators lack the power and the capacity to engage in extraterritorial oversight of global production processes affecting the environment and the working conditions of employees.

Transnational private regulators include but are not limited to chain leaders. Both standards and model contract clauses have also been drafted by trade and lawyers' associations.[27] Trade associations integrate the standards with specific elements related to the industry they represent. Lawyers' associations, instead, have devised general clauses and used policy annexes to diversify the terms according to the needs of the specific industry or of the supply chains.[28] A strong influence on the

27 In relation to Model contract clauses see the MCC 2.0 drafted by the American Bar Association that follows the previous version MCC 1.0. See both the text of the clauses and their formation process in D. Snyder, S. Maslow, S. Dadush, 'Balancing buyer and supplier responsibilities, Model Contract Clauses to Protect Workers in International Supply Chains, Version 2.0' *The Business Lawyer* 2021, 115 *et seq*, available at www.aba.org (hereinafter Balancing buyer and supplier responsibilities).

28 See S. Snyder, 'Contracts as an instrument of international management and governance', in S. Maslow and D. Snyder (eds), *Contracts for responsible and sustainable supply chains* (Chicago: American Bar Association, 2023). The modular approach of the MCC and the specific functions of

architecture of contracting is played by certification and in particular by the chain of custody models.

Private regulators can use coercion and/or persuasion that can translate into mandatory or voluntary instruments within the contractual tool kit.

Chain leaders, when governing chain's sustainability, combine preventive measures and ex post liability rules. They engage in preventive action and force the chain's participants to adopt precautionary measures as a requirement to access and to remain in the chain. Prevention may result in thresholds or paths. The former determines access with minimum level, the latter define a path towards the improvement to implement environmental and social standards. Transition plans related to climate change represent a good illustration of strategic preventive action involving the chain's environmental policy.[29]

Chain leaders also deploy ex post enforcement based on liability rules when parties violate the commitments to comply with sustainability obligations. Hence the private regulatory tool kit includes both ex ante and ex post instruments.

The regulatory power of chain leaders encompasses standard setting, monitoring, and enforcement.[30] Different legal instruments can be used to exercise this power, depending on the regulatory tasks, the objectives, and the structures of the chains.

2.1 Standard Setting Power

Standard setting concerning environmental sustainability is not a simple activity of standards' transposition into the chain. It presupposes both risk assessment and risk management. The applicable rules and the regulatory instruments are the results not the premises by the chain leader of such assessment.

The chain leader defines two distinct yet connected chain's policies with two different sets of regulatory instruments aimed at implementing sustainability.

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schedule P and Q that are annexed to the model clauses. According to Snyder Schedule P specifies the firm's or chain's environmental policies that vary across industries. Schedule Q (which was introduced in MCCs 2.0, and which states the *buyer's* commitment to responsible purchasing practices) is modular. It sets out responsible purchasing practices and attempts to address buyer demands, requests, and ways of doing business that can lead to human rights and environmental abuses.

29 See CDP at www.cdp.net.

30 The focus of the analysis in this paper is the power to regulate contractual relationships in global chains. For a broader discussion of the notion of power in global value chains see M. Dallas, S. Ponte and T. Sturgeon, 'Power in global value chains' *Review of International Political Economy* 2017, 666 *et seq*, focusing in particular on two transmission mechanisms of Power: Direct and Diffuse.

One, the qualification system, is related to procurement and the composition of the chain. It defines the identity and the membership of suppliers and regulate entry and exit from the chain.

The other is related to contracting within the chain, whose architecture and content is usually defined through the General terms and conditions (GTCs), the Supplier codes, master agreements, and framework contracts. It determines the content of contractual clauses between parties along the chain. The techniques related to contracting may range from mass customization to flexible specialization.[31] The instruments include both mandatory and default contract rules. The distinction between mandatory and default rules, those modifiable by suppliers, determines the relationship between concentration and delegation in standard setting power along the supply chain.[32] Mandatory rules are usually deployed in hierarchical chains, whereas default rules are more common in relational chains. However, it happens that mandatory rules are used in relational chains and default in hierarchical ones.[33]

The scope of the standard setting power is partly limited by the principle of privity of contract. The chain leaders impose on their tier one suppliers the content of the contracts to be concluded with the subcontractors, but the enforceability of the clauses is limited to their contractual partners (the so called cascading compliance model). But the *de facto* power can go well beyond the limits of privity. Hence, the chain leader can exercise *de facto* control over suppliers' contractual arrangements.

The exercise of standard setting power concerning contractual relationships stems from the combination of these two sets of instruments.

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31 See F. Cafaggi, 'Sales in global supply chains: a new architecture of the international sales law', in D. Saidov, *Research handbook on international and comparative sale of goods law* (Cheltenham: Edgar Elgar, 2019) 334 *et seq*.

'Within each supply chain, the combination translates into some terms and obligations that apply to every participant in the chain and a set of customized terms that can vary depending on: (1) the stage of production; (2) the role of intermediaries; (3) the degree of competitiveness in the segment of the market; and (4) the availability and costs of exit options from the chain for each participant. Architectural solutions like contractual mass customization – where some common provisions can be adapted and tailored within a uniform framework, supported by GTCs – may provide the second-best solution to adaptive coordination among multiple sale contracts within global chains. Strategies towards mass customization of contracts are multiple. Complementary models of mass customization have been offered: modularity, on the one hand, and flexible specialization, on the other.' (349).

32 See Cafaggi and Iamiceli, Institutional alternatives, n 16 above, 44 *et seq* describing the instruments deployed to delegate standard setting functions through the combination between mandatory and default contract rules.

33 See Cafaggi, Regulation through contracts, n 1 above.

2.2 Monitoring Power

The chain leaders have (1) direct monitoring power related to entry and exit from the chain, and (2) a combination of direct and indirect monitoring power to evaluate suppliers' performances and compliance with contractual commitments by the subcontractors with whom they do not have direct contractual relationships.[34] Monitoring concerns not only individual contractual performances but also the overall suppliers' activity in a specific time span. It includes performances' evaluation. To measure suppliers' performance, chain leaders have adopted sustainability scorecards that differs from the conventional vendor rating that measures the supplier's commercial performance.[35]

The necessity of a complete oversight of the chain has been partly driven by due legislative diligence obligations that include additional instruments to those associated with contracts.[36] Monitoring is driven by compliance requirements that may entail liability and by the necessity to coordinate environmental obligations instrumental to standards' implementation.

The chain leader holds direct monitoring power with the possibility to inspect the chain's participants' activities. The use of digital technologies allows direct monitoring by the chain leader relevant not only for environmental harms but also for commercial purposes.

The chain leader monitors indirectly through the suppliers and third parties, for example the certifiers.[37] Suppliers operate as agents of the chain leaders when they monitor subcontractors' environmental performance. Monitoring through suppliers presents both advantages and disadvantages. Delegation by the chain leaders to lead suppliers reduces direct costs but increases agency costs. The cascading compliance approach suggests that delegation of monitoring to first and second tier suppliers might

34 See for example the ENEL platform WEBUY to evaluate suppliers' performances. They deploy a supplier performance index (SPI) based on key performance indicators (KPI). The evaluation outcome includes four possibility: rewards, investigation and support, penalties, suspension/termination. Available at www.globalprocurement.enel.com.

35 See for example the regenerative agriculture scorecard deployed by Danone to evaluate farmers' performances concerning 1. Soil; 2. Manure (only for dairy farms); 3. Biodiversity; 4. Water. Each practice has 4 levels of scoring from 0 to 3. 0 does not meet the standards and 3 indicates a very good performance. See agriculture regenerative Danone available at www.danone.org.

36 See for example the plans that every firm has to deliver to show compliance with due diligence requirements according to national legislations.

37 Subcontractors are required to certify compliance with sustainability requirements and failure to provide certification may result into breaches that lead to different forms of private santions including penalties.

be more efficient than centralized monitoring.[38] However, this conclusion might change with the use of new digital technologies. A prominent role in monitoring sustainability performance is also played by certifiers and other intermediaries like NGOs.

Financial institutions impose reporting obligations on chain leaders and exercise limited monitoring. Increasingly the creation of specialized financial indexes, focusing on sustainability performances, has generated additional instruments and actors involved in monitoring compliance with sustainability standards along global chains.[39] They also influence the architecture of contracting and incentivize enforcement.

2.3 Enforcement Power

The chain leader holds both direct and indirect enforcement power. The direct remedial and sanctioning powers derive both from the qualification system and from the terms in the contracts concluded with the first tier suppliers. The chain leader can exercise directly remedial and sanctioning power against its own immediate contractual counterparties and indirectly, through the suppliers (contractors), when the violations are committed by the subcontractors. Its contractual enforcement power is, however, limited by the privity principle whose scope may be reduced by the application of the third party beneficiary doctrine.[40] Hence, in case of

38 On the cascading compliance approaches, their advantages and pitfalls see A. Van Assche and R. Narula, 'Internalization strikes back? Global value chains, and the rising costs of effective cascading compliance' *Journal of Industrial and Business Economics* 2023, 161, 173; V. Soundararajan, 'The dark side of cascading compliance model in global value chains' *Journal of Industrial and Business Economics* 2023, 209, 218. They suggest that the cascading compliance model where control is not based on ownership may lead to misalignment between the chain leaders and the suppliers and result in opportunistic behavior.

39 See the ESG indexes that include key performance indicators. See, for example, the European Investment Bank (EIB) environmental and social principles and standards, available at www.eib.org.

40 Acording to current contract laws the liability for environmental violations cannot be based on contractual causes of action but on extracontractual liability. The possibility for an individual or an organization to use contractual liability depends on the scope of the third party beneficiaries doctrine. See for example the Model Contract clauses recommended by the American bar association (hereinafter MCC 2.0).

In the MCC 2.0 a distinction is made under 7.2 between third parties within the chain and third parties outside the chain. The former seem to be able to use contractual liability under the third party beneficiary doctrine. The latter seem to be excluded.

7.2 Third-Party Beneficiaries. [All buyers and suppliers in the supply chain have the right to enforce the relevant provisions relating to the human rights protections set forth herein and in Schedule P [and Schedule Q] and privity of contract is hereby waived as a defense by Buyer and Supplier provided, however, that there are otherwise no third-party beneficiaries to this Agreement. Individuals or entities, including but not limited to associations, workers, land owners, property owners, those residing, working and/or recreating in proximity to supply chain activities and any

breach by the first tier supplier that does not include terms and conditions related to the chain leader power to intervene, the chain leader cannot seek modifications of the contract between the first tier supplier and the subcontractors but only remedies from its counterparty. Suppliers, and their subcontractors may be held jointly and severally liable when the third-party beneficiary doctrine allows the chain leader to enforce the subcontractor environmental violations. Among the remedies there might be the enactment of a remediation plan that also includes the subcontractors.

The enforcement power in the qualification system, instead, is not limited by privity of contract with respect to the chain leader. It may confer on the chain leaders direct powers to sanction those who breach environmental requirements and to redefine the position of the chain's participants when they fail to meet the requirements or to comply with the commitments.[41]

Regulatory power distribution is not static. Supply chains' governance changes over time and determines a different power distribution between lead firms and suppliers.[42] Upgrading and downgrading contribute to the changes which, in turn, influence the contractual architecture.[43]

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individual who is injured or suffers damages due to a violation of human rights have no rights, claims, causes of action or entitlements against Buyer or Supplier arising out of or relating to this Agreement, Schedule P, [Schedule Q] or any provision hereunder.] [There are no third-party beneficiaries to this Agreement] (MCC 2.0).

1.1. The Parties to this [Purchase Order/Agreement] acknowledge and agree that the terms of [Schedule P/Schedule Q] are intended to benefit and protect not only the Parties but also persons directly impacted by (1) Supplier's activities performed under this [Purchase Order/Agreement] and (2) activities by subsuppliers that the Supplier contracts with to perform under this [Purchase Order/Agreement]. Such persons include but are not limited to workers, land owners, property owners, those residing, working, and/or recreating in proximity to supply chain activities who are injured or suffer damages due to breach of [Schedule P/Schedule Q], including survivors of those killed or disabled. Such persons are intended thirdparty beneficiaries to [Schedule P/Schedule Q].

1.2. All intended third-party beneficiaries of [Schedule P/Schedule Q] have the right to enforce [Schedule P/Schedule Q] against Parties in any court or tribunal that has jurisdiction over the [Buyer/Supplier or Purchase Order/Agreement].

1.3. Third-party beneficiaries may assign their rights to a labor union, nongovernmental organization, or other organizations providing legal assistance they select. Parties adopting this language will need to consider its relation to other dispute resolution mechanisms and should note in particular the clause (¶ 1.2) on jurisdiction.

41 See below text and p. 34 ff.

42 See Sako and Zylberberg, n 19 above, availabe at www.ssrn.org. They analyze how the suppliers' bargaining power can change, what are the relevant factors that determine the changes, and what effects these changes may produce on the chain's governance.

43 See G. Gereffi, 'Economic upgrading in global value chains', in Gereffi, Ponte, Raj-Reichert (eds), n 7 above, 240–254.

How is regulatory power distributed along the chains? The global nature of supply chains makes it costly and ineffective complete concentration of regulatory power in the hands of chain leaders. Moreover, the importance of transnational suppliers, especially the level one, is growing, influencing both the governance of the chains and the architecture of contracting.[44] In these chains asymmetry of power is reduced, and the architecture of contracting is determined by the interaction between lead firms and first tier suppliers.[45] The latter provide large buyers not only goods but also services and, increasingly, manage electronic platforms linking buyers with the final customers.[46] They successfully try to erect barriers that exclude competition and create bilateral monopolies with buyers within the chain.

Even in unipolar chains private regulatory power may not be entirely concentrated in the hands of the chain leaders. It is usually distributed between the leader(s) and the first tier suppliers.

Power distribution inside the chain may occur in different ways and not uniformly: the allocation between chain leaders and first tier suppliers may follow different paths from those concerning second and third tiers.[47]

Delegation is the most frequent but not necessarily the exclusive mode of power distribution.[48] Delegation of regulatory power by chain leaders to suppliers occurs in different forms: contracts and protocols.

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44 See T.M. Nguyen, 'Hidden power in global supply chains' *Harvard Journal of International Law* 2023, 35 *et seq*. Nguyen suggests that in addition to producer and buyer driven chains a new type of chain has emerged where first tier suppliers play a distinctive relevant role influencing the organizational model of the chain. In particular the analysis of the vendor machine inventory (VMI) between TAL and some buyers like JCPenney has transformed the relationship between the chain leader and the supplier by conferring to the latter the direct control over the demand of goods branded by the chain leader (see in particular 60, 68).

45 See Raj-Rachert, n 8 above. Describing how power is distributed in multipolar chains.

46 Raj-Rachert contends that the rise of transnational suppliers is based on three interrelated factors (1) growth in responsibilities; (2) increased technological, design and innovation capabilities; (3) and strategic mergers and acquisitions (n 8 above, 360).

47 See R. Alexander, 'Emerging Roles of Lead Buyer Governance for Sustainability Across Global Production Networks' *Journal of Business Ethics* 2020, 269–290, highlighting the different relationships between lead firms and lower tiers compared to first tier suppliers. Alexander identifies different forms of chain governance once these relationships are fully considered.

48 See Cafaggi, Regulation through contracts, n 1 above, describing the different legal instruments to delegate private regulatory power and the importance of agency costs to delegation instrument's choice.

Delegation of regulatory power imposes agency costs. Agency relationships operating in the cascading compliance models have proven difficult. The empirical research shows that the highest number of violations occurs in the supplier's segment of the chain and the governance challenge is to provide the suppliers with incentives to effectively perform the delegated functions. Suppliers, exercising monitoring and enforcement power on behalf of the chain leader, need appropriate and adequate incentives.

Among the determinants of regulatory power delegation in global chains are the quality and quantity of information available to chain leaders. Similarly, to what happens in public regulation, often chain leaders face an information deficit that may require distributing regulatory powers along the chain to those that can acquire information about risks at a lower cost. This is usually the case for first and second tier suppliers. Delegation of regulatory power can include intermediaries. Lead firms may use third parties to list and scorecard sustainability performances.[49]

However, a consistent trend, primarily based on the use of new digital technologies, suggests that chain leaders are improving their ability to directly or indirectly source information about compliance and constantly monitor the evolution of risks along the chain. The use of electronic platforms increases the ability to exercise direct control and reduces the need for delegation of monitoring and enforcement power along the chain.[50]

Indeed, technology is a key factor affecting power distribution along chains.[51] The use of electronic platforms has remarkably increased the chain leaders' ability to directly control supply chain beyond first tier.[52] These changes impact

49 See for example SEDEX or ECOVADIS

Danone

'Danone requires that in-scope Tier 1 suppliers register on the Sedex (Supplier Ethical Data Exchange) (direct procurement categories, as well as third party manufacturers, and producers of promotional items) or Ecovadis (indirect procurement categories) platform and complete the self-assessment questionnaire evaluating their sustainability performance. At the end of 2021, 3,489 supplier sites were registered on the Sedex or Ecovadis platform v 3,891 in 2020 (this drop was mainly due to the change in program approach and the launch of the Ecovadis requirement), and 92 % had completed Sedex self-assessment or obtained an Ecovadis scorecard. These 3,489 sites represent 2,540 suppliers corresponding to an estimated 59 % of purchase amount (excluding raw milk).'

50 On the use of platforms in global supply chains see: OECD, 2019, An Introduction to Online Platforms and Their Role in the Digital Transformation.

51 See F. Butollo, G. Gereffi, C. Yang, M. Krzywdzinski, 'Digital transformation and value chains: Introduction' *Global networks* 2022, 585 *et seq*.

52 See for example Iberdrola using the GoSupply platform to evaluate and screen suppliers when selecting tender's participants.

'Risk monitoring of the Group's suppliers, through the GoSupply platform, is carried out with a special focus on critical suppliers. When a supplier is invited to participate in a tender with an

on the relationship between lead buyers and suppliers and the delegation and/or sharing of regulatory power.[53] Usually, chains that include these types of first tier suppliers are either modular or relational; as a consequence contractual relationships tend to be less standardized than in captive and hierarchical chains.[54]

The allocation of regulatory powers along global chains is also affected by the chain leader's liability regime.[55] The consolidation of due diligence obligations and the corresponding liability regime is driving the allocation of powers, leading to a higher degree of centralization given the increasing scope of liability recently introduced by some State legislatures for due diligence violations by leading firms.[56] These laws regulate the liability of lead firms for direct violations and for failure to monitor suppliers when they breach due diligence obligations. Overall, the trend is towards shared responsibility between the lead firm and suppliers that have control over the subcontractors.[57] The latter, according to the cascading compliance model, have to oversee their contractual partners and ensure compliance with transnational standards. An open question concerns the liability of intermediaries, its relationship with that of the chain leader, and its influence on the allocation of regulatory powers along global chains.

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estimated value equal to or greater than €400,000, if they have not yet been assessed, must register with GoSupply in the 360° level mode, so that the supplier's full risk profile can be determined early in the process and any necessary risk mitigation measures can be taken. For tenders of less than €400, 000, the supplier must be assessed under the Basic modality' (Iberdrola Report on activity in Procurement and Supplier management, 41).

53 See Alexander, n 48 above, 269 *et seq* 'The article considers new governance roles that lead frms, as buyers, are playing when attempting to promote sustainable practices across all stages of production for buyer-driven industries. The focus is exploring the nature of new governance approaches which lead frms have developed in order to address diverse sustainability challenges found within GPNs, particularly related to lower-tier suppliers. These approaches can involve lead firms working through vertical buyer–seller links or developing new horizontal relationships, which link lead frms with lower-tier suppliers and governance processes in these suppliers' local productive systems.'

54 On the relationship between chains and contracts see Cafaggi and Iamiceli, Institutional alternatives, n 16 above.

55 See V. Ulfbeck and O. Hansen, 'Interplay between contract and tort in the supply chain', in V. Ulfbeck, A. Andhov and K. Mitkidis (eds), *Supply Chain in Law and Responsible Supply Chain Management: Contract and Tort Interplay and Overlap* (London: Routledge, 2019) 133.

56 See the French law on the devoir de vigilance (2017) and the German law on due diligence and supply chains (2021). See also the proposal of a EU directive on due diligence 2022.

57 An interesting and challenging question is whether shared responsibility should lead to the application of joint and several liability or that of comparative negligence in contract. On these questions see F. Cafaggi, Liabilities for due diligence violations and the structures of supply chains, on file with the author.

The distribution of private regulatory power between the chain leaders and the first tier suppliers differs significantly for standard setting, monitoring, and enforcement. Even if accurate empirical evidence is missing, anecdotal examination of the literature on chains allows to conclude that standard setting is usually the most centralized, sitting in the hands of the chain leaders often without coordination among them in multipolar chains. The distinction between mandatory and optional contractual terms define the degree of centralization. The higher the number of optional terms, the wider the potential decentralization of standard setting, since first and even second tier suppliers can design their own regulatory framework derogating to the General terms and conditions.[58] Monitoring compliance is shared between the chain leaders, the suppliers, and other intermediaries, with significant variations depending on the length of the chain and the number of nodes. Enforcement is usually decentralized to suppliers but for the procurement and the qualification systems that remain centralized.[59] However, increasingly the introduction of a shared responsibility regime for sustainable performances between the chain leader and the suppliers is reducing delegation and increasing power sharing.[60]

3 The Regulatory Functions of Contracts – Sustainability Obligations in Transnational Commercial Contracts

Sustainability includes both transnational environmental and social standards but their implementation through the chain may require different contractual

58 See for a broader analysis Cafaggi and Iamiceli, Institutional alternatives, n 16 above.

59 See for example the European model clauses that require the suppliers to have grievance mechanisms (Erasmus University Rotterdam, available at www.eur.nl).

1.4 Grievance Mechanism
During the term of this Agreement, Supplier shall maintain an adequately funded and governed non-judicial Operational-Level Grievance Mechanism (OLGM) in order to effectively address, prevent, and remedy any adverse environmental and human rights impacts that may occur in connection with this Agreement or participate in the complaint mechanism of Buyer or in an external (multi-stakeholder) grievance mechanism.

60 See the US Model clauses MCC 2.0 approved by the ABA. See for an introduction Maslow and Snyder (eds), n 29 above.

instruments.[61] This analysis focuses on the environmental aspects but some of the issues related to supply chain regulation encompass both dimensions.[62]

Environmental standards concern both products and processes. Both dimensions involve multiple actors in the supply chain from product design to product implementation and reuse.[63] Even within environmental standards differences may require specific regulatory instruments depending on the objectives e.g. preserving biodiversity, contrasting climate changes, reducing carbon emissions, promoting circular economies. Often the implementation of sustainability requires changes at the chain rather than the firm level. For example, in the case of regenerative agriculture the necessity to involve multiple actors determines the need to coordinate obligations concerning not only farmers but also land owners, input providers, and processors.[64]

61 Labor and social issues may combine commercial and labor or employment transnational contracts. In particular framework and collective contracts.

62 In relation to labor and social issues there is an important contribution related to US law and now in the process of being implemented in Europe with model contract clauses. See Snyder, Maslow, Dadush, Balancing buyer and supplier responsibilities, n 28 above. See also Snyder, n 29 above, available at www.ssrn.com.

63 See for example the EU Communication on Making sustainable products the norm, Brussels, 30 March 2022, COM(2022) 140 final, regulating product ecodesign.

According to the European Commission 'The ecodesign requirements will, as appropriate for the product categories to be regulated, cover: • product durability, reliability, reusability, upgradability, reparability, ease of maintenance and refurbishment; • restrictions on the presence of substances that inhibit the circularity of products and materials; • energy use or energy efficiency of products; • resource use or resource efficiency of products; • minimum recycled content in products; • ease of disassembly, remanufacturing and recycling of products and materials; • life-cycle environmental impact of products, including their carbon and environmental footprints; • preventing and reducing waste, including packaging waste.' Clearly these activities refer to activities performed within the whole chain.

64 See for example The Unilever regenerative agriculture principles 2021 availabe at www.unilever.org.

'Making farming regenerative requires changes to farm practices and management at a systems level. Soils respond to the type and diversity of crops that are grown on them and to the type and amount of nutrients that are added to them. Systems level changes in perennials are necessarily slower but regenerative management in the non-cropped land, such as alley ways, and introduction of increased above-ground-diversity through companion planting can also improve soil health, biodiversity and thereby increase the resilience of the systems … changing to a regenerative focus is likely to include, for instance, improving crop rotations, adoption of cover cropping, composting, mulching and conservation tillage practices. Regenerative agriculture also includes actions to prevent pollution such as prevention of erosion, nutrient runoff and leaching to improve water quality and reduction of greenhouse gas emissions by improving the farm carbon footprint. It also includes taking measures to improve biodiversity, preferably at farm and landscape level, and a strict prohibition on conversion of natural habitats.'

The examples in the analysis below are drawn from carbon emissions and disposal of hazardous wastes, but the general framework related to the instruments' complementarity in chain's governance may also be applied to other environmental areas.

Multiple private regulatory instruments are available, and the choice is partly driven by the ability to involve and control remote participants in the chain, located in different jurisdictions.[65] The degree of power centralization affects the choice of instruments.

Among the regulatory instruments with direct impact there are programs designed by chain leaders.[66] Environmental programs directly influence the production and distribution processes by introducing new technologies or revise sourcing and logistics, including policies to minimize transportation, and storing costs. Programs can translate into environmental plans referred to individual firms or clusters. In the case of environmental obligations, often the first-tier suppliers are required to submit an environmental plan that reflects the state of the technologies available at time of their enrollment in the qualification system and the steps to improve their environmental performance over time.[67] The plans have to map and assess environmental risks and define the preventive measures that avoid or mitigate environmental harm.

These plans may also be related to the specific environmental performance defined in the contract. This is the case for carbon emissions where a general plan

65 See World Bank, 'States and trends of carbon pricing' 2022, available at www.worldbank.org. See also M. Honegger, M. Poralla, A. Michaelowa, H. Ahonen, 'Who is paying for carbon dioxide removal? Designing policy instruments for mobilizing negative emissions technologies' *Frontiers in climate* 2021 (3) 1–15.

66 See for example the Unilever Climate transition action plan available at www.unilever.org.

67 See ENEL HSE

7 ENVIRONMENTAL PLAN

7.1 REQUIREMENTS

7.1.1 The Contractor shall deliver the Environmental Plan relevant to the specific Work Site and activity prior to commencement of Work Sites activities and update or supplement it regularly, as circumstances or the Contract require, or as specifically requested by ENEL, during the performance of the Contract.

7.1.2 The Environmental Plan shall be carried out in accordance with applicable Law, if any, and/or in accordance with the guidelines set out in Section 7.2, and/or according to ISO 14001 standard (or equivalent standard, in this case ENEL reserves the right to approve the method), in case of conflicting requirements, the one maximizing Environmental protection applies. In the event the Contractor is unable to follow the above mentioned requirements (e.g. because applicable Law requires a different standard), it must request a determination from ENEL, which will make a determination as to the standard to apply.

concerning emission for the year is linked to a specific target concerning the production process in which the parties are involved.

It is important to underline that sustainability requirements have to be complied with by all those who participate in the chain, together with the other requirements.[68]

Chain of custody regimes for sustainability ensure coordination when certifiers are involved.[69] These obligations have a double implication: (1) individual enterprises have to define a suitable internal governance to comply with those standards and (2) they have to undertake more specific obligations when they engage in individual transactions and perform the contractual tasks. Sustainability requirements have been integrated in the more general supplier codes so that all suppliers, including subcontractors, have to abide by them.[70] For the chain leader, the obligation concerns the governance of its own firm and that of the supply chain including suppliers and their subcontractors. Whether the sustainability principles are effectively enforced in the chain remains an open question.

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68 See for example the ENEL qualification system. See the food transition pact that Carrefour suppliers have to sign and it is incorporated by reference in the commercial contracts between Carrefour and its suppliers.

69 See, for example, Better Cotton Reviewing chain of custody models and risk controls. A due diligence perspective available at www.bettercotton.org.

70 See, for example, Coca cola european partners (CCEP).

i. CCEP has also integrated climate change into the Supplier Guiding Principles (SGPs), which apply to all of its suppliers – including its critical suppliers – and the Principles for Sustainable Agriculture (PSA), which apply to its suppliers of key agricultural ingredients and raw materials.

1. The SGPs set out the minimum requirements expected of suppliers, including environmental protection. The PSA, define what is meant by sustainable sourcing and include standards that CCEP ingredient suppliers are expected to meet.

2. The PSA include a focus on energy management and climate protection, including criteria to ensure that CCEP suppliers maximize energy efficiency, seek to maximize the use of renewable energy and reduce greenhouse gas emissions from agricultural practices.

3. CCEP requires all its suppliers to sign up to its SGPs as part of its purchase order process and CCEP has made a commitment to ensure that all its suppliers comply with these principles by the end of 2020.

4. CCEP measures success by tracking the % of suppliers which comply with its SGPs. CCEP aims for 100 % of suppliers to comply with SGPs. CCEP works with suppliers to build SGPs into all new contracts and into multi-year contracts as they renew.

5. CCEP also measures success by tracking the % of its ingredient suppliers which comply with the PSA.

Contractual relationships in supply chains are often long term and repeat, although spot transactions may also be used, depending on the chain structures and on market conditions.[71] Relational chains present contracting features different from hierarchical and captive chains. Usually, the former feature higher contractual incompleteness than the latter. However, crises may destabilize contractual relationships and transform their features, forcing the parties to redefine the obligations and to allocate costs. Relational contracting can be subject to standardization in order to coordinate the various nodes of the chain. The degree and the mode of contractual standardization may vary depending on the characteristics of the chain.

Within the contracts different aspects co-exist. The sustainability requirements in commercial contracts are often regulated separately from the quality and safety standards concerning products and processes.[72] For example, in agrifood chains parties have to comply with the principles of sustainable agriculture usually defined in separate documents.[73]

The features of regulatory contract law may differ from those regarding commercial aspects. For example in relation to the breach, the distinction between fundamental and non-fundamental breach that characterizes the conventional contractual liability differs from the notion of serious and minor violation typical of regulatory violations. The former usually focuses on the consequences of the breach, the latter, instead, mainly on the gravity of the violation and only secondarily on the consequences. Clearly the regulatory function of contracts implies that deterrence

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71 On the distinction between spot contracts and relational contracts see T. Williamson, 'Transaction costs economics, the governance of contractual relations' *Journal of Law and Economics* 1979, 233–261. However the environment of contracting matters and the supply chain determines different dynamics both for spot and relational contracts. For a deeper analysis see P. Antras, 'Conceptual aspects of global value chains' 34 *World Bank Economic Review* 551 (2020).

72 See Cafaggi, New architectures, n 5 above.

73 Chain leaders may incorporate by reference international standards like the OECD/FAO guidance for responsible agriculture in supply chains available at www.fao.org. and before SAFA guidelines issued by FAO available at www.fao.org.

They usually draft principles to be implemented in their chain. In agriculture often transnational enterprises issue principles of sustainable agriculture that are annexed to suppliers codes.
See for example the Coca Cola principles for sustainable agriculture (PSA) 'The PSA are aimed at primary production level (i.e. farm), are inclusive of small-scale farmer cooperatives, medium and large commercial operations, and form the basis for our continued engagement with suppliers to achieve compliance, transparency and continuous improvement of their farm base according to these principles. They will also guide our continued collaboration with industry platforms and standard bodies to drive the adoption of sustainable agriculture practices in the production stage of our supply chain. Agricultural suppliers at the processing level are expected to adhere to and demonstrate compliance to The Coca-Cola Company Supplier Guiding Principles.'

features more prominently in sustainability than it does in the context of purely commercial issues related to conformity of the good or service.

An example of environmental commitments in global chains using commercial contracts is the reduction of CO_2 emissions.[74] The net zero target plans, defined according to the guidelines of Target based science initiative (TBSI), is a good illustration. The development of science based targets for decarbonization permits the adjustment of the targets to scientific and technological innovations.[75] Multinational enterprises are required to define plans that involve their suppliers.[76]

The costs of the emissions are relevant to define the targets and the consequences of the failed performance. Carbon pricing has been recognized as an effective instrument to police CO_2 emissions.[77] It is usually distinguished between external (public driven) and internal (private driven) carbon pricing.[78] Carbon pricing has to be science based.

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74 See UN Global Compact strategy. See S. Light, 'The new insider trading environmental markets within the firm' 34 *Stanford Environmental Law Journal* 2014, 4 *et seq*.

75 See CDP White Paper What is internal carbon pricing cit. 'For preventing the worst impacts of climate change and future-proof business growth, science-based targets (SBTs) provide a clearly defined pathway for companies to reduce GHG emissions. Targets are considered "science-based" if they are in line with the latest climate science and projected to meet the goals of the Paris Agreement – limiting global warming to wellbelow 2 °C above pre-industrial levels, and pursuing efforts to limit warming to 1.5 °C.'

76 See OECD Guidelines for multinational enterprises on responsible business conduct '77. This includes the introduction and implementation of science-based policies, strategies and transition plans on climate change mitigation and adaptation as well as adopting, implementing, monitoring and reporting on short, medium and long-term mitigation targets. These targets should be science-based, include absolute and also, where relevant, intensity-based GHG reduction targets and take into account scope 1, 2, and, to the extent possible based on best available information, scope 3 GHG emissions. It will be important to report against, review and update targets regularly in relation to their adequacy and relevance, based on the latest available scientific evidence and as different national or industry specific transition pathways are developed and updated. Enterprises should prioritise eliminating or reducing sources of emissions over offsetting, compensation, or neutralization measures'. Available at www.oecd.org. Last visited 26 November 2023.

77 See CDP White paper What is internal carbon pricing and how can it help achieve your net-zero goal? Available at www.cdp.org. 'Carbon pricing is an approach to reduce greenhouse gas (GHG) emissions by using market mechanisms to pass the cost of emissions onto emitters, usually by pricing the carbon dioxide equivalent (CO_2 e) emitted. A carbon price works as an economic signal to polluters, and based on economic incentives, allows them to decide to either transform their activities, operate more sustainably and lower their emissions, or continue emitting and paying for their emissions.' See also states and trends of carbon pricing World Bank 2022 available at www.worldbank.org.

78 See CDP White Paper What is internal carbon pricing cit. 'There are two forms of carbon pricing – external and internal. External carbon pricing usually consists of: Emissions Trading Scheme (ETS): ETS caps the total level of emissions pertaining to greenhouse gas (GHG). It allows those industries

Chain leaders set targets of emission reduction for the whole chain and impose obligations on the suppliers and the subcontractors to reduce the emissions and meet the targets. Emission reduction by the participants in the supply chain is often regulated by programs that parties subscribe to. Emission reduction and carbon offsetting are considered among the most relevant strategy and a policy debate is ongoing about their equivalence.[79] Among the instruments a voluntary carbon market (VCM) has gained increasing importance.[80] Through offsetting emissions, enterprises can finance projects by purchasing credits.[81] These credits offset the emissions they produce. Offsetting can occur within global chains or in open markets.

In relation to decarbonization the distinction between carbon compensation and carbon neutralization is highly relevant to describe the regulatory policies for the chain.[82] Compensation refers to offsetting whereas neutralization refers to carbon

with low emissions to sell their extra allowances to larger emitters. This way it acts like a cap-and-trade system. Carbon taxes: CO_2 emissions can also be priced implicitly by government policies that encourage emissions reductions, such as energy efficiency standards and renewable energy subsidies. This sets a price directly on carbon by defining a tax rate on GHG emissions or – more commonly – on the carbon content of fossil fuels. For example, the excise duty on petrol and diesel in India is an implicit carbon tax. Companies can set an internal carbon price (ICP) voluntarily to value the cost of a unit of CO_2 emission. This price varies depending upon the trade regions and individual company's objectives. ICP is a strategic planning tool that when implemented correctly can help organizations in the transition to a low-carbon economy, as the fees collected can have a real impact on business operations and related decision-making. Corporations have been using ICP as a strategic planning tool to manage climate-related business risks and prepare for the transition to a low-carbon economy.'

79 See OECD Guidelines for multinational enterprises on responsible business conduct: 'Carbon credits, or offsets may be considered as a means to address unabated emissions as a last resort. Carbon credits or offsets should be of high environmental integrity and should not draw attention away from the need to reduce emissions and should not contribute to locking-in greenhouse gas intensive processes and infrastructures. Enterprises should report publicly on their reliance on, and relevant characteristics of, any carbon credits or offsets. Such reporting should be distinct from and complementary to reporting on emissions reduction' available at www.oecd.org. Last visited 26 November 2023. See on these issues Honegger *et al.*, n 66 above, 00.

80 See V. Battocletti, L. Enriques and A. Romano, 'Offsetting' unpublished paper on file with author.

81 Battocletti *et al.*, n 81 above, distinguishes two categories of projects: avoidance/reduction projects and removal/sequestration projects.

82 According to the Science Based Targets initiative, there are two broad categories of carbon credits:

– Compensation: credits generated by action to avoid or reduce emissions outside of a company's value chain. This can include protecting forests that would have been cut down or introducing energy-efficient cookstoves that reduce emissions.

removals. They require different regulatory instruments. Usually, companies adopt both strategies with a different combination over time.[83]

Accounting and reporting carbon emissions may differ depending on the actors within the chain. The Green house Gas (GHG) protocol distinguishes between scope 1, 2, and 3.[84] Scope 1 includes direct on-site emissions. Scope 2 includes indirect on-site emissions (e.g. purchased electricity). Scope 3 includes upstream or downstream emissions in the value chain outside a company's own operations. Scope 3 concerns suppliers that may be subject to operational and (or) financial control by the chain leader.[85] The great bulk of violations occurs in the scope 3 level.[86] The main obstacle to implement transnational standards along global chains is with the subcontractors, often small or micro enterprises with little technological capacity and limited financial resources to afford the costs of emission reduction.[87]

A great deal of progress has been made in the last ten years to reach out to the upstream part of the chain but problems concerning knowledge and resources still present daunting challenges. To improve monitoring and coordination of carbon emissions, lead firms have provided electronic platforms to track emissions along the chain and report the individual performances.[88]

– Neutralisation, often known as carbon removals: credits generated through direct removal of GHGs from the atmosphere. This can include planting new trees that sequester carbon, or technological solutions such as direct air capture with the carbon sequestered underground.

83 See for example the UNILEVER climate transition plan available at www.unilever.com. Where the preference to strategies aimed at carbon removals leads to a combined strategy in the medium term and the dominance of carbon removal in the long term (12–13).

84 The GHG protocol distinguishes between scope 1, 2, and 3 depending on the type of emissions and the entity responsible for emission. See GHG protocol available at www.ghgprotocol.org.

85 See corporate value chain (scope 3) standard available at www.ghgprotocol.org.

86 CDP supply chain Report 2022, available at www.cdp.net.

87 See CDP white paper available at www.cdp.net.

88 See for example Microsoft.

'Microsoft developed a new methodology to improve its estimation of its own cloud value chain emissions and allocates those emissions effectively to customers. The process outlined models component-level GHG emissions, (2) aggregates those emissions to the datacenter and region levels, and (3) allocates them to customers based on their cloud usage by month and region. This methodology enables Microsoft to provide customers with their cloud-based emissions totals based on their specific hardware profiles, datacenters, and reporting month.'

'The Microsoft Emissions Impact Dashboard is a web-based user interface that allows our cloud customers to access the Microsoft emissions associated with their cloud usage. The dashboard allows segmenting customer Scope 3 emissions data by service type (Azure, M365, etc), region, and timeframe and provides information on public reporting. The Microsoft Emissions Impact Dashboard enables Microsoft cloud customers to track their carbon emissions, carbon intensity scores, and

Another example of environmental obligations, implemented through transnational commercial contracts, concerns the use of hazardous substances in the production process.

Violations of environmental contractual obligations may lead to sanctions and remedies. But rewards can also be used.[89] Carrots have grown over sticks especially when initial organizational and technical capabilities are low.[90] Sustainability private regulatory models combine coercion with persuasion and, to a limited extent, finance behavioral changes. Supply chain policies combine rewards and sanctions to promote improvement that can lead to upgrading.[91] This essay focuses more on remedies and sanctions but refers occasionally to the parallel system of rewards that is in place.

In the next section the analysis focuses on two sets of instruments deployed to regulate the composition of the chain and contracting: (1) the qualification system that defines requirements to access the chain and (2) the General terms and Conditions that determine the modes and content of contracting together with supplier codes and ethical codes.

It is important to distinguish between failure to comply with sustainability requirements listed in the qualification system (direct power over contractors and subcontractors) and breaches of contractual terms that include environmental obligations concerning waste disposal, hazardous substances, emission reductions, etc. In the former case the consequences of the violation can be downgrading in the ranking of the qualification system and a request to submit and comply with a remediation plan, or, for more serious violations, suspension or exclusion from the

estimated emissions savings compared to certain model onpremise.' (A new approach for scope 3 emissions transparency, 2021 available at www.microsoft.com.).

89 See, for example, the European Model clauses third draft for consultation (Erasmus University Rotterdam, available at www.eur.nl.).

'Art 1.3 (j) Positive incentives for compliance

Buyer and Supplier shall collaborate to establish benchmarks to assess sustainability performance. If possible, given the state of business commitments and market demand, Supplier shall be rewarded for satisfactory or superior human rights performance. Rewards may include, without limitation, contract renewals, further or expanded orders, contracts of a longer term, investment in increasing Supplier's capacity, or the payment of bonuses. Buyer's evaluation of Supplier with respect to such matters as potential expansion or continuation of the commercial relationship shall give weight to human rights performance [equal] [as well as] to criteria such as quality, price, timely delivery, and the like.' (Erasmus University Rotterdam, available at www.eur.nl.).

90 See G. de Geest and G. Dari Mattiacci, 'The rise of carrots and the decline of sticks' *University of Chicago Law Review* 2013, 341 *et seq*.

91 On the relevance of upgrading in global value chains see Gereffi, n 44 above, 240–254.

chain.[92] In the latter, remedies and sanctions, including pecuniary sanctions, can be administered by the contractual party directly or through judicial intervention.[93] The analysis of the administrative sanctions that local public regulators can administer is not considered in this paper albeit very relevant. Administrative sanctions complement both the private sanctions imposed by the chain leader and the remedies of the contractual counterparty (first or second tier supplier).[94] EU legislation has recently introduced environmental legislation that combines administrative sanctions and civil remedies for violations in supply chains.[95]

4 The Qualification System to regulate Access and Exit to the Chain and Its Role for Sustainability Performance

Qualification systems and procurement have changed both functions and identity over time.[96] They used to be tools to select the best commercial partners. They have become instruments to evaluate the regulatory capacity and the ability to implement regulatory standards within the chain, in addition to the more traditional functions. Among the requirements for the qualification system stand out the

92 See ENEL Qualification system on file with the author.
See ENEL Health, safety and environment (hereinafter HSE), available at www.enel.com.
7 ENVIRONMENTAL PLAN
7.1 REQUIREMENTS
7.1.1 The Contractor shall deliver to ENEL the Environmental Plan relevant to the specific Work Site and activity prior to commencement of Work Sites activities and update or supplement it regularly, as circumstances or the Contract require, or as specifically requested by ENEL, during the during performance of the Contract.
7.1.2 The Environmental Plan shall be carried out in accordance with applicable Law, if any, and/or in accordance with the guidelines set out in Section 7.2, and/or according to ISO 14001 standard (or equivalent standard, in this case ENEL reserves the right to approve the method), in case of conflicting requirements, the one maximizing Environmental protection applies.
93 As we shall see only rarely the chain leader is conferred by the contract between the contractor and the subcontractors the power to interfere and impose sanctions.
94 See for example art 24 of the German Act on corporate due diligence in supply chains enacted in 2021 and entered into force in 2023.
95 See for example EU Regulation 2023/1115.
96 On the changes concerning procurement driven by the necessity to implement sustainability see L. Ventura, 'Supply chain management and sustainability. The new boundaries of the firm' *Uniform Law Review* (26) 2021, 599–634.

capacity to implement sustainability, including both environmental and social standards.[97]

The qualification system defines requirements to access, to remain in the chain, and the occurrences that may justify forced exit from the chain. The scope of qualification systems may include only first tier suppliers or extend to subcontractors and second or third tier suppliers.[98] These requirements include commercial quality, sustainability, ethical integrity, and technical capacities of the requesting party.[99]

Suppliers are registered, classified, and ranked with the qualification system.[100] The status within the chain lasts for three or five years and then the enterprise is subject to a new evaluation.[101] The qualification system defines the minimum requirements to become a supplier in the chain. It is usually comprehensive, and

97 See for example the qualification system of Iberdrola and Enel. Iberdrola Report on activity in Procurement and Supplier management available at www.iberdrola.com.

98 See for example the Unilever qualification system that provides a rather comprehensive definition of the enterprises that may access the Responsible partner policy

'Who is in scope of our RPP? • All 'Tier 1' suppliers, defined as those who invoice Unilever for goods or services • Companies in any tier that do the work that Unilever contracts from a Tier 1 supplier • Any supplier beyond Tier 1 who has a contract with Unilever, or whom Unilever has expressly appointed to provide goods or services to the Tier 1 supplier, even where they do not directly invoice Unilever • Companies distributing and/or selling on behalf of Unilever, inclusive of agents, franchisers and importers • Customers and business partners that Unilever directly contracts with to bring our products to Unilever's consumers around the world, inclusive of retailers and digital commerce sellers • Charities, NGOs and social enterprises who receive funding or product donations from Unilever' See Unilever Responsible partner policy 2022 available at www.unidroit.org, last accessed 27 November 2023.

99 See ENEL Supplier qualificaton Organization Procedure (Op) 162 on file with the author.

100 The classification usually reflects the strategic importance of the suppliers measured by quantitative and qualitative indicators. See for example the Iberdrola supplier classification system: 'Depending on the criticality of the supply, Iberdrola will require a certain level of registration and classification on the new platform:

- 360° Level: Active suppliers of strategic and critical products and/or services and purchases for significant sums or a large contracting volume. Purchases under framework arrangements. It requires the submission of detailed up-todate information and relevant documentation that is used for internal supplier management, sustainability assessment, risk monitoring and measurement of associated KPIs.
- Basic Level: active, but not critical, suppliers of non-strategic goods and/or services or those which are not technically complex and purchases for minor amounts. Depending on the information provided and internal classification criteria, a supplier can remain at this level or be required to complete a higher level (360° Level).
- Elementary Level: Applications from new suppliers'. Available at www.iberdrola.com.

101 See Enel qualification system on file with the author

encompasses not only commercial but also integrity, (corruption related requirements), and sustainability requirements.[102] The qualification system may include not only first tier but also second, and third tier depending on their size and stability. It can rank the suppliers and allocate business opportunities accordingly.

The qualification architecture is built on a ranking system connected to the risks of non- compliance with sustainability and other requirements.[103] The suppliers may be classified according to their strategic relevance and subject to a differentiated system.[104] They are ranked within the qualification system according to their level of risks calculated with objective indicators.[105]

The qualification system can define sustainability performance targets that would not be feasible in the context of individual contracts. For example, climate transition plans to achieve ESG goals.[106] Hence, not only the qualification system provides complementary regulatory tools, but it also permits planning and oversight that reduces the shortcomings of the cascading compliance models.

Parties that participate in the chain must all respect the sustainability requirements of the qualification system, regardless of the existence of a direct contractual relationships with the chain leader.[107]

The qualification system is related to procurement. Procurement regulates both access and participation to the chain's activities. It can refer to a single firm or to a group. In the case of a pyramidal group the analysis of the qualification system focuses on both the parent companies and the subsidiaries. Procurement oversees suppliers' performance evaluation. Not only evaluation by the chain leader is made to grant access to the chain, but also during the collaboration the chain leader's

102 See the requirements above p.19 ff.

103 See for example ENEL Supplier Qualification on file with the author.

104 See Iberdrola report on activity in procurement and supplier management (Iberdrola procurement report)

'Depending on the criticality of the supply, Iberdrola will require a certain level of registration and classification on the new platform: • 360° Level: Active suppliers of strategic and critical products and/or services and purchases for significant sums or a large contracting volume. Purchases under framework arrangements. It requires the submission of detailed up-todate information and relevant documentation that is used for internal supplier management, sustainability assessment, risk monitoring and measurement of associated KPIs.

- Basic Level: active, but not critical, suppliers of non-strategic goods and/or services or those which are not technically complex and purchases for minor amounts. Depending on the information provided and internal classification criteria, a supplier can remain at this level or be required to complete a higher level (360° Level).
- Elementary Level: Applications from new supplier.'

105 See ENEL Supplier qualification on file with the author.

106 See CDP climate transition plan discussion paper available at www.cdp.org.

107 As it was suggested the Qualification system may create different typologies of suppliers depending on their capacities and risks. Requirements will differ accordingly.

procurement puts in place an evaluation system with score cards that measure the overall performance, including sustainability.[108] The performance evaluation system bears consequences on the positions of the suppliers in the ranking and can determine their upgrading and downgrading.[109]

Access to the chain follows a procedure to verify the existence of the requirements.[110] The suppliers do not have a right to access the chain; the evaluation, based on the qualification system, is left to the discretion of the competent body, a supplier qualification committee, usually chaired by the chain leader.[111] The access to the proceedings is not participatory and it usually does not prescribe any procedural guarantees for the party seeking access to the chain. Hence usually the party seeking access to the chain does not have a right to be heard and a right to complain in case of rejection.

Risk assessment concerning the suppliers is a key feature of both the selection system and the allocation of business opportunities among the registered suppliers. It is based on the attribution of levels of risk to the suppliers. Suppliers are ranked not only the by their performance but also by the risks of due diligence violations.

Through the qualification system the chain leader can exercise direct control over second and third tiers with whom it does not have direct contractual relationships.

Suppliers are subject to continuous monitoring by the chain leader procurement units and to auditing by independent organizations that evaluate the compliance with the requirements.[112] They evaluate the level of risks associated with

108 See for example IBERDROLA assessment model of evaluation.
According to the Iberdrola system: 'Supplier evaluation includes the supplier's performance in wide ranging areas: identification of goals linked to the Sustainable Development Goals (SDG), management of risks resulting from climate change, circular economy strategy, due diligence in human rights, etc. Iberdrola has assigned percentages and allocated 40 % to environment, 30 % to social and 30 % to governance. The suppliers are classified into two levels: adequate if their score is over 51 points out of a possible 100 at least 30 % of the points in each of the ESG axes, and inadequate in all other cases.'

109 On the correlation between sustainability performance and upgrading and downgrading see V. De Marchi, E. Di Maria, A. Krishnan, S. Ponte, 'Environmental upgrading in global value chains', in Gereffi, Ponte, Raj-Reichert (eds), n 7 above, 310, 323, G. Gereffi and J. Lee, 'Economic and social upgrading in global value chains and industrial clusters, why governance matters' *Journal of Business Ethics* (133) 2016, 25–38. On the more general issue of upgrading in GVC see Gereffi, n 44 above, 240, 254.

110 See for example ENEL Supplier qualification Op 162 on file with the authort.

111 See for example ENEL Supplier qualification on file with the author.

112 Describe the contribution of ECOVADIS and similar organizations.

organizational and contractual performance.[113] Accordingly, the level of risks related to individual suppliers changes in relation to their contractual performances.

A key feature of evaluation depends on whether the contractor operates within the chain exclusively or engages also in transactions with competitors of the chain leader.[114]

The initial access requirements, defined in the qualification system, may be upgraded with specific programs designed by the chain leader. Access to the chain can be immediate or gradual, based on a process that allows the requesting supplier to meet the requirements over time.[115] The position in the chain can also be affected by sustainability performances. The chain leader may set more ambitious targets over time and support the suppliers in their efforts to modify production processes, including transportation and packaging.[116] Climate change transition plans, for example, engage the enterprises into a long term transformation that affects their processes and their governance. These targets can define long term commitments by the chain leader and its contractors independently from contractual specific obligations. The CO_2 emissions reduction programs of the entire chain show that frequently chain leaders collaborate with their suppliers to ensure the achievement of the target.[117] Hence, on the one hand

113 See Iberdrola report 'Risk monitoring of the Group's suppliers, through the GoSupply platform, is carried out with a special focus on critical suppliers. When a supplier is invited to participate in a tender with an estimated value equal to or greater than €400,000, if they have not yet been assessed, must register with GoSupply in the 360° level mode, so that the supplier's full risk profile can be determined early in the process and any necessary risk mitigation measures can be taken. For tenders of less than €400,000, the supplier must be assessed under the Basic modality.'

114 See Cafaggi, Regulation through contracts, n 1 above.

115 Enel Supplier qualificaton on file with the author.

116 See for example the description of changes in the packaging strategy by Coca Cola CEEP as they have been described in the CDP response to climate change. Available at www.Cocacolaep.com. assets.

117 See for example Cargill programs with their suppliers ZELP (Zero Emission Livestock Project) and Soil and Water Outcomes Fund (SWOF). The SWOF is a market-based program to accelerate soil health and water conservation across Iowa, US, farmland and provide financial incentives to Iowa farmers to engage in environmental innovation.

a. Collaboration & innovation 1 % of suppliers by number/1 % of supplier-related Scope 3 emissions
   i. Run a campaign to encourage innovation to reduce climate change impacts
   ii. Cargill collaborates with multiple customers to reduce emissions from across the agricultural supply chain, including on-farm interventions for regenerative agricultural practices that result in enhanced soil health and carbon drawdown, as well as reduced emissions through animal feed or transportation. Cargill also develops innovations that allow customers to reduce emissions from their own operations and/or supply chains.

common plans and investments are made; on the other hand, compliance checks on the supply chain are performed.[118] If targets are not met, collaborative strategies are developed to identify the causes and to improve sustainability performances. In extreme cases of failure to perform, however, the suppliers can be excluded from the chain.

Failure to comply with the qualification committee's instructions may lead to the suspension or the exclusion from the qualification system and, consequently, from

iii. Programs are selected based on proximity to Cargill supply sheds, scale of opportunity, potential for scalability, and value to the farmer/rancher. Customer collaborators are selected by shared strategic objectives and focus on a given geography.

iv. Measures of success: The measure of successes for specific projects varies depending on the project goal and design and may include # of acres enrolled or metric tonnes of CO_2e sequestered and/or avoided.

Cargill seeks to provide customers with more sustainable solutions that reduce carbon emissions. As one example, increasing methane emission concerns are putting pressure on cattle producers to implement solutions to reduce their impact. Cargill and ZELP (Zero Emission Livestock Project) have partnered to bring European dairy farmers an innovative solution to reduce methane emissions, combining technology in methane oxidation and data processing to minimize the environmental impact of dairy production while improving animal welfare. See www.cargill.com.

118 See for example in the case of Coca Cola commitments to reduce CO_2 emissions in the supply chain.

Reduction: What emissions targets has the company set?

a. Committed to support strategic suppliers to set their own science based carbon reduction targets, to shift to 100 % renewable electricity by 2023, and to begin sharing carbon footprint data with TCCC

b. Reduce absolute scope 3 GHG emissions 29 % by 2030 from a 2019 base year
   i. Packaging: reach 100 % recycled or renewable plastic by end of decade; reduce weight of packaging and amount of material; innovating in refillable packaging and dispensed technology
   ii. Operations and commercial sites: identify new renewable sources of energy, reduce fugitive CO_2 losses, and use less energy by investing in new equipment and in training programmes for employees
   iii. Transportation and distribution: shift to electric vehicles for TCCC's own car fleet and vans, work with suppliers to make distribution networks more efficient (improving warehouse capacity, shifting from road to rail), back-hauling (combines customer deliveries with collections to ensure full loads on both outward and return journeys), cutting travel distances

c. Net zero by 2040

the chain.[119] These measures, instead, have the nature of private sanctions. Clearly there might be post-contractual obligations that persist even after exiting the chain. This is certainly the case for environmental violations whose responsibility remains, despite forced exit from the chain.

When suspension is combined with the requirement of an improvement plan both functions (promoting and sanctioning) co-exist.

The functional differences between the improvement plans, suspension, and termination require different procedural requirements and the application of different principles depending on the remedial or sanctioning nature of the measure. Private sanctions related to the qualification system, as we shall see, have to be effective, proportionate, dissuasive.[120]

Whereas the chain leader has direct power to downgrade, to sanction with suspension, and to exclude subcontractors from the chain based on the qualification system, it faces limitations for the privity of contract to sanction directly the violations committed by subcontractors according to the contractual terms.

5 The Broader Functions of Commercial Contracts and Contract Laws to Achieve Environmental Regulatory Objectives

Governing sustainability in global chains calls for a multi-instruments strategy to control firms' capabilities and performances. Environmental requirements encompass those necessary to participate in the chain and those specifically related to the contractual performances. The former measure the organizational features to implement environmental standards and refer to the capacity of the enterprise; the latter concern the ability to perform and to engage in production and distribution processes compliant with the environmental standards. In the previous section the qualification system has been analyzed. In this section the complementary instrument of contractual architecture and terms concerning sustainability is examined.

The chain leader may have direct control over the choice of subcontractors made by the supplier. Accordingly, the supplier can be authorized to subcontract, and the chain leader must approve the list of subcontractors once the compliance with the requirements has been verified.[121] Unlike the qualification system, where there is

119 See ENEL qualification system on file with the author.

120 See below text and p. 44 ff.

121 See for example Enel GTCs

direct control with long term duration, in this instance there is a case-by-case verification by the chain leader related to each procurement contract. The choice between integrating the subs in the qualification system or verifying case by case, depends on the strategic importance of the subcontractors and the frequency of their participation in the chain's activity.

The General Terms and Conditions (GTCs) define the content of contracts deployed within the chain. They usually include terms concerning environmental sustainability that may be supplemented by separate general principles and guidelines, issued by the chain leaders, and incorporated by reference in the contracts.[122] These terms impose costs on the parties for the benefit of third parties (environmental protection and employees).

When the deployment of GTCs is imposed on suppliers with their subcontractors there is a clear limitation of private autonomy. When there are conflicting interests, as can for example happen in relation to remedies, the parties can deviate from GTCs and even if they reproduce the clause, one of them can claim its voidness for abuse of dominant position or the abuse of economic dependence.

10.2 The Contract shall specify the maximum amount or percentage that may be subcontracted; in the absence of such indication, the contractual activities may be subcontracted up to 49 %. As regards contracts falling within the scope of the Public Procurement Code, subcontracting shall be expressly regulated by the Public Procurement Code. The Contractor may subcontract the activities only after has received ENEL's authorization, which shall be granted only after ENEL has verified the fulfillment of the integrity, technical, organizational, economic and financial requirements set out for the performance of the Contract, as well as of the safety standards. If provided for by the Contract, the authorization to subcontracting, at Enel's discretion, shall also be subject to the prior verification of fulfilment of the environmental protection requirements. In the event of amendments to the scope of subcontracting, as well as to its amount or the requirements for the performance of the subcontracted activity, the Contractor shall require an additional authorization from the Contract manager.

10.4 The Contractor shall promptly provide ENEL with the list of the potential Subcontractors and the schedule of their activation; such list and the relevant schedule may be subject to periodical review. The Contractor may not enter into any subcontract if Subcontractors are not included in such list or not authorized. ENEL shall receive the authorization request at least twenty (20) calendar days before the start of the subcontracted activity. The authorization request shall include: (i) corporate data of the Subcontractor, (ii) commencement/end date of the subcontracted activity and (iii) portion of the Scope of Contract to be subcontracted (type, volume, countries). For the purposes of obtaining the authorization, the Contractor shall ensure that each Subcontractor is registered with ENEL's Portal before the authorization.

122 See for example UN and OECD guidelines for multinational enterprises on responsible business conduct (last edition 2023) available at www.oecd.org.

Transnational commercial contracts have become instruments to implement sustainability and in particular environmental standards.[123]

Regulation of sustainability obligations in commercial contracts includes the definition of (1) standards and the possibility to differentiate depending on size and capabilities of suppliers, (2) performance indicators, (3) criteria to establish the severity of violations, (4) remedies, and (5) sanctions. In some instances, the chain leader only prescribes remedies; in others it also includes private sanctions. Private sanctions are usually associated with a breach of contractual regulatory requirements, thereby accentuating the role of the chain leader as a transnational private regulator.

The enforcement of these obligations poses daunting challenges to the conventional contract law and forces to rethink the remedial and sanctioning strategies usually applied to commercial terms (quality and price). It should be underlined that supply chain governance requires prevention, mitigation, and redress. Hence enforcement choices should be seen in relation to the model of chain's governance.

We first examine who can enforce the terms and subsequently how can the sustainability terms be enforced. The section concludes with a detailed analysis of remedies for breach.

The chain leader defines the standards that contractors have to meet when they engage in individual transactions. Parties within the chain are obliged to draft their contracts accordingly. The first-tier supplier has an obligation towards chain leader(s) to warrant subcontractors' compliance with environmental obligations.[124] The suppliers must ensure that subcontractors comply with the standards

123 See K. Peterkova Mitkidis, 'Using private contracts for climate change mitigation' *Groningen Journal of International Law* 2014, vol 2 no 1; P. Verbruggen, 'Private regulatory standards in commercial contracts. Questions of compliance', in H.-W. Micklitz, *R. van* Gestel, R. Brownsword, *Contract and Regulation* (Cheltenham: Edgar Elgar, 2016) 284.

124 See ENEL Safety, health and environmental terms in relation to hazardous substances.

12.4 Contractor shall minimize the use of Hazardous Substances and shall conduct its activities and causes its Subcontractors to conduct their activities in a manner designated to prevent pollution of the environment or any other release of any Hazardous Substance. The Contractor shall provide evidence of the absence of oils containing PCBs and the absence of CFCs, HCFCs, halons, substances with trade restrictions, in the supplied equipment. Moreover the Contractor must avoid the use of asbestos in the supplied materials/equipment and in any used PPE and tool.

12.5 Unless otherwise provided in the Contract, Contractor shall be responsible for the management of and proper disposal (within the timeframe set forth in the Contract) of all Hazardous Substances brought onto or generated at the Work Site by it or its Subcontractors, if any. The Contractor shall cause all such Hazardous Substances brought onto or generated at the Work Site by it or its Subcontractors, if any, (A) to be transported only by carriers maintaining valid permits and operating in compliance with such permits and Laws regarding Hazardous Substances (i.e. European Agreement Concerning the International Carriage of Dangerous Goods by Road – ADR regulations, if applicable) pursuant to the manifest and shipping documents identifying, to the extent allowed by applicable

defined by the chain leader. Both parties may however lack incentives to enforce those terms and collude. What are the legal instruments available to the chain leader to ensure that the terms are included in the contracts and to enforce them when it is not party to the contract?

Contracts that do not comply with the GTCs cannot be modified unless a specific clause empowers the chain leader to seek contractual changes. The chain leader cannot directly enforce subcontractors' obligations towards the suppliers for lack of privity.

When violations occur the chain leader obliges first tier suppliers to seek remedial actions towards second and third tier suppliers. Here both monitoring and enforcement are indirect and decentralized. The problems related to indirect enforcement concern the incentives of suppliers to monitor performance and to enforce environmental standards. Unlike the commercial issues, where suppliers have incentives to monitor and enforce the obligations related to the conformity of goods and services delivered by their contractors, in the case of environmental standards often second and third tier suppliers lack the incentives to monitor since compliance with environmental standards usually does not confer them direct benefits whilst often requires bearing costs. For this reason, the indirect enforcement power of the chain leader operating with the cascading compliance regime may lead to suboptimal results and must be complemented by the qualification system where the chain leader holds direct enforcement powers.

When direct power exists, are environmental obligations enforceable through conformity terms or do they need specific terms? According to the conventional view of conformity a good or a service can be perfectly fit with the specifications and yet violations of environmental and social standards might have occurred. However, a broader notion of conformity can also include process standards and in particular sustainability obligations.[125] Hence conformity can be used to enforce environmental

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Law, only the Contractor as the producer of waste or person who arranged for waste disposal, and (B) to be treated and disposed of only at treatment, storage and disposal facilities maintaining valid permits operating in compliance with such permits and laws regarding Hazardous Substances, from which, to the best of the Contractor's knowledge, there has been and will be no release of Hazardous Substances. On these issues see A. Bagchi, Production liability, 87 Fordham Law Journal, 2019, p. 2502 ff. and K. Parrella, Protecting third parties in contract, 558 American Business Law Journal, 2021, pp. 327/386.

125 On the applicability of the conformity requirement in international sales to process violations, including environmental terms, see Cafaggi, n 32 above, 334 *et seq* part 352 *et seq*.

See the European model clauses cit. linking non conformity to severe adverse impact

Article 3 Rejection of Goods

3.1 Rejection of Nonconforming Goods

In the event of a severe Adverse Impact that Supplier has caused or to which Supplier has contributed that renders the Goods Nonconforming Goods, Buyer shall have the right to reject them unless Buyer's breach of its obligations under Section 1.3 [and/or Schedule Q] materially caused or

rules concerning processes that result in products that may be fit for commercial purposes but not for sustainability. The new legislation on due diligence provides independent instruments to enforce environmental obligations without necessarily expanding the scope of conformity.[126]

Environmental terms incorporated in the contract differ from the commercial terms in relation to the notion of breach and to the content and objective of remedies.[127]

Liability for violations of environmental obligations is imposed on the infringer by contractual arrangements. Environmental obligations concerning production processes often apply along the entire chain in order to ensure certifiability of the final product necessary to access a particular market. Not only suppliers have to comply, but they also have to monitor subcontractors' compliance. Failure to monitor subcontractors can give rise to suppliers' liability along the chain. Due diligence obligations may lead to the extracontractual liability of the chain leader. Different liability models are in place. Some are discrete, others are shared.

The Model Contract clauses 2.0 recently published by the American Bar Association (ABA) have replaced the previous either/or model with a shared liability approach.[128] A similar approach has been taken at European level.[129] Shared liability usually results in joint liability.[130] The shared responsibility model between suppliers and buyers adopted by MCC 2.0 pursues the objective of encapsulating the strong interdependences between parties' performances required by the implementation of sustainability standards along the chain.[131] However, there is a risk of a misalignment between the allocation of regulatory powers and the

contributed to the Adverse Impact. Goods are Nonconforming Goods if the goods cannot pass without objection in trade or if the Goods are associated with a Zero Tolerance Activity. Article 1.3 (h) applies to this rejection.

126 See for example the German Act cit. n 95.

127 Once the differences between commercial and regulatory aspects are recognised two possible responses arise: one is to maintain a unitary notion of breach, including the distinction between material and non material breach that works for quality, quantity, and sustainability. A different strategy is to recognise that both the notion and the effects of violations of environmental provisions are so different that cannot be reconciled with the conventional notion of breach and distinguish the two notions: one is that of breach and the other one is that of violation, drawing on regulatory law. The alternative is not about semantics but about the extent that the conventional contractual doctrines can be transplanted to the violations of due diligence contract terms that egulate the behavior of firms for environmental and social protection.

128 See Snyder, Maslow, Dadush, Balancing buyer and supplier responsibilities, n 28 above.

129 See European Model clauses third draft for consultation cit n 3.

130 See for example ENEL GTCS.

131 See Snyder, Maslow, Dadush, Balancing buyer and supplier responsibilities, n 28 above.

distribution of liabilities. The power of chain leaders may not reflect their share of liability. Such misalignment can negatively affect suppliers' incentives and reduce the effectiveness of contracts as regulatory instruments to implement sustainability. Hence the shared responsibility should always reflect the concrete distribution of powers between the parties along the chain.[132] Shared liability should not be limited to the contractual parties but also include the chain leader when it is not party to the contract.

Therefore, on the one hand transnational commercial contracts include a regulatory function, on the other hand the specificity of private environmental regulation requires the introduction of specific notions related to breach and remedies and possibly other elements of the contract. For example, the breach of contractual environmental obligations is regulated with criteria different from those related to quantity and safety. The distinction between minor and major violations encompasses both an analysis of the seriousness of the consequences for the environment and an assessment of the negligence or intention to cause that harm.

First tier contractual suppliers' liability towards the chain leader is usually strict and not fault based. Contractual strict liability usually applies both to the supplier's obligation and to their duty to monitor subcontractors. When the remediation plan concerns subcontractors' conduct, the first-tier supplier is responsible towards the chain leader for the compliance with the plan even if the breach depends on the subcontractors' activities and the misuse could not have been prevented by their due care.

If the breaching party does not deliver a remediation plan or does not comply with it, then the non-breaching party has the power to seek more severe remedies like contractual suspension or termination. However, as underlined before, the chain leader cannot impose these measures on subcontractors unless the contract contains a specific authorization term.

6 The Enforcement of Sustainability Contractual Terms in Global Chains: Remedies for Breach

Control over standards' implementation depends on the chain's governance and the modes of enforcement. Enforcement of contractual terms can be direct or indirect. Breach of sustainability standards included in commercial contracts may lead to the adoption of both remedies and private sanctions. Remedies include both preventive

132 See Cafaggi, n 58 above.

and reactive measures. They specifically address the violation of environmental obligations but may also concern delivery of goods and services produced with environmental harms.

Remedies for breach of sustainability contract clauses concerning environmental standards can include correction, restitution, compensation, and termination.[133]

Remedies for breaching environmental obligations sensibly differ from those related to breach of quality or safety requirements. The objective of prevention and the focus on correction rather than compensation characterize the remedial pyramid. They have to be consistent with the precautionary principle. However, the chain leader has less control over the choice and effectiveness of remedies selected by the supplier against its subcontractors for violations of environmental harms.

Remedies are generally articulated in an escalating form that moves from collaborative to hierarchical enforcement.[134] Usually corrective remedies come first, followed, in case of persisting non-compliance, by the contractual

133 See ENEL HSE available at www.enel.com.

19.2 REMEDIES FOR VIOLATIONS OF THE RULES REGARDING ENVIRONMENTAL PROTECTION

19.2.1 In the event Contractor breaches an obligation, as provided by Law or by the Contract, on Environmental protection, the Contractor shall indemnify ENEL for, and hold ENEL harmless for, any loss or expense that ENEL may sustain or incur as a consequence of: a) any Environmental Event, and/or b) any claim or suit brought by the individuals or entities affected by the Environmental Event, and/or, any fine, penalty or sanction imposed by an authority to ENEL by reason of the Environmental Event.

134 See for example ENEL HSE where the company reserves the power to apply the various remedies and sanctions simultaneously or sequentially.

19.2.2 In the event Contractor breaches an obligation, as provided by Law or by the Contract, on Environmental protection, ENEL, at its sole discretion, and to the extent not contrary to the applicable Law, may:

a) require the Contractor to implement a timely remediation plan to reinforce corrective measures related to the Environmental prevention and protection deficiencies identified,

and/or b) suspend, for a number of days which correspond to the seriousness of the violation – or until the verification of any adjustments or corrective actions taken to address the violation – the execution of any contractual works or a certain activity (depending on the Environmental breach) without this giving the Contractor any right to extend the deadline for completion of the works or payment or compensation of any kind,

and/or c) require the Contractor ensures its employees – who were responsible for the violation – attend up to 16 h of additional training regarding environment. The Personnel responsible for these violations shall be readmitted on site only after attending the prescribed specific training courses,

and/or d) apply the sanctions set out in Section 19.35,

and/or e) suspend payment of sums due to the Contractor, to the extent of 10 % of the amounts accrued at the time of environmental violation, until the Contractor implements the changes to its environment management system as required by ENEL,

suspension of the counter performance and, eventually, by the possibility to terminate the contract. In some instances, these remedies are either complementary or alternative and sequential, depending on the discretion of the chain leader. For example, correction of the causes of the environmental harm may be combined with performance suspension or may precede it. Compensation is not often used as a contractual remedy since the party who is seeking the remedy is not the victim in case of environmental harm. Contracts can allocate the liability costs of environmental harm caused by chain's activity as for example in the case of the use of pesticides in agriculture where there is both a harm to health and to the environment. However, if the creditor is liable towards third parties the breaching party can be asked to indemnify him for the losses incurred because of the strict liability regime.[135]

Prevention and reparation of environmental harm take priorities over compensatory remedies that monetize the environmental harm and termination that may leave the harm where it falls. Even in case of serious violations, termination of the contractual relationship might not be the most appropriate remedy for environmental violations. Interestingly the new EU legislative proposals condition contractual termination to the absence of contribution to the violation. When the other party has contributed to the violation it cannot seek termination.[136] When termination occurs the breaching party may still have post-contractual obligations to repair the environmental harm that would otherwise only rest on extracontractual liability.

Corrective remedies should have priority since they are the most consistent with the precautionary principle. A similar conclusion holds for the contractual violations of social standards.[137] They usually result in remediation plans where the breaching party commits to repair the negative consequences according to objective indicators and a timeline. It should be underlined that remediation plans can also be required for

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and/or f) suspend the Contractor and/or its Subcontractors and/or Contractor's Affiliates from Supplier Qualification System, and/or terminate the Contract according to Section 19.5.

135 Monetary compensation should be used by the creditor to repair the environmental harm when it has not been possible to seek remedial action by the debtor. See in relation to social standards the MCC 2.0 issued by ABA Section 6.3 Damages. Buyer and Supplier acknowledge: (a) Neither Buyer nor Supplier should benefit from a Schedule P violation or any human rights violation occurring in relation to this Agreement. If damages are owed that would result in a benefit to Buyer or Supplier, such amounts should go toward supporting the remediation processes set out in Section 1.4 and Article 2. A 'benefit' is here understood to mean being put in a better position than if this Agreement had been performed without a Schedule P Breach. Nothing herein limits the right of a party to be put in the position it would have been in had this Agreement been performed without a Schedule P Breach.

136 See European Model clauses cit. n 3.

137 See, in relation to the ABA, MCC 2.0, Snyder, n 29 above, 33 referring to Model clause 6.3.

preventive reasons where there is risk of violation not yet materialized.[138] If the violation has been committed by several parties the remediation plan can be collective and address the consequences for the entire chain.

Remediation plans can take the form of an agreement between the infringer and the counterparty where the former makes enforceable commitments to the latter to eliminate the harm. If the other party is also responsible for the adverse impact caused by the violation it should be involved in the remedial plan and take responsibility to repair the harm caused. These agreements often include provisions aimed at benefitting third parties who can have an enforceable right against the party responsible to execute the plan. Breach of remediation plans can lead to remedies.

The identification of remedies, especially when they address not only the consequences but also the causes of the harm, can lead to coordination among various chain's participants since often the violation concerns several parties along the chain. This is certainly the case when multiple breaches materialize but even when a single breach occurs with cascading effects over the contractual relationships downstream.

Take the example of the use of hazardous substances. The contractor (first tier supplier) is responsible for the appropriate use of hazardous substances. The contractor may also be responsible towards the chain leader for the misuse of hazardous substances by its subcontractors. At times the GTCs also envisage a liability of the subcontractor towards the chain leader for violations of sustainability obligations.[139]

In case of breach consisting in the misuse of hazardous substances, remedies initially pursue correction rather than punishment. They are grounded on the interdependence among performances along the chain and the necessity to keep the contractual relationships working even if there is a breach. Termination of contract would be disruptive when performance interdependence is high. It is

138 See European Model clauses cit. distinguishing between adverse impact caused by a breach or not caused by a breach.

(i) An Adverse Impact is not caused by a breach → Remediation Plan (Section 2.3) is required, if this Remediation Plan is not executed this results in a breach and triggers the remedies of Article 5

(ii) An Adverse Impact is caused by a breach (for example, Supplier has not implemented or refuses to collaborate to implement proper Human Rights and Environmental Due Diligence and deploys irresponsible purchasing practices vis-à-vis subcontractors) → Remediation Plan is required and this may trigger the remedies of Article 5 (including termination and responsible exit).

139 See F. Cafaggi, 'Private regulatory powers and due diligence obligations. The role of civil liability'. On file with the author.

necessary to continue the production process and, at the same time, to remedy the environmental breach. The supplier has to deliver a remediation plan either when the misuse of hazardous substances is its responsibility or when it is the responsibility of the subcontractors. Remediation plans include actions by several actors that have to address the causes of the breach and the reparation of the harmful effects.

When there is a breach of contractual environmental obligations (e.g. violation of the prohibition to use hazardous substances, violation of the obligation to process the material with environmental effective technologies) the supplier may be required, in addition to reparation, to revise the environmental plan and to indicate the necessary corrections, by drafting a remediation plan in order to:

(a) restore the correct level of environmental protection associated to the contractual performance;
(b) prevent accidents and violations from happening in the future.

Contracts can be suspended until the corrective measures have been fully implemented and the preventive measures adopted to ensure that future accidents will not occur again. Suspension of the contract may also have consequences on the qualification position of the breaching party.[140]

Contracts can be terminated in case of very serious and persistent violations, with consequences on the qualification position, for example downgrading.[141]

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140 See Enel qualification system on file with the author.

141 19.5 CONTRACT TERMINATION FOR REASONS ATTRIBUTABLE TO HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS
19.5.1 ENEL – at its sole discretion – may terminate the Contract in case:
a) Fatal/Life Changing Accident during the performance of the Contract, in which Contractor is, as determined by the accident investigation analysis carried out by the ENEL Group company, primarily responsible for the Fatal/Life Changing Accident;
or b) Fatal/Life Changing Accident during performance of another contract with ENEL or another ENEL Group company by the Contractor or a Contractor Group company, in which Contractor or the relevant Contractor Group company (i) is, as determined by the accident investigation analysis carried out by the ENEL Group company, primarily responsible for the Fatal/Life Changing Accident and (ii) has a negative outcome in Enel's assessment on HSE organization of Contractor and/or Contractor Group company;
or c) contractor does not implement actions defined in the remediation plan (proposed by Contractor after an HSE default and validate by ENEL) within the specified time limit,
or d) the amount of the safety sanctions applied due to violation reach the amount of 5 % (five per cent) of the Contract's value or the equivalent amount of severe sanctions,
or e) the amount of the applied environmental sanctions reach the amount of 5 % (five per cent) of the Contract's value or the equivalent amount of,

In addition to remedies, especially for sustainability obligations, pecuniary sanctions may be levied.[142]

7 Pecuniary Private Sanctions in the Qualification System and in Transnational Commercial Contracts

Private sanctions imposed on parties within the chain for environmental violations have to be effective, proportionate, and dissuasive.[143] Private sanctions and remedies for violations of sustainability obligations are strongly correlated. They pursue complementary objectives. They can be cumulated.

The combination of penalties and remedies may differ depending on whether the non- breaching party wants to remain in the contractual relationship or terminate the contract.[144]

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or f) violations by the Contractor and/or any Subcontractor of the requirements of Law or of the Contract on the protection of the environment, implying at least one of the following consequences: • High widespread impact; long term or irreversible environmental-biodiversity damage • Non-compliance with legal or permit requirements that could result in: ♣ severe fines impact on licenses, civil/criminal lawsuits with restriction of Enel personnel freedom, ♣ civil/criminal lawsuits with liability involvement of Enel personnel, ♣ Environmental Asset Shutdown, • Reputational issues: ♣ Severe concerns among national and international stakeholders, expressed in a written communication send to ENEL, ♣ Severe media opposition at national and/or international level, • Financial loss (all costs incurred as a result of the environmental event, i.e. fines and penalties, liabilities, immediate corrective actions, remediation plan implementation, loss of revenues, etc) greater than €1,000,000.

142 See below text and fns. 45 ff.

143 The analysis focuses on pecuniary sanctions but the principles apply to all private sanctions both pecuniary and non pecuniary.

144 See ENEL GTCs art 15 PENALTIES.

'15.1 Without prejudice to the provisions of art 16.3 of the GC, any failure by the Contractor to meet the contractual terms and/or dates, may result in the application of a penalty by ENEL, in accordance with the provisions of the Contract. The application of penalties does not exclude nor limit ENEL's right to compensation for any further damage. 15.2 If the overall amount of the penalties applied exceeds 10 % of the Contract amount, ENEL shall be entitled to terminate the Contract. 15.3 The application of penalties shall not limit the Contractor's responsibility under art 13 of the GC and under the Contract. 15.4 The penalties shall be collected in accordance with the terms and conditions set forth by the Contract and the Law. 15.5 Failure to apply one or more penalties shall not be construed as a waiver by ENEL of the application of similar penalties, or of any penalty ENEL may be entitled to in the future for the same reason.'

In the conventional view sanctions deter, remedies repair. Sanctions primarily focus on the infringer's conduct. Remedies focus on the victim which, in the case of environment, is usually the community (local and/or global).

Private sanctioning power can have different grounds: it can be based on the qualification system and apply to all chain's participants, or it can be grounded on contracts and be limited by the principle of privity to the contractual counterparty. We shall examine both hypotheses and evaluate whether pecuniary sanctions may have different objectives depending on whether the violation concerns the qualification system or the contractual obligations or both.

In global supply chains the private authority e.g. the chain leaders levy private sanctions. Pecuniary sanctions imposed by the chain leader deserve special attention since they may combine various functions: deterrence, reparation, and innovation.

Private pecuniary sanctions imposed by the chain leader for violations of the qualification system differ from administrative sanctions administered by local public authorities. Administrative sanctions for both environmental and social violations are usually administered by national public authorities.[145] Private sanctions, instead, can be levied by the chain leader without any jurisdictional boundary.

Private sanctions should deter violations, but they can also contribute to improve environmental innovation. When, as it is often the case, the money coming from the private sanctions goes to a fund directed at improving environmental performance by firms in the chain, the pecuniary sanctions combine punitive and educational functions.[146] Those responsible for violations pay the costs of environmental innovation along the chain.

What are the principles applicable to private pecuniary sanctions?

The Supplier Codes or the more specific regulatory instruments devoted to sustainability do not usually specify principles concerning the determination of sanctions and the procedural guarantees associated to sanctioning. It is contended, however, that the principles of effectiveness, proportionality, and dissuasiveness should be applied by chain leaders when determining whether the sanction is appropriate and what should their amount be.[147] Even if no specific reference to the principle of proportionality is usually made in the chain leader's GTCs or sustainability principles,

145 ILO can have a role for labor and social standard and collective transnational framework agreement can also be relevant. But the core of the enforcement regime is still in the hands of national authorities.

146 It should be however clarified that there are instances of sanctions imposed by national legislation that go to private parties. This is for example the case for *ammendes civiles* in France where the sanctions go to NGOs engaged in the environmental field. Usually, the money from administrative sanctions related to environmental violations go to the State.

147 These principles are usually applied to administrative sanctions at least in the EU context. See F. Cafaggi and P. Iamiceli, 'The Principles of Effectiveness, Proportionality and Dissuasiveness in the

it is a general principle that should be applied to both civil and administrative sanctions. More broadly, it is suggested that private regulators be subject to the substantive and procedural rules concerning administrative sanctions but for the principle of legality. Hence no specific legislative rule is needed to empower the chain leader to impose sanctions unlike the case of administrative authorities. They can be referred to the principle of freedom of contract.

The sanctioning structure, according to the principle of proportionality, should be correlated to the severity of the violation and be designed according to the principle of escalation. Less severe violations should be punished with lower pecuniary sanctions. The amount could increase with the severity of the breach, the magnitude of the consequences, and when the violation is repeat. If remedies differ depending on the seriousness of the breach the combination with pecuniary sanctions should be designed accordingly.

The potentially sanctioned party should be entitled to due process and procedural guarantees. Before the private sanction can be imposed, there has to be a proceeding where the potentially sanctioned party has to be informed about the violations and has the right to defend and respond to the accusations.

The private sanction should certainly be motivated and the chain leader or the competent committee should state why the sanction is necessary and indicate the criteria to determine the amount of the sanction. If the procedural guarantees are not complied with, the private sanction could be voided in judicial proceedings.

Not only private sanctions can be used when the qualification system requirements are breached but also in relation to specific contractual performances. Private sanctions in transnational commercial supply contracts are not unusual. Pecuniary sanctions can be deployed when there is a breach of sustainability obligations.[148] In theory, private pecuniary sanctions can be used by both the chain

Enforcement of EU Consumer Law: The Impact of a Triad on the Choice of Civil Remedies and Administrative Sanctions' *European Review of Private Law* 2017, 575, 618.

148 See ENEL safety health and environmental terms available at www.enel.org,

19.4 CLASSIFICATION OF ENVIRONMENTAL BREACHES

19.4.1 Without prejudice to its right to terminate the Contract, in relation to each violation regarding the environmental protection, and without prejudice to its right to claim further damages, ENEL also has the right – at its sole discretion – to apply, by notifying the Contractor by official communication with proof of receipt, the sanctions listed and quantified in 'APPENDIX 3 Sanctions for HSE violations' relevant the specific Country.

19.4.2 In case the Contractor (or one of its Subcontractors) is responsible of an Environmental Event, ENEL reserves the right to apply – depending on the relevance of the impact – a sanction of up to 2 % of the total (or maximum) contract value and in any case not less than the amount specified in 'APPENDIX 3 Sanctions for HSE violations'.

Notice that the sanctioning power is regulated in the HSE terms. Hence the pecuniary sanction applied by ENEL against subcontractors is not based on a contract between the two parties. The

leader and/or by the contractors when a breach of contract occurs. In practice, the sanctioning power is usually conferred to the chain leader.

Sanctioning is related to violations concerning contracts between the chain leader and the suppliers. The chain leader can impose a sanction for breaches of environmental standards committed by the contractor. The maximum amount is usually determined by the terms and conditions issued by the chain leader.

The chain leader can impose pecuniary sanctions also to non contractual parties within the limits posed by the privity principle. In order to avoid the violation of privity the sanctioning power must be based on a clause in the contract between the contractor and the subcontractor that authorizes a third party (the chain leader) to impose the sanction against the infringer. If such a clause is missing the chain leader cannot impose any sanction on subcontractors for violations of contractual obligations for lack of contractual privity.

What is the relationship between private sanctions and remedies for contractual sustainability violations? The focus here is on the private sanctions administered by the chain leader against its contractors for violations committed by the contractors or by the subcontractors of which the contractor is responsible for, based on specific contract terms.

Are remedies and private pecuniary sanctions related? In case of an affirmative answer how are they related?

When private sanctions are administered, do their functions change depending on the type of remedies they are associated with?

In theory, sanctions and remedies can be either alternative or complementary. In practice, they complement each other. In the case of sustainability's violations, remedies are of great relevance because environmental harms can be remedied, mitigated, or eliminated through corrective and restitutionary remedies. Pecuniary sanctions do not usually perform any of these functions. They deter, punish and promote organizational changes.

As mentioned earlier from the very limited available empirical evidence it appears that sanctions administered by the chain leader can operate with all three families of remedies e.g. corrective, restitutionary, and compensatory.

Private pecuniary sanctions issued by the chain leader can be combined with corrective remedies sought by the contractual non breaching party.[149] For example, the pecuniary sanction can complement environmental remediation and contribute

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potentially sanctioned party accepts the possibility to be sanctioned by a third party (the chain leader) in case of breach of contract.

Failure to specifically accept HSE would deprive ENEL of this power.

149 See below text pp. 51.

to deter the violation which would be absent if the consequences of the violation were limited to remediation.

Pecuniary sanctions can also be combined with compensation when the breach of environmental obligations entails damages for the non-breaching party.

When pecuniary sanctions are combined with contractual suspension or termination or with forced exit from the chain the deterrence function characterizes both measures. In this instance the complementarity between private sanctions and remedies is limited, and the principle of proportionality may require a different approach to the choice and the definition of the amount of the sanction.

The proportionality evaluation concerning sanctions should internalize the remedy is combined with.[150] Hence the use and the content of private penalties imposed by the chain leader should be correlated to the function and content of the environmental remedy/ies sought against the infringer. The amount of sanctions should be also correlated to the costs of the remedy, especially when remediation imposes radical changes to production or distribution processes.

The application of the principles of effectiveness, proportionality, and dissuasiveness is particularly important when private sanctions are combined with administrative sanctions levied by local public regulators. When, for example, a contractor who has violated environmental rules can be subject to both sanctions. In this case the party determining the content and amount of the private sanction should consider the public pecuniary sanctions in order to define its proportionality and dissuasiveness. When, in addition to the private and the administrative sanctions, remedies with a deterring function like contractual suspension or termination are deployed the principle of proportionality can avoid or mitigate overdeterrence.

8 Concluding Remarks

Private regulators exercise standard setting, monitoring, and enforcement powers to govern their global supply chains and design the contractual architecture relevant to implement sustainability standards. The regulatory power is distributed between chain leaders, suppliers, retailers, and third parties (intermediaries). Increasingly big suppliers are gaining bargaining power that affects the allocation of regulatory power along the chain.[151] Power distribution influences the choices of private regulatory instruments to implement sustainability standards. National and transnational commercial contracts play a significant role both for the implementation and the enforcement of the standards.

150 See Cafaggi and Iamiceli, n 148 above, p. 618.

151 See text and n above pp. 10 et seq.

Distribution of power within the chain occurs in different ways among which prominently stands delegation by the chain leader to the suppliers. The balance between concentration and delegation of private regulatory power differs in relation to standard setting, monitoring, and enforcement. More concentrated in standard setting, shared in monitoring, decentralized for enforcement. The chain leader(s) hold standard setting power, share monitoring powers, and significantly rely on suppliers for the enforcement of contractual terms.[152]

The combination of concentration and delegation of regulatory power depends on the application of private autonomy to transnational commercial contracts. Excessive concentration may undermine choice, reduce private autonomy, and violate the principles that regulate national and transnational contract laws even when they pursue regulatory objectives.

Technologies are increasing the possibility for direct control by chain leaders through electronic platforms and their ability to monitor sustainability performances of parties not in privity. Hence technology is contributing to the introduction of new governance models in global chains that redistribute regulatory power between chain leaders and first tier suppliers.

Two sets of private regulatory instruments can be used: on the one hand the qualification system that regulates access, participation, and exit from the chain; on the other hand, GTCs and specific environmental standards that define the content and the remedies of contractual terms deployed in global chains to define environmental performances.[153] Qualification systems regulate entry, position and exit from the chain. Once the supplier is included in the chain, it is subject to a monitoring system to verify the persistence of requirements over time.[154] Usually, yearly verification occurs, and the assessment is repeated every three or five years.[155]

During their participation in the chain, the suppliers can be upgraded or downgraded depending on their performance and the level of risk. The position in the ranking can determine access to or exclusion from business opportunities within the chain.

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152 See above text and pp. 10 et seq.

153 On the multiplicity of instruments see Alexander, n 48 above, 269–290. She identifies five model mechanisms: 'Hierarchical, Compliance, Support Services, Partnership and the Promotion of Voluntary Change. The mechanisms are not mutually exclusive and are often combined within one strategy. The approaches available to lead frms depend on their relationships with producers along with the nature of the sustainability challenge being faced. The mechanisms can involve both vertical and horizontal ties. Each pathway has diferent benefts. Strengthening or shortening vertical connections can be seen as a way to reduce risk created by outsourcing. Creating horizontal connections can be seen as a way to reach broad groups of producers that are not easily accessible through vertical pathways.' (280 *et seq*).

154 See ENEL qualification system on file with the author.

155 See ENEL qualification system on file with the author.

When performance is below the desired level, an improvement plan is required and set in place to ensure future better performance. Hence different types of regulatory instruments may be used to impose changes on the suppliers' organizational systems to improve sustainability performance. These measures do not have sanctioning nature but are aimed at promoting performance's improvements and preventing failures.

In the GTCs the chain leader(s) may only refer to suppliers with whom there is privity of contract and include an obligation to impose the same obligations on subcontractors (so called pass-on clauses that define the cascading compliance model). The contractual remedies for sustainability violations, enforceable by the chain leader, can only apply to its direct contractual partners. It can interfere with contracts between parties belonging to the chain only if empowered by a contract clause.

The control by the chain leader over compliance with environmental obligations is both direct and indirect. Direct control operates through the qualification system and monitoring contractual performance in contracts with direct suppliers. Indirect control concerns the contractual relationships to which the chain leader is not a party. Indirect control, usually operates through the cascading compliance, is based on first tier suppliers contractually obliged to monitor and assure compliance with environmental standards of their subcontractors.

The analysis has shown that it is only the combination of direct control, with the qualification system, and indirect control, through delegation to suppliers and third parties, that can provide an effective governance of sustainability in global supply chains.

As highlighted earlier, the chain leader can impose on contractors a duty to ensure compliance of subcontractors with sustainability standards and introduce contractual clauses that make the contractor accountable not only for failure to monitor the sub-contractors but also for the violations committed by them that were foreseeable or preventable at a reasonable cost. The contractors' liability for violations of sustainability principles by subcontractors is usually strict, not fault based. Through these duties and the associated liabilities, the chain leader exercises indirect control over the enterprises with which it does not have direct contractual relationships. Interestingly, the model contract clauses recommended by ABA in the US propose a radical change, shifting to fault. Accordingly, there would be two liability regimes in transnational commercial contracts: one strict, for commercial clauses and warranties, and one fault-based, related to regulatory provisions like environmental and social standards.[156]

The analysis has shown that power warrants both direct and indirect control to the chain leaders over standards' implementation. Power is or should be correlated to liabilities. Liabilities towards parties not in privity is usually extracontractual.

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156 See Snyder, Maslow, Dadush, Balancing buyer and supplier responsibilities, n 28 above.

The legislation on due diligence and the liability of the chain leader will increase the incentives to monitor and organize implementation of environmental standards at supply chain level but will not replace transnational private regulation of contracts with environmental national regulations.

Environmental violations within supply chains can be enforced through a private system that encompasses both remedies and private sanctions. Such a tool kit combines ex ante preventive measures with ex post remediation and liability. Remedies and sanctions can be cumulative since they pursue different complementary objectives. Penalties can be combined either with compensation or with termination. Sanctions deter, remedies repair. Remedies are also cumulative since corrective measures, aimed at repairing environmental harms, can be combined with the suspension/termination of contractual performance or with measures directed at changing the production or the distribution process in order to eliminate or mitigate the environmental harm.[157] The interplay between the qualification

157 See European Model Clauses above note 3

5.2 Exercise of Remedies

(a) Remedies shall be cumulative. Remedies shall not be exclusive of, and shall be without prejudice to, any other remedies provided hereunder or at law. A party's exercise of remedies and the timing thereof shall not be construed in any circumstance as constituting a waiver of its rights under this Agreement. This party's remedies include, without limitation:

(i) Demanding adequate assurances from the other party of due performance in conformity with this Agreement. Such assurances shall be fair, reasonable and non-discriminatory.

(ii) Obtaining specific performance and/or interim measures, such as but not limited to injunctive relief with respect to a party's noncompliance with the obligations mentioned in Section 5.1.

(iii) Suspending payments, whether under this Agreement or other agreements, until a party determines, in this party's reasonable discretion, that the party in breach has taken appropriate remedial action following the expiration of the cure period indicated in Section 2.3(d) (iv).

(iv) Terminating this Agreement if permitted by Sections 2.4(b), 2.5, or 3.3 and in accordance with Article 1.3(h) on responsible exit.

(v) Obtaining damages caused by the breach; provided, however, that if Buyer's breach of Section 1.3 [and/or Schedule Q] caused or contributed to the Adverse Impact, damages shall be reduced according to the contribution of Buyer to this Adverse Impact.

(vi) If a party has reasonable grounds for insecurity with respect to the other party's performance of this Agreement, this party may demand adequate assurances that the other party will perform. This party may suspend its performance until adequate assurances are received. If adequate assurances are not received in a reasonable time, the other party has breached, and this party may terminate this Agreement.

system and the contracts allows differentiation between minor, serious and very serious violations that can lead to the expulsion from the chain and the interruption of any contractual relationships with the infringer without exclusion. The principles of effectiveness, proportionality and dissuasiveness should be applied to private sanctions similarly to their application to administrative sanctions even if the chain leader does not explicitly refer to them in its supplier code or in the GTCs.

The combined use of the qualification system and of both sanctions and remedies for environmental violations provides the chain leader(s) with adequate enforcement powers that should be correlated with due diligence liability.

The chain leaders' powers to set standards, monitor compliance, and enforce rules is (or should be) correlated to the liabilities towards third parties for the violation of sustainability standards. They are liable for failure to exercise their powers or for exercising them ineffectively by adopting chain's governance models that do not provide adequate incentives and sanctions for the chain's participants. Technology can contribute to a more effective control of sustainability performances and evaluation to prevent rather than remedy environmental violations. It usually results in power concentration, but it depends on the architecture of the platform.

In the exercise of the regulatory power, the choice of instruments is affected by the liability regimes recently introduced. The challenge to institutional design is to align powers and liabilities and their distribution among a chains' participants.