

BRAZIL AND THE EU IN TRANSNATIONAL ENERGY GOVERNANCE

LA GOVERNANCE TRANSNAZIONALE DELL'ENERGIA IN BRASILE E NELL'UNIONE EUROPEA

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ABSTRACT

This article explores the transnational dimension of EU and Brazilian energy policies. In an increasing number of areas, energy policymakers cannot make choices which overlook their external impact. The focus of this article is on how national and regional energy policies manage this external dimension. The EU and Brazil are compared to identify similarities and differences in the strategies they employ. More specifically, the article analyses the role of hierarchical and non-hierarchical governance in two energy areas with a strong transnational dimension: the regulation of biofuels and the regulation of foreign energy investments. The main conclusions of the analysis are twofold. Firstly, unilateral initiatives aimed at exporting non-hierarchical governance to transnational regimes only add a layer of rules but do not ensure its integration into the national/regional legal orders. Secondly, states and regional organizations should foster regulatory cooperation through bilateral and multilateral agreements in which the learning processes of non-hierarchical governance play a central role.

KEYWORDS: Energy governance. Transnational regimes. Comparative law. Biofuels. International investment law.

RIASSUNTO

Questo articolo esplora la dimensione transnazionale delle politiche energetiche nell'Unione Europea e in Brasile. In un numero crescente di aree, le scelte energetiche non possono trascurare il loro impatto oltre i confini degli ordinamenti giuridici. Questo articolo concentra l'attenzione sulla gestione della dimensione esterna delle politiche energetiche nazionali e regionali. La comparazione fra l'Unione Europea e il Brasile consente di identificare somiglianze e differenze nelle rispettive strategie. In particolare, l'articolo analizza il ruolo della governance gerarchica e non gerarchica in due aree con una forte dimensione transnazionale: la regolazione dei biocarburanti e la regolazione degli investimenti internazionali nel settore dell'energia. Due le conclusioni principali dell'analisi. Innanzitutto, iniziative unilaterali finalizzate all'esportazione della governance non gerarchica in regimi transnazionali aggiunge solo un ulteriore livello di regole ma non garantisce la sua integrazione negli ordinamenti giuridici nazionali o regionali. In secondo luogo, gli stati e le organizzazioni regionali dovrebbero promuovere la cooperazione regolatoria attraverso accordi bilaterali e multilaterali in cui i processi di apprendimento caratteristici della governance non gerarchica svolgano un ruolo centrale.

PAROLE CHIAVE: Sistemi di governo dell'energia. Regimi transnazionali. Diritto comparato. Biocarburanti. Diritto degli investimenti internazionali.

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SUMMARY: 1. Introduction: the transnational dimension of energy governance; 2. Hierarchical and non-hierarchical governance; 3. Transnational regimes and biofuels governance; 4. Foreign energy investments governance; 5. Conclusions: linking transnational governance to the domestic legal context; References.

1 INTRODUCTION: THE TRANSNATIONAL DIMENSION OF ENERGY GOVERNANCE

This article explores the transnational dimension of EU and Brazilian energy policies. In an increasing number of areas, energy policymakers cannot make choices which overlook their external projections. The most obvious reason is that many energy issues have, or obtained in recent years, a cross-border and sometimes global relevance. Another reason is that a growing number of transnational regimes, or regime complexes, is trying to shape national and regional energy policies. In many cases, these regimes do not only involve states, but also international organizations and non-state private actors.¹

The focus of this article is on the way national and regional energy policies manage their external dimension. The EU and Brazil are compared to identify similarities and differences in the strategies they employ. More specifically, the article analyses the role of hierarchical and non-hierarchical governance in two energy areas with a strong transnational dimension: the regulation of biofuels and the regulation of foreign energy investments.

The distinction between hierarchical and non-hierarchical governance is a central theme in European studies. To a large extent, the governance debate reflects the progress of the regional integration process and the search for solutions to the many crises affecting the EU. But the distinction between types of governance can also be used to understand the interplay between the internal (national or regional) and external (transnational) dimensions of energy policies. Both the EU and Brazil face the problem of designing

1 GOLDTHAU, 2013; EKINS et al., 2015; VAN DE GRAAF, COLGAN, 2016.

energy policies which fit their resource endowment and the structure of their industries, while at the same time avoiding clashes with the energy policies of their most relevant commercial partners and of transnational regimes. A large literature explores the many channels that the EU has exploited to export its policies or to shield itself from unwanted external influences.² Recent evidence shows that in some cases the EU is able to export non-hierarchical governance beyond its borders.³ Brazil started later than the EU to negotiate its position in the global economy, but is now able to influence the dynamics of several international regimes.⁴ The question addressed here is whether EU and Brazilian strategies involve a recourse to hierarchical or non-hierarchical governance.

Two methodological issues are worth noting. Firstly, the EU and Brazil represent different versions of the regulatory state. The EU had to devise new and effective regulatory structures to move forward the integration project. It borrowed some ideas from the US (e.g. delegation to independent agencies) but in the end created a very different institutional context, which mixes elements of hierarchical and non-hierarchical governance. Brazil, and developing countries more generally, are building their own version of the regulatory state.⁵ They may borrow from both EU and US experiences, but superficial assonances may hide deeper differences. Thus, the EU and Brazil could diverge on how they define the meanings and roles of the two types of governance. Their reactions to external influences could also differ. These aspects can only be explored if the internal institutional context is considered together with the transnational regime. The two types of governance are the starting point of the comparative analysis and are used to understand the relative weight of the internal institutional context and of the international regime.

Secondly, the EU and Brazil may be difficult to compare because the former is a regional organization and the latter is a

2 LAVENEX 2014; MÜLLER, FALKNER 2014; YOUNG 2015; BRADFORD, 2015.

3 ZEITLIN, 2015a. See the discussion in section two.

4 See e.g. STUENKEL, TAYLOR, 2015.

5 See generally DUBASH, MORGAN, 2013, and specifically on Brazil PRADO, 2013.

federal state. Would it be more appropriate to compare the EU and regional organizations in Latin America? Without denying the interest of such analysis, Latin America projects of regional integration on energy issues are still at an early stage.⁶ Brazil's role as a global player seems to justify the comparison proposed here. Of course, the different EU and Brazilian decision-making processes have to be included in the analysis.

The paper is structured as follows. Section two briefly presents the distinction between hierarchical and non-hierarchical governance, as discussed in legal and political science studies. Section three analyses the policy choices the EU and Brazil made to cope with the transnational dimension of biofuels governance. It shows that the external effects of EU biofuels policy prompted Brazil to adopt non-hierarchical governance schemes ill-suited to its institutional context. This is an example of mismanagement of the transnational dimension of energy governance. Section four analyses the policy choices the EU and Brazil made to balance the protection of foreign investments with other regulatory goals. It shows that the internal institutional context led the EU and Brazil to follow different paths. This example raises questions about the possibility for mutual learning and regulatory coordination in transnational energy governance. Section five summarizes the results of the comparative analysis and lists the topics which need further inquiry.

2 HIERARCHICAL AND NON-HIERARCHICAL GOVERNANCE

The distinction between hierarchical and non-hierarchical governance provides a useful starting point to compare EU and Brazilian externally-oriented strategies in the energy sector. The distinction is widely employed in the different streams of interdisciplinary literature which try to broaden the analysis of regulatory systems beyond traditional state intervention. Governance usually encompasses public measures which differ

6 See e.g. RAINERI et al., 2013.

from command-and-control regulation (e.g. creating networks and discussion arenas, providing information) as well as measures of a regulatory nature adopted by private parties. Thus, the hierarchical aspect can be associated with measures adopted by public authorities or by private parties (e.g. obligations stemming from contractual relationships or compulsory participation to certification systems). The same is true of the non-hierarchical aspect. For the purposes of this article, two issues discussed in the literature deserve attention: firstly, which conditions support the creation and maintenance of non-hierarchical governance; secondly, which role legal rules can play in non-hierarchical governance.

With regard to the first issue, interest in non-hierarchical governance usually springs from the unsatisfactory outcomes of traditional regulatory processes. Over the course of its history, the EU had to face many decisional deadlocks. To overcome them, alternative policy instruments had to be introduced.⁷ Non-hierarchical governance arises under specific conditions. For example, strategic uncertainty, or the impossibility to define the goals and the means to pursue them, is one of the factors prompting a shift to experimentalist governance. The latter grants interested parties the freedom to experiment with policy designs in order to learn how to cope with regulatory problems. Such freedom comes with monitoring of decentralized choices by higher level institutions and by parties located at the same level.⁸

The unsatisfactory performance of traditional state regulation is a strong driver of non-hierarchical innovations. But additional conditions have to be fulfilled. For example, experimentalist governance requires some degree of initial consensus on the need for action, a strong involvement of civil society actors, and the absence of politically salient conflicts.⁹ Reflexive governance, another version of non-hierarchical approaches, underlines the need for collective learning processes and suggests that specific measures have to be

7 TÖMMEL, 2016.

8 SABEL, ZEITLIN, 2010.

9 DE BÚRCA et al., 2013.

adopted to ensure that the interested actors dispose of the needed learning capabilities.¹⁰ Each of these conditions is quite demanding in terms of human and financial resources. Traditional, hierarchical regulation may be no less demanding, but could have the advantage of being already entrenched in policymaking routines. Therefore, when the conditions for non-hierarchical governance cannot be fulfilled, hierarchical governance could still be the dominant approach in many settings. This observation helps explain how the distinction between the two types of governance can be used to compare EU and Brazilian energy policies. Both can be prompted to adopt one type of governance by their internal institutional context or by the pressure of a transnational regime. Their choice should depend on the availability of those resources which enable to successfully deploy each type of governance. However, the transnational dimension of energy policies may have two opposite effects: it can direct internal policies toward the governance type which best fits the available resources or toward the governance type preferred by commercial partners and international organizations, even though the latter is not supported by available resources. Therefore, the comparison can show whether and to what extent success or failure of energy policies depends on the interplay between the internal and external dimensions.

The second issue to be considered in the governance debate is the role of legal rules. Whereas such a role appears straightforward when state regulation commands a specific type of behaviour and sanctions violations, several interpretations are possible for non-hierarchical governance. When the latter is equated with soft law, legal rules seem to play no role at all. A more interesting interpretation suggests to differentiate between two aspects: the possibility that in each case of non-hierarchical governance legal rules could play more than one role and the impact that non-hierarchical governance could have on legal rules. To put it differently, non-hierarchical governance is usually dependent on legal rules, but at the same time it can transform them.

10 LENOBLE, MAESSCHALCK, 2010.

As to the possibility of multiple roles, the governance debate sometimes employs stark dichotomies, for example between the “shadow of the hierarchy” interpretation and the “penalty default” interpretation. According to the former, non-hierarchical governance is only possible if legal interventions can replace it in case of failure.¹¹ Conversely, the penalty default interpretation suggests that legal intervention cannot replace non-hierarchical governance, but should provide a threat of draconian sanctions in order to encourage experimental cooperation.¹² While both interpretations suggest that legal rules do have a role to play in non-hierarchical governance, they assume that in each setting legal rules can only perform one function. However, a larger array of functions can be figured out. For example, legal rules can complement non-hierarchical governance, or set up minimum requirements for its operation, or use it instrumentally to fulfil regulatory goals.¹³ Whether the full spectrum of functions is available depends on national, regional and transnational institutional contexts. Exploring all the options may allow to implement non-hierarchical governance even when some of the required conditions are missing.

A multiplicity of outcomes is also possible when non-hierarchical governance affects legal rules. Depending on the degree of integration, the interaction could lead to co-existence, complementarity or transformation. Both the experimentalist and reflexive strands of the governance literature emphasize the transformative potential of non-hierarchical governance. Its implementation should lead to new, hybrid arrangements in which legal rules are fully coherent with the cooperative solutions designed by the actors. This view has two drawbacks. Firstly, it assumes that the regulatory job in hybrid schemes is almost entirely done by non-hierarchical governance tools. A more interesting possibility is that legal rules, too, contribute to shape non-hierarchical governance.¹⁴

11 See e.g. BÖRZEL, 2012.

12 SABEL, ZEITLIN, 2012.

13 HOLLEY, 2016.

14 ARMSTRONG, 2014.

This approach is in line with the observation made above about the availability of a wide spectrum of legal roles. Secondly, the factors which allow to transform legal rules and move toward hybridity are not specified. Here the literature on institutional change may help identify such factors. Non-hierarchical governance does not seem able to prompt radical change. Therefore, one of the possible variants of gradual institutional change might be observed. For example, existing rules can be displaced by new ones, or new rules can be layered on top of existing ones, or the way to interpret existing rules may change. All these possible outcomes are affected by the characteristics of the political and institutional context.¹⁵ Moreover, each type of gradual change may represent a step in a sequence of changes.¹⁶ Hence, the comparative analysis of the EU and Brazil should shed light on both the role(s) of legal rules and the characteristics of the institutional contexts driving a specific type of gradual institutional change.

The adoption of hierarchical or non-hierarchical governance may be prompted by external pressure. There is evidence that the EU is sometimes successful in exporting experimentalist governance to transnational settings. The most important channels are unilateral, bilateral and multilateral relationships with third countries. EU influence on international organizations and multilateral bodies is more limited. The presence of penalty default mechanisms appears to be one of the most important conditions for successful export.¹⁷ However, this research raises two questions. Firstly, to what extent the governance schemes being exported do reflect a satisfactory solution to the regulatory problems faced by the EU itself? Could they simply reflect the constraints of the EU policymaking process? Secondly, what is the impact of those schemes on importing countries? Do the schemes fit their (real or perceived) needs and institutional contexts?

15 See MAHONEY, THELEN, 2010, p. 1 ff., for a taxonomy of types of gradual change and the conditions required by each of them.

16 VAN DER HEIJDEN, 2014.

17 ZEITLIN, 2015b, p. 324 ff.

Both questions are linked to the debate on the design and structure of regulatory states in developing countries (section 1). As mentioned above, non-hierarchical governance could be perceived differently in Brazil, or the role played by legal rules could differ. This is not to say that the European governance debate is not relevant to Brazil. David Trubek, one of the founders of the new governance approach, has argued that in the early twenty-first century Brazil entered a new era of state activism.¹⁸ The main tenets of industrial policy became public-private partnerships, technological innovation, international competitiveness of the domestic industry, and attention to redistributive effects. The transition to the new developmental model did not rely on a big strategic plan, but on the search for new solutions which could overcome internal and external constraints. This experimentalist approach required to assign new roles to legal rules. The legal architecture of the industrial policy had to safeguard flexibility in order to ensure experimentation, to facilitate coordination both vertically and horizontally, to encourage collaboration and risk sharing in public-private partnerships, and to ensure accountability, transparency and participation in development policies.

Non-hierarchical governance also plays a role in the literature which explores the development strategies of middle-income countries.¹⁹ This category includes widely different states, but they all share the problem of changing the policies that allowed them to move away from the low-income status and of shifting to policies allowing them to enter the group of high-income countries. This problem has political, economic and legal dimensions. Their interconnectedness discourages the search for solutions which do not start from a deep knowledge of local contexts. Moreover, regional effects on available policy options have to be taken into account. At the same time, strategies grounded on non-hierarchical governance are proposed for middle-income countries in Europe, Latin America and Asia. Even though they do not lead to the implementation of

18 TRUBEK et al., 2013.

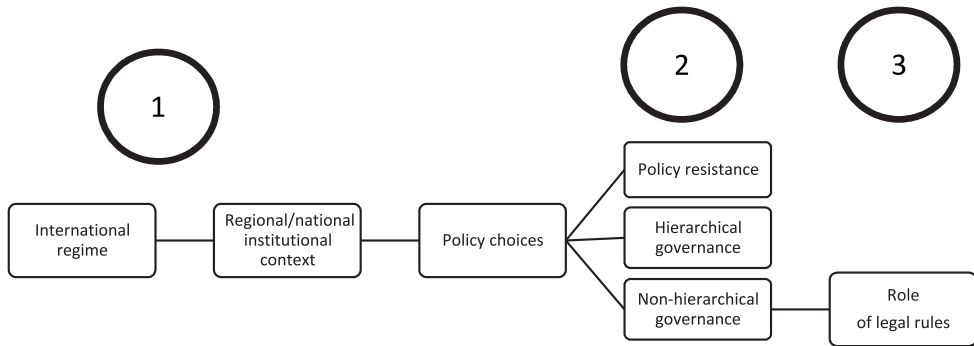
19 PEERENBOOM, GINSBURG, 2014; DONER, SCHEIDER, 2016.

the same kind of reforms, they all share the same approach to the design of governance mechanisms aimed at overcoming internal constraints.

The most difficult issue is to identify the links between the choice of a specific governance scheme and the legal changes it prompts. In this article, the transnational dimension of national/regional policies is exploited to shed light on those links. Even though internal institutional contexts do play a role, the constraints and opportunities stemming from transnational regimes could make it easier to explain the choices made and the direction of change. Of course, resistance to change is one possible outcome. But the other two options are the adoption of hierarchical or non-hierarchical governance schemes under the influence of transnational regimes. The issues to be explored are under which conditions each option becomes more likely and when transnational regimes prompt legal changes that fit the internal institutional context.

Figure 1 identifies the links to be explored. The first step of the analysis requires to understand whether the transnational regime is able to influence the internal decision-making process. The second step requires to identify the direction of policy change. The third step requires to assess the role of legal rules. The next two sections apply this framework to biofuels governance and foreign energy investments governance.

FIGURE 1 THE INTERPLAY BETWEEN REGIONAL, NATIONAL AND TRANSNATIONAL REGIMES.²⁰



3 TRANSNATIONAL REGIMES AND BIOFUELS GOVERNANCE

Two reasons explain why biofuels governance provides a good test bed for the interplay between internal and external energy governance. Firstly, biofuels are located at the crossroads of several transnational regimes. WTO law is the main reference point for the global biofuels market, as well as for international trade of agricultural commodities used to produce biofuels. Decarbonization policies for the transport sector imply that biofuels governance can also be affected by the international climate change regime. More generally, biofuels governance is linked to strategies aimed at promoting the bioeconomy²¹ and to energy policies on renewable sources. Secondly, certification schemes for biofuels are the tool of non-hierarchical governance with the deepest impact on this sector. Those schemes added a layer of transnational private governance to the above mentioned international regimes. Hence,

²⁰ Author's elaboration.

²¹ According to EUROPEAN COMMISSION, 2012, p. 8, "The Bioeconomy Strategy and its Action Plan aim to pave the way to a more innovative, resource efficient and competitive society that reconciles food security with the sustainable use of renewable resources for industrial purposes, while ensuring environmental protection."

biofuels governance allows to discuss the two aspects explored in this article, namely the possible influence of transnational regimes and the implementation of non-hierarchical schemes.

An additional aspect worth mentioning is the controversy on the environmental and social sustainability of biofuels. First generation or conventional biofuels, mainly produced from agricultural commodities like sugarcane, corn and palm oil, were challenged in many national and international fora because they may produce more greenhouse gas emissions than fossil fuels, increase food prices and lead to the exploitation of workers in developing countries. Each of these environmental and social challenges has to be empirically assessed for each type of biofuel, production process and local regulatory framework.²² But they signal that biofuels governance has to take into account several competing goals. Their achievement calls for transnational regimes coordinating hierarchical and non-hierarchical governance systems. The issue to be explored is under which conditions such coordination becomes.

Let us begin with the first step of the analysis, that is the influence of transnational regimes on internal decision-making processes. EU and Brazilian biofuels policies started at different times, were affected by different structural factors and pursued several, partly overlapping goals. However, for both the EU and Brazil the external dimension of biofuels policies seems to have played an important role.

Brazil's early attempts to develop a national ethanol industry date back to the first half of the twentieth century.²³ But the most sustained investments started in the 1970s. In the wake of two energy crises, biofuel policies focused on the goals of energy security and independence. Both goals could be easily integrated with another one, that is technological innovation in the agricultural

22 Recent reviews of scientific evidence conclude that the balance between negative and positive aspects of biofuels production depends on local economic, institutional and technological conditions, but there is still much uncertainty about the impact of each condition: see CREUTZIG et al., 2015; ROBLEDO-ABAD et al., 2016.

23 In what follows I rely on the detailed descriptions of Brazilian biofuels policy in CASSUTO, GUEIROS, 2013; WALTER, DOLZAN, 2014; DIAS DE MORAES et al., 2014; PEREIRA DE ANDRADE, 2016.

and transport sectors. Supply-side support measures included blending mandates, specifying the percentages of ethanol to be blended with gasoline, price controls on fossil fuels, ensuring the competitiveness of biofuels, favourable loan conditions for biofuels producers and the mandatory installation of ethanol pumps at gas stations. Demand-side measures included tax incentives and the availability of vehicles which could be fueled first with ethanol only and then with any blend of ethanol and gasoline. Over the years, other policy goals contributed to shape biofuels governance. The international competitiveness of the biofuel industry became one important aspect of the export-oriented industrial policies which Brazil pursued since the 2000s.²⁴ In the same years, and following international commitments, climate change objectives became an additional policy goal. Social goals like the inclusion of small farmers and the protection of workers were not explicitly included in the governance framework for ethanol, but were addressed later through the certification schemes. The new regulatory framework for biodiesel, which started in the 2000s, addressed social concerns (inclusion of small farmers) from the outset.

Brazilian biofuels policies were able to improve the productivity of the sugar industry, to foster technological innovation, and to create the infrastructures for the internal market. Periods of crisis were overcome both with additional public investments and with revisions of existing policies. These positive outcomes did not follow from initial conditions that opened the way to innovative policies. They seem to reflect a process of experimentation that was driven by contingent situations and progressively adapted to ensure the profitability of the biofuels industry.²⁵ However, Brazilian biofuels policies were not successful on all counts. Their benefits

24 HOPEWELL, 2014.

25 See SABEL, 2012, p. 1 ff., on the process of self-discovery which allows to solve the coordination problems facing export industries in developing countries. SCHNEIDER, 2015, p. 122 ff., observes that the conditions ensuring the effectiveness of developmental states (efficient bureaucracies, political support, monitoring of economic performance and close relations with private business) were lacking or weak in the Brazilian ethanol industry, but a learning process made it possible to overturn the failures of the 1980s and achieve leadership in the 2000s.

accrued more to the sugar industry than to consumers of ethanol and sugar.²⁶ Moreover, the social and environmental sustainability of biofuels were heavily debated. On the latter aspect, the influence of transnational regimes is most visible.

The climate change regime seems to have played a secondary role, and only in the later stages of biofuels policies. It was used to justify large public investments in the sector and to shield it from international criticisms. When stricter controls on deforestation were proposed in United Nations negotiations on climate change, Brazil was able to avoid them by committing to contain any negative impacts of increased biofuels production.²⁷ In the Brazilian intended nationally determined contribution to mitigation of and adaptation to climate change, submitted in 2015, an increase of biofuels production represented a central aspect of the measures to be adopted by 2025.²⁸ However, the climate change regime did not directly affect the biofuels governance system.

The most important external influence came from the interaction with the EU biofuels legislation. Efforts at increasing the share of biofuels in the EU relied first on an indicative target of 5.75% renewable fuels, to be achieved by 2010. The target was missed and replaced in 2009 by a binding target of 10% renewable energy in transport by 2020. This new obligation led Member States to adopt or expand national support schemes for biofuels. While they were left free to choose the kind of support to be granted, the Renewable Energy (RES) Directive 2009/28/EC bound them to fulfil some sustainability criteria for biofuels. Only those biofuels meeting the criteria could be counted towards the 10% target and be eligible for support.²⁹

From a governance perspective, the EU could adopt a hierarchical approach and use its traditional enforcement tools

26 KHANNA et al., 2015.

27 LORENZO, VAZQUEZ, 2016.

28 Brazil's and other countries' intended nationally determined contributions are available at http://unfccc.int/focus/indc_portal/items/8766.php

29 SCARLAT et al., 2015.

to ensure compliance with the sustainability criteria. It chose instead to adopt a non-hierarchical approach and introduce a certification scheme. The European Commission would give an official recognition to certification schemes which complied with the sustainability criteria. Those schemes would then monitor compliance with the criteria on the ground. As of early 2017, 19 certification schemes have been recognized.³⁰

Several competing explanations have been advanced on why non-hierarchical governance was chosen. Perhaps the most widespread is that it made compliance with WTO law easier. Mandatory sustainability criteria laid down in EU legislation could fall foul of anti-discrimination provisions in international trade agreements. Conversely, voluntary certification could not be deemed to discriminate because it did not prevent export of biofuels not complying with sustainability criteria to EU markets. An alternative explanation is that, faced with criticisms from environmental organizations, the EU had to introduce sustainability criteria to avoid a loss of legitimacy for its renewable energy policy. It then chose to follow the UK model of biofuels certification, as well as the model of the already successful global certification system in the forest sector, to reach a political compromise and move forward with the 2020 targets.³¹

Whether the EU sustainability criteria are compatible with WTO rules is highly uncertain. However, the same is true for most biofuels support schemes adopted around the world.³² Therefore, WTO law cannot be considered the main factor driving the adoption of non-hierarchical governance. This is not to say that it did not have any influence. Arguments about the compatibility with WTO law were successfully used to keep social sustainability criteria, related to human rights and labor rights, out of the 2009 RES

30 The list is available at <https://ec.europa.eu/energy/en/topics/renewable-energy/biofuels/voluntary-schemes>.

31 RICHARDSON, 2014; PONTE, DAUGBJERG, 2015.

32 See generally LEAL-ARCAS, FILIS, 2014; GRIGOROVA, 2015; OLSEN, RØNNE, 2016. Doubts on the compatibility of the Brazilian legal framework for biofuels with WTO law are expressed by RUTHERFORD, 2016.

Directive.³³ However, a few years later Directive 2015/1513/EU introduced additional requirements to reduce the risk of displacing agricultural production to previously non-cropland like grasslands and forests (indirect land use change or ILUC).³⁴ These compatibility of these requirements with WTO rules is also doubtful, but they were adopted nonetheless to increase political support for biofuels policies. Finally, the EU choice to adopt non-hierarchical governance for biofuels did not avoid WTO disputes. Argentina requested consultations in 2012 and 2013, claiming that EU sustainability criteria and the Member States' implementing measures accorded more favourable treatment to biofuels of EU origin.³⁵

From the point of view of the first step of the analysis, these developments suggest that the EU's choice of non-hierarchical governance was mainly driven by the internal policymaking process. The sustainability criteria adopted through the certification system helped to increase the legitimacy of biofuels policies, but above all created a global standard that countries interested to the EU market have to meet. This extra-territorial effect is the outcome of a unilateral initiative and does not easily match with the basic principles of a multilateral trade regime. But the EU seems determined to adopt all the tools at its disposal to pursue this extra-territorial strategy. To avoid WTO disputes, negotiation of

33 DAUGBJERG, SWINBANK, 2015.

34 In July 2016 the European Commission proposed a Regulation on land use change (COM(2016)479) which requires each Member State to ensure that emissions from land use are entirely compensated by an equivalent removal of greenhouse gases from the atmosphere through action in the same sector. For example, if a Member State cuts down its forests, it must compensate the resulting emissions by planting new forest or by improving the sustainable management of existing forest, croplands and grasslands.

35 See cases DS459/1 (challenging the EU methodology to assess savings of greenhouse gas emissions with respect to fossil fuels and the support measures of 4 Member States) and DS443 (Spain amended the challenged measures on biofuel imports, so termination of the dispute is likely). Dispute settlement proceedings were also started on antidumping measures adopted by the EU against biofuels from Argentina (DS473/10) and Indonesia (DS480). In 2016 both the Panel Report and the Appellate Body Report partially upheld the claims about the mistaken calculation of the countervailing duties imposed on Argentinian biofuels. However, the claim that the EU antidumping measures were inconsistent with WTO law was rejected. On the possibility that these disputes open the way to an enlarged role of the WTO in energy matters see MEYER, 2016.

trade agreements with major exporters of biofuels like Malaysia were started.³⁶ Moreover, antidumping and anti-subsidy measures on biofuels from important commercial partners like the US were adopted.³⁷ The main consequence of such measures has been to insulate the EU biofuels market from global trade. This gave the EU biofuels industry the possibility to increase domestic production and to achieve almost complete independence from biofuels imports.³⁸ But protectionist measures do not allow to exploit comparative advantages.³⁹ Moreover, there is evidence that EU consumption of biofuels could have a strong negative impact on land use in other countries.⁴⁰

To what extent was Brazil affected by the EU's non-hierarchical approach? Instead of using the WTO dispute settlement system to challenge the sustainability requirements, Brazil chose to adapt to the new EU legal framework. The most important Brazilian industry association in the sugar and ethanol sector, UNICA, first opposed and then joined the Bonsucro roundtable, steered by WWF UK. This change of strategy was mainly due to the new regulatory framework introduced by the RES Directive and the need to access the EU biofuel market.⁴¹ The Commission recognized Bonsucro certification scheme, but Brazilian companies also joined other recognized schemes like the Roundtable on Responsible Soy, 2BSvs, Greenenergy and the Roundtable on Sustainable Palm Oil. UNICA, Petrobras and some Brazilian producers are also members of the

36 POLETTI, SICURELLI, 2016.

37 See the list of adopted measures at <http://ec.europa.eu/trade/policy/accessing-markets/trade-defence/>. In June 2016 the EU's General Court (Case T-276/13, *Growth Energy and Renewable Fuels Association v Council of the European Union*) declared the antidumping measures invalid because they could only be imposed on specific producers and not on all US bioethanol exports. Appeal is pending before the Court of Justice of the EU (Case C-465/16 P).

38 USDA, 2015; BECKMAN, 2015.

39 Indeed, the "soft imperialism" approach adopted by the EU in the biofuels sector is at odds with its sustainability goals: see AFIONIS, STRINGER, 2014.

40 ECOFYS et al., 2015.

41 SCHLEIFER, 2015.

Roundtable on Sustainable Biofuels. Thus, as far as the second step of the analysis is concerned, the broad participation to certification schemes seems to suggest that EU influence prompted the Brazilian industry to fully embrace non-hierarchical governance. Using the language of experimentalist governance, one could argue that the EU sustainability criteria played the role of a penalty default, excluding from the EU market Brazilian companies not adhering to certification schemes. However, when the Brazilian institutional context is considered, this governance choice takes on a different meaning.

The biofuels certification schemes were not the only private governance experiences in Brazil. Other initiatives had already been promoted in the fields of labor and environmental protection. Their success has mainly been due to the close relationship between the business sector and the Brazilian government's priorities.⁴² Industry self-regulation has also been successfully deployed in the Brazilian ethanol sector.⁴³ In contrast, the biofuels certification schemes were mainly driven by external factors, that is access to the EU market. Therefore, the link between state priorities, business sector interests and social demands was much weaker. It could be expected that the externally-driven certification schemes would face more problems in promoting compliance with the sustainability criteria. Indeed, several studies found that:

- a) The most stringent standards registered low rates of adhesion, showing that the EU's choice of recognizing different certification schemes did not allow convergence toward those with a broader scope.⁴⁴

42 PEÑA, 2014 (discussing the complementarity between international initiatives on private governance and local political institutions); ANDONOVA, 2014 (analysing Brazil's path toward collaborative governance with hundreds of environmental partnership initiatives).

43 In the state of São Paulo Consecana, an industry association representing both processors of sugar and ethanol and growers of sugar, managed to reduce conflicts and uncertainty along the ethanol supply chain by establishing common rules for product quality, a pricing methodology and mandatory contract terms: see PERES, KESAN, 2016.

44 SCHLEIFER, 2013; PONTE, 2014; HAUGEN, 2015; NAIKI, 2016. It has been

- b) In those sectors less dependent on export, like biodiesel production, interest in joining transnational certification schemes was lacking and the national schemes aimed at promoting social goals (e.g. the Social Fuel Seal) did not protect local communities from food insecurity, reduced access to land and poor working conditions.⁴⁵
- c) Brazil implemented command-and-control measures to reduce deforestation and sanction illegal labor practices.⁴⁶ Therefore, hierarchical governance might have contributed more than non-hierarchical governance to improved sustainability of biofuels production.

These studies do not show that certification systems have been ineffective in the Brazilian biofuels sector. Ensuring compliance with non-hierarchical governance is difficult in both developed and developing countries. What these studies suggest is that the effectiveness of non-hierarchical governance is much more dependent on the local interaction among public and private stakeholders than on the design features of transnational certification schemes. Brazilian biofuel governance was shaped by the preferences of the key actors and institutions in the agricultural

observed that the lack of coordination among certification schemes may lead to double-counting of biofuels, with distortionary effects on EU renewable energy targets: see LAURENT, 2015, p. 151.

45 LABRUTO, 2014 (discussing the reasons for the failure of the National Commitment to Labor Conditions in Sugarcane Activity to protect workers in Brazilian plantations); STATTMAN, MOL, 2014 (showing that family farmers organized in cooperatives benefitted from public support for biodiesel production, but were not integrated into biodiesel value chains); BAILIS et al., 2014 (documenting persistent concerns about biofuels sustainability in the Latin American and Caribbean region); SELFA et al., 2015 (discussing the challenges of social inclusion in biodiesel production).

46 COSLOVSKY, 2014 (crucial role of labour inspectors and prosecutors in limiting illegal labor practices in the sugarcane industry); SOLOMON et al., 2015, p. 1283 (agro-ecological zoning to protect forests, gradual phase-out of sugarcane burning, and promotion of small landholders cooperatives); SPAROVEK et al., 2016, p. 211 (rural credit restrictions, networking of civil society and governmental agencies, and voluntary initiatives by important stakeholders in the agricultural sector); GARRETT, RAUSCH, 2016, p. 480-482 (measures which improved the enforcement of the Brazilian Forest Code).

and energy sectors. Sustainability criteria were integrated at a later stage, but their meaning and implementation had to be adapted to the already existing equilibria.⁴⁷

The local dimension of transnational governance schemes helps shed light on the third step of the analysis, namely the role of legal rules in non-hierarchical governance. As far as the EU is concerned, reliance on voluntary certification schemes in the RES Directive signals that non-hierarchical governance is fully integrated into the legal framework. Legally binding rules enable the non-hierarchical system to perform its intended functions. A different situation can be identified in Brazil. Legal rules seem to provide an alternative to certification systems. While not directly interfering with those systems, legal rules do not display any integrative or complementary relationship.⁴⁸ The institutional change produced by non-hierarchical governance in the Brazilian legal system is a version of layering: more traditional hierarchical governance continues to apply alongside the new non-hierarchical approach to sustainability. Usually, layering is the type of change that becomes possible in institutional contexts which do not offer much room for radical revisions of existing rules. As mentioned above, Brazilian biofuels governance had to coordinate the interests of a large number of stakeholders in the agriculture and energy sectors. Therefore, radical change may be blocked by the existence of many veto points. Layering allows to move forward with gradual change, but falls short of the kind of full integration which maximizes the benefits of non-hierarchical governance. An interesting question is whether layering is just the first step of gradual change, which could lead over time to a closer integration between non-hierarchical

47 See STATTMAN et al., 2013, on the process which led to the emergence of an autonomous sub-field of biofuels governance in Brazil. On a broader level, the way non-hierarchical governance is absorbed into the Brazilian institutional framework could reflect the institutional complementarities across the corporate governance and labor markets which characterize the Latin American variety of capitalism: see SCHNEIDER, 2013.

48 But see COSLOVSKY, LOCKE, 2013, for the observation that the independent strategies of private auditors and public enforcers tacitly complemented each other in improving labor practices in the Brazilian sugar industry.

governance and legal rules. Such an outcome seems to depend on the effectiveness and legitimacy that certification systems will be able to muster.

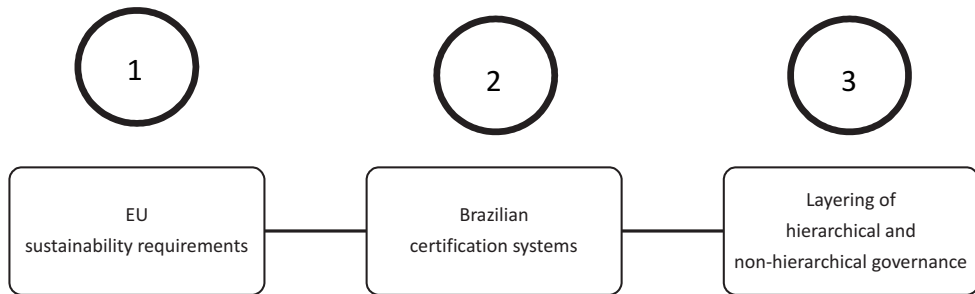
Figure 2 summarizes the analysis. It shows that both Brazil and the EU have to take into account external influences, but enjoy a large degree of flexibility on how to manage them. The WTO regime is powerful enough to discourage the most blatant versions of discrimination, but not detailed enough to shape governance choices.⁴⁹ The climate change regime provides a background justification for biofuels policies, but its influence on governance choices is even more indirect than is the case for WTO law.⁵⁰ Transnational private governance is the most important external influence, but its meaning and implementation is heavily dependent on local contexts. The EU sustainability criteria did set up a global standard which Brazil had to take into account, but their impact on deforestation concerns and illegal labor practices is difficult to identify.⁵¹ Therefore, previous assessments of successful transfers of non-hierarchical governance to transnational settings, referred to in section 2, only tell half of the story. The other half is represented by the implementation problems of non-hierarchical governance in different institutional contexts.

49 Other authors showed that WTO law can sometimes encourage non-hierarchical governance (e.g. COTTRELL, TRUBEK, 2012) or influence different aspects of national legal orders (e.g. SHAFFER, 2015). The analysis proposed in the text suggests that in some cases WTO influence can be displaced, or at least limited, by other competing transnational regimes.

50 It remains to be seen whether the 2015 Paris Agreement will lead to an expanded role for private governance in the international climate change regime: see e.g. CHAN et al., 2015.

51 A similar observation was made for Indonesia, where the adoption of certification schemes did not improve the sustainability of water management: see LARSEN et al., 2014.

FIGURE 2 THE INTERPLAY OF NATIONAL, REGIONAL AND TRANSNATIONAL REGIMES IN THE BIOFUELS SECTOR.⁵²



The shortcomings of externally-driven non-hierarchical governance will have to be fixed to address the new challenges arising from the estimated growth of the global biofuels market in the coming decades. A preliminary issue is the role that certification schemes are going to play in transnational governance. They contributed to build a “market for sustainability” which increased their attractiveness to the agribusiness sector. But the risk is that they fall prey to a commodification process which prevents any assessment of the links between certification and social and environmental impacts.⁵³ A related challenge is to evaluate the viability of voluntary certification outside the traditional North-South trade relationships. With the rise of China and India as major importing countries of biofuels and related agricultural commodities from Indonesia and Malaysia, in South-South trade relationships voluntary certification will not be supported by the same institutional pressure which prompted its adoption in Western markets.⁵⁴ Thus, commodification risks and shifting trade patterns

⁵² Author’s elaboration.

⁵³ RICHARDSON, 2015.

⁵⁴ SCHLEIFER, 2016. Another effect of the changing landscape of international biofuels trade could be that the EU will be able to unilaterally impose its sustainability criteria on poorer countries, thus further fragmenting the transnational biofuels regime: see BASTOS LIMA, GUPTA, 2014.

suggest that non-hierarchical governance will need to go beyond the EU model to preserve its effectiveness in the global biofuels market. Moreover, non-hierarchical governance will have to deal with, and to some extent drive, the ongoing transformations of this market. To the extent conventional biofuels will still represent the biggest share of global markets for some time, the multiple and flexible uses of food crops will require to address sustainability concerns across different sectors and supply chains.⁵⁵ An even more pressing challenge is to mobilize non-hierarchical governance toward the goal of accelerating the transition to second and third generation biofuels, as well to new and more sustainable global supply chains.⁵⁶

Legislative proposals submitted by the Commission in 2016 send ambiguous signals on the possibility to shift from unilateral initiatives to international agreements on sustainability criteria. On one hand, the proposal for a recast RES Directive limits the contribution to the 2030 RES target (27% of EU's gross final consumption of energy) of biofuels, bioliquids and biomass fuels consumed in transport, if produced from food or feed crops. Each Member State cannot count those fuels for more than 7% of its final consumption of energy for road and rail transport. That percentage shall be progressively reduced to no more than 3.8% by 2030. Lower limits, as well as distinctions among biofuels depending on their indirect impact on land use change, may be set up by Member States. At the same time, the proposal added a blending mandate for second generation biofuels of up to 6.8% by 2030. The effect of the two provisions is to discourage domestic production or import of first generation biofuels in the next decade. On the other hand, the proposal strengthened the environmental sustainability criteria for biofuels.⁵⁷ While the new criteria should ensure that biofuels effectively contribute to mitigation of GHG emissions, they are

55 BORRAS et al., 2016

56 IEA BIOENERGY, 2015; UNCTAD, 2016; IRENA, 2016.

57 See Articles 7(1), 25 and 26 of the proposed recast Directive on the promotion of the use of energy from renewable sources, COM(2016)767. Also see the European Strategy for Low-Emission Mobility (COM(2016)501), announcing the phase out of subsidies to food-based biofuels after 2020 and support to advanced biofuels.

nonetheless unilaterally imposed on third countries. Article 18(4) of the current RES Directive envisaged agreements with third countries on sustainability criteria for biofuels, but none was concluded. The proposal for a recast RES Directive strikes it down without much explanation. International agreements on energy matters could be the most effective way to foster the experimental approaches, decentralized learning and feedback systems of non-hierarchical governance. They would be coherent with the initiatives planned within the EU Energy Diplomacy Action Plan and the new European Consensus on Development.⁵⁸ Reasons internal to the EU explain why concluding such agreements could be difficult.⁵⁹ At the same time, without such agreements the EU could lose its technological leadership on second generation biofuels.⁶⁰

Should international agreements on biofuels fail, are the EU's unilateral sustainability criteria legitimate and justified? It has been argued that unilateral measures leading to higher environmental protection are better than a complete lack of action, provided that they are non-discriminatory and take into account due process constraints.⁶¹ But in the case of biofuels the possibility to achieve a higher environmental protection through EU's criteria cannot be proved. Moreover, those criteria could become discriminatory when used together with trade defenses.

An alternative strategy would be the inclusion in the recast RES Directive and its implementing measures of specific provisions allowing to take into account the equivalence of third countries' regulation on the sustainability of biofuels, or to make a case-by-case assessment of compliance with EU criteria. For example,

58 See Council Conclusions on Energy Diplomacy of 20 July 2015, Council Conclusions on Energy and Development of 28 November 2016, as well as the Commission's proposal for a new European Consensus on Development, COM(2016)740.

59 See WESTBERG and JOHNSON, 2014, on resistance to international agreements in the EU agricultural policy and their potential benefits in terms of more effective involvement of third countries.

60 On the collaboration between Brazil and the US in the fields of second generation biofuels and aviation biofuels see AFIONIS and STRINGER, 2016.

61 LIN, 2017, p. 17-21.

Article 27(5) of the recast RES Directive empowers the Commission to specify detailed implementing rules for certification schemes, including adequate standards of reliability, transparency and independent auditing. Such powers should not be used to prevent the adoption of sustainability criteria tailored to local needs, but to make it possible an assessment of equivalence. This approach could foster dialogue and cooperation with third countries, thus avoiding the kind of disconnected layering between hierarchical and non-hierarchical governance we have observed in Brazil.⁶² It could also help overcome the deadlock on environmental and energy cooperation in the framework of the EU-Brazil strategic partnership launched in 2007.⁶³

4 FOREIGN ENERGY INVESTMENTS GOVERNANCE

Both the EU and Brazil have had an uneasy relationship with international investment law. Therefore, both have tried to devise alternative regimes. The current regime for international investments relies mostly on two legal tools: several thousands of bilateral investment treaties (BITs), since the 1950s concluded at an increasing pace between two countries or regional blocks, and international investment arbitration, before the World Bank's International Centre for Settlement of Investment Disputes (ICSID) or before other international arbitral institutions and ad hoc arbitral tribunals. Only a few multilateral investment treaties are in force, the most important example in the energy sector being the 1994 Energy Charter Treaty (ECT). The hallmark of the current regime is its decentralized nature. The substantive rules on the protection of foreign investments are negotiated between countries, and their enforcement depends on the decisions of arbitral tribunals. The

62 See SCOTT, 2014, for the argument that equivalence and contextuality should be included in the proportionality assessment of EU legislation with extra-territorial effects. Assessing regulatory equivalence raises a host of comparative methodological issues. Their analysis has just begun: with regard to regulatory cooperation in regional trade agreements see, e.g., CHASE, PELKMANS, 2015; HOEKMAN, 2016.

63 On the Strategic Partnership see EUROPEAN COMMISSION, 2007, as well as updates on ongoing activities at http://eeas.europa.eu/brazil/index_en.htm.

fragmentation and unpredictability produced by this decentralized regime should not be exaggerated. Similar rules are included in the BITs concluded by different countries, while common trends can be identified in the arbitral case law.⁶⁴

Still, the current regime has been criticized on many grounds. Claims that BITs and arbitral tribunals mainly protect developed countries' companies have been advanced.⁶⁵ The UNCTAD has argued that the changing landscape of investment calls for the adoption of a new framework, whose guiding principles should be inclusive growth, sustainable development and responsible investment.⁶⁶ The debate on alternative paradigms for the protection and promotion of foreign investments has already led several countries and regional organizations to experiment national measures and models of investment agreements that move away from the current regime. Two aspects of these developments are of direct relevance to the analysis in this article.

Firstly, the transition to the low-carbon economy will force both developed and developing countries to compete for investments related to energy and climate goals. According to the International Energy Agency (IEA), investments amounting to \$9 trillion are needed in the power sector until 2050 to keep global warming below 2°C. Additional investments of \$6.4 trillion are required to achieve potential energy savings in the buildings, industry and transport sectors.⁶⁷ The largest share of such investments will come from the private sector. This means that attracting foreign investors will be one of the most critical factor to achieve the goals of the climate change agenda. Therefore, states and regional organizations will need to manage the interplay between their own investment regimes

64 See e.g. BUNGENBERG, TITI, 2015.

65 On the legitimacy crisis of the current investment regime see the contributions collected in HINDELANG, KRAJEWSKI, 2016.

66 See UNCTAD's Investment Policy Framework, first proposed in 2012 and updated in 2015 (UNCTAD, 2015a) and the related Action Menu for the reform of international investments agreements (UNCTAD, 2015b, p. 119 ff.).

67 IEA, 2016.

and international investment law. It can be assumed that the higher the degree of coordination between the two levels, the higher the chances that states and regional organizations will be able to attract the needed amount of investments. Thus, what this example has in common with biofuels governance is the tight link between the transnational regime and the domestic institutional context.

Secondly, non-hierarchical governance could play a crucial role in the search for alternative paradigms of investment protection. One of the clearest limits of the current regime is the lack of adaptability to different institutional contexts. Standard clauses on fair and equitable treatment, direct and indirect expropriation and dispute resolution are assumed to prevent regulatory changes which could negatively affect foreign investments. However, these clauses are not able to improve governance mechanisms in all countries. They could be analogized to a hierarchical type of intervention which risks being ineffective because it does not take into account the institutional resources available at country level. Introducing non-hierarchical governance in investment protection and promotion would mean to embed in international agreements a learning process which helps identify the measures capable of improving regulatory processes and reducing investors' risks.

Let us consider the first step of the analysis, that is the influence of transnational regimes on national and regional policies. Brazil started to use BITs in the 1990s, but they were never ratified. The official explanation was that BITs clashed with the constitutional principle of equal treatment of citizens and foreigners and could hamper the national development policies. Another reason was that Brazil's sustained growth rate attracted foreign investments even without the additional incentives provided by international investment agreements.⁶⁸ However, two factors required a new investment strategy. Firstly, in the 2000s Brazil started to become a capital exporter. Hence, Brazilian companies needed protection abroad. Secondly, inward investment flows were mainly market-

68 TITI, 2016; MONEBHURRUN, 2016; HASTREITER, 2015; MOROSINI, XAVIER, 2015.

driven, but contributed little to domestic technological innovation.⁶⁹ Hence, new measures were needed to foster the right type of investments. After extensive consultations, a new investment strategy materialized in 2015 with the adoption of a model Cooperation and Facilitation Investment Agreement (CFIA) in the negotiations with a group of African, Central and Latin American countries. This choice signaled that Brazil was trying to free itself of the constraints of the current investment regime and replace it with a new approach. Brazil is not alone in experimenting with new models.⁷⁰ This means that those constraints are weak enough and do not hinder the search for alternative paradigms. At the same time, the problems stemming from the lack of a coordinated approach at international level remain to be addressed. We will come back to this issue when discussing the second and third step of the analysis.

As far as the EU investment policy is concerned, the Lisbon Treaty represented a turning point. It extended to foreign direct investments EU exclusive competence on commercial policy (Article 207(1) TFEU). After the failure of the Doha Round negotiations made it clear that multilateral agreements in the WTO framework could not be signed in the foreseeable future, the Commission's investment strategy turned to regional and bilateral agreements. One of the most prominent examples of the new strategy is the EU-Canada Comprehensive Economic and Trade Agreement (CETA), signed in 2014 but awaiting ratification.⁷¹ Both the CETA and the ongoing negotiation on the EU-US Transatlantic Trade and Investment Partnership (TTIP) include investment chapters, but they are among the most controversial aspects. They introduce new investment protection standards and a new Investment Court System. The latter should replace the traditional decentralized investment

69 EGAN, 2015.

70 See UNCTAD, 2016, pp. 108 ff., for a survey of proposed reforms.

71 CETA's ratification became more uncertain after the European Commission proposed that the Agreement be ratified by the parliaments of all Member States (COM(2016)444/F1 of 5 July 2016). A single negative vote by one parliament could block the ratification process.

arbitration system.⁷² Thus, the EU and Brazilian investment policy share the goal of displacing the current regime. Moreover, in the EU the search for an alternative approach to investment protection and promotion was driven by the need to coordinate the competences of the EU and the Member States.

The long-standing position of the Commission is that all BITs agreed between Member States (intra-EU BITs) should be terminated because only EU law should apply and the EU courts should have exclusive competence on intra-EU investment disputes. Extra-EU BITs, concluded between Member States and third countries, should be terminated when new EU-wide agreements are concluded.⁷³ Arbitral tribunals have constantly rejected this position, arguing instead for the complementarity between EU law and international investment law. In 2013, the *Micula* case showed that no compromise was possible between these two positions. After an arbitral tribunal found that the defendant Member State was in breach of its BIT obligations toward a European investor, the Commission stated in 2015 that the damage award could not be paid because it amounted to illegal State aid.⁷⁴ But in early 2016 an ICSID ad hoc Committee confirmed the 2013 arbitral award.⁷⁵ Hence, compliance of the Member State with international obligations could amount to infringement of EU law and viceversa.

The conflict between EU law and international investment law reached its apex between 2015 and 2016. In June 2015 the Commission started infringement proceedings against five Member States that did not terminate their intra-EU BITs, as well as EU Pilots against other twenty-one Member States. In March 2016 the

72 See EUROPEAN COMMISSION, 2015.

73 According to Regulation (EU) No. 1219/2012.

74 CHEVRY, 2015.

75 The materials related to the *Micula* case are available at <http://www.italaw.com/cases/697>. See also Commission Decision (EU) 2015/1470 of 30 March 2015, OJ L232/43 of 4 April 2015, declaring the damage award incompatible with the internal market and ordering recovery of compensation already paid. Appeals against this decision are pending before the EU General Court (Cases T-624/15, T-694/15 and T-704/15).

German Federal Supreme Court (BGH) referred three questions for a preliminary ruling to the EU Court of Justice, asking whether intra-EU BITs are compatible with EU Treaties.⁷⁶ In April 2016, five Member States (Austria, France, Finland, Germany and the Netherlands) reacted to the Commission's enforcement initiatives with a proposal aimed at simultaneously terminating all intra-EU BITs, while at the same time introducing a transitory regime for the protection of investors. The proposal also included a new investor-state dispute resolution procedure, to be administered by the Permanent Court of Arbitration.⁷⁷ The proposal runs counter the Commission's policy of eliminating any parallel system of investment protection in the EU, but it cannot be excluded that a compromise will be sought for.

What conclusions can be drawn from step one of the analysis? Even though neither Brazil nor the EU were prevented from proposing new approaches to investment protection and promotion, both had to take into account the constraints of the current regime. Thanks to the fact that it did not join such regime in the past, Brazil could adopt the more innovative CFIA model with countries of the Global South. But it is unclear whether the same model could work in the investment agreements with developed countries. The EU faced a higher hurdle because of the existence of several intra-EU and extra-EU BITs. Therefore, it could only propose a gradual shift to a different approach. The next step of the analysis is to verify whether the attempted reforms include elements of non-hierarchical governance.

For Brazil's CFIA model, the answer seems to be in the affirmative. It shifts the focus from protection to promotion of investments, sets up a governance structure (a Joint Committee and a Focal Point Ombudsman) which should monitor the implementation of the agreement and identify available opportunities, encourages continuous negotiations on thematic agendas, favours dispute

76 See the questions referred by the BGH at <http://www.globalinvestmentprotection.com/index.php/intra-eu-bits-before-the-court-of-justice-of-the-eu/> .

77 See the text of the proposal at <https://www.tni.org/en/publication/proposal-to-expand-investors-rights-for-all-intra-eu-investment-will-be-the-next-nail-in> .

prevention in place of dispute resolution, establishes a clear link between the agreements and the domestic legal systems. The most notable differences from traditional BITs are the absence of standard clauses on investors' protection and the replacement of investor-state arbitration with state-state arbitration.⁷⁸ Both aspects are in line with the attempt to create a dialogical framework in which each party tries to understand how to fit its investment strategy into the local context. This approach can be considered non-hierarchical to the extent it tries to ensure the compatibility of the international agreement with the host state's national legal order, but without assuming that the former has to replace the latter. Moreover, the governance structure supports the learning process which features prominently in non-hierarchical approaches. To be sure, some hierarchical aspects could resurface when the new regional dispute settlement centre, currently under discussion in the UNASUR framework, will become operational.⁷⁹ The centre could carry out arbitration proceedings in investor-state disputes, thus creating a system much closer to the current international regime than the CFIA model.

EU proposed reform of investment agreements is less innovative than Brazil's, but it does contain some elements of non-hierarchical governance. The European Commission has tried to clarify the balance between the right to regulate for the public interest and the protection of investors from unexpected regulatory changes. Moreover, the Commission has tried to replace the current investment arbitration regime with a EU Investment Court. Both the new standards and the dispute resolution procedure have been criticized. For some authors, they do not remedy the flaws of international investment law and may even decrease the regulatory space available to the EU and its Member States.⁸⁰ More

78 Detailed analysis of the CFIA in TITI, 2016; MONEBHURRUN, 2016; MOROSINI, XAVIER, 2015.

79 On the functions the centre could perform see MACIAS, 2016; FACH GÓMEZ, TITI, 2016.

80 See e.g. VAN HARTEN, 2016; POULSEN et al., 2015.

fundamentally, the overall approach of the Commission is contested because it does not seem to provide a satisfactory solution to the different problems Member States experience when investment protection issues arise in developing and developed countries.⁸¹

Leaving aside the soundness of these criticisms, elements of experimentalist governance can be detected in the attempt to design mechanisms of regulatory cooperation which could foster mutual learning and the search for regulatory solutions which can be adapted to different institutional contexts.⁸² However, incorporation of non-hierarchical governance might not bear enough persuasive force to overcome the multi-faceted opposition against Commission's proposals. Moreover, we mentioned above that the Commission is using its enforcement powers to push Member States to terminate their intra-EU BITs. This strategy signals the lack of a broad consensus on a new governance model for investment protection and promotion.

Even though intra-EU BITs are going to be terminated and investment arbitration between Member States replaced by a different dispute resolution system, the consequences of the new regime for third countries are not clear. The Investment Court that the Commission proposed to include in the CETA and TTIP may be accepted or not, but in the best case will create a separate regime. It cannot be excluded that the negotiation of the two Agreements will lead to additional differences between them. The same could happen for future trade and investment agreements with other important commercial partners. Thus, the proposal to replace the current regime of investment arbitration could help address the internal disagreement on EU investment policy, but could not fit the needs and interests of developed and developing third countries.

These doubts become even more pressing when the multilateral relationships within the ECT are taken into account.⁸³

81 ARAUJO, 2016, p. 232 ff..

82 ZEITLIN, 2015b, p. 354; WIENER, ALEMANN, 2015; CHASE, PELKMANS, 2015.

83 KLEINHEISTERKAMP, 2012.

The termination of all intra-EU BITs will not prevent investors from using the ECT to start arbitration proceedings against the Member States or the EU itself. This means that traditional investment arbitration could apply in the energy sector even though the Investment Court will be introduced in other sectors. Moreover, the new dispute resolution system could concur with the ECT regime or apply to those energy disputes which fall outside its scope. This scenario appears highly undesirable because it could lead to marked differences across the EU and ECT regimes and reduce the influence the Commission could have on the revision process of the ECT. More generally, the lack of clear boundaries between the two regimes could reduce the attractiveness of the EU energy sector to foreign investors.

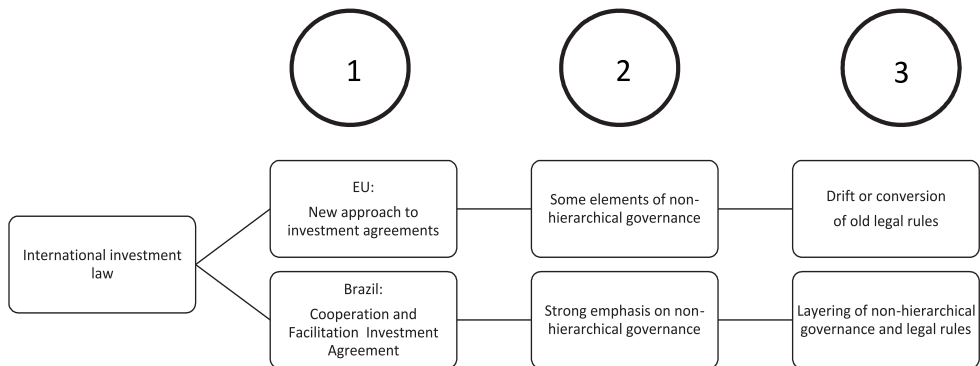
Step two of the analysis shows the emergence of some non-hierarchical aspects in the Brazilian and EU investment policies, but also suggests that the relationship between those aspects and legal rules needs to be clarified. In the case of Brazil, the principle of non-interference with domestic legal orders seems to ensure a larger degree of adaptability. However, the very idea of investment promotion implies that changes to local institutions and policies are both expected and desired. Thus, even the CFIA model is not neutral from the point of view of the impact on the host country. The model tries to suggest that the international agreement and the domestic legal order represent different layers of rules and that any encroachment between them is excluded. A more convincing interpretation is that the international agreement produces a change in the impact of existing rules (drift) or a change in the way they are applied (conversion). Both instances of gradual change become possible when existing rules grant a large margin of discretion. But while drift assumes the existence of strong veto possibilities, conversion requires weak veto possibilities.⁸⁴ In either case, the main problem is that legal change remains hidden. Fuller integration of non-hierarchical governance and legal rules could be difficult to achieve.

84 See the analysis in MAHONEY, THELEN, 2010.

In the case of the EU, displacement of old rules could happen. Such a reform could pave the way to a fuller integration of non-hierarchical governance and legal rules. However, such an outcome requires that resistance from both Member States and the main commercial partners be overcome. Moreover, the EU proposed reform is much less explicit than the Brazilian one on the respective weight of regulatory cooperation and dispute resolution. Non-hierarchical governance will thrive only if the former plays a central role. Therefore, the reform of EU investment policy could lead to layering of hierarchical and non-hierarchical aspects, but with much uncertainty about the roles each of them will play.

Figures 3 summarizes the analysis. Brazil was able to adopt a more innovative investment policy, while the EU was constrained by existing BITs. Both Brazil and the EU tried to inject non-hierarchical aspects into their policies. However, neither has been able to achieve full integration between those aspects and legal rules.

FIGURE 3 THE INTERPLAY OF BRAZILIAN AND EU INVESTMENT POLICY AND TRANSNATIONAL INVESTMENT REGIME.⁸⁵



These unresolved issues prompt the question whether a wider recourse to non-hierarchical governance schemes could better address the frictions between the national/regional institutional

85 Author's elaboration.

context and international investment law. A shift to non-hierarchical governance could mean that the negotiation of bilateral or multilateral agreements is driven neither by the goal of exporting a specific model nor of replacing the domestic legal order. The transnational governance of investments should aim at ensuring the compatibility across different local contexts. Here compatibility should be understood not only as non-discriminatory treatment of foreign investors, but also as the enhancement of opportunities for investment provided by each country. In the energy sector non-hierarchical governance could help develop a bottom-up process which contributes to the low-carbon transition. From this point of view, future negotiations on energy matters between Brazil and the EU should focus on the search for a model of regulatory cooperation which tries to integrate the main elements of non-hierarchical governance already included in the reform proposals discussed in this section.

5 CONCLUSIONS: LINKING TRANSNATIONAL GOVERNANCE TO THE DOMESTIC LEGAL CONTEXT

The discussion of the interplay between domestic and transnational regimes in the biofuels and foreign investments sectors shows that Brazil and the EU are still struggling to get rid of their own internal constraints. These constraints prevent them from converging on more effective transnational regimes. Of course, lack of convergence may be explained by divergent interests. Both in the biofuels sector and in the energy investments sector this view is supported by the failure, or limited achievements, of bilateral and multilateral negotiations. However, the potential benefits of a deeper regulatory cooperation seem to depend on institutional innovation. Non-hierarchical governance has been hailed as the best solution to states' limits in dealing with cross-border issues and to decision-making deadlocks in multilateral negotiations. But what we observe in biofuels and energy investments regimes are attempts to use non-hierarchical governance in ways that do not readily connect to national/regional legal orders. In the biofuels sector, sustainability criteria stemming from international certification systems partially

addressed Brazil's most pressing social and environmental issues. With regard to energy investments, reform proposals in Brazil and the EU try to move beyond the current regime, but whether they can transform domestic institutions is still uncertain.

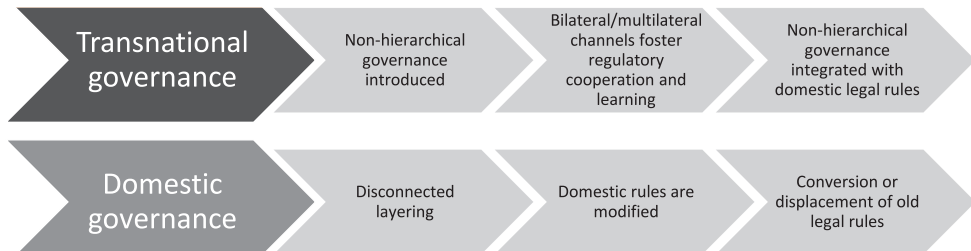
The hurdles faced by countries and supranational institutions striving to improve the effectiveness of non-hierarchical governance in transnational settings are not peculiar to the energy sector. They have been pointed out in other sectors as well. While the role of the public sector appears impossible to ignore, its interaction with non-hierarchical governance may improve or reduce its effectiveness.⁸⁶ Such interaction is also one of the central themes in the ongoing debate on international regulatory cooperation and the innovative structures which should foster it.⁸⁷ Interestingly, that debate struggles to overcome the limits of regulatory differences across national jurisdictions while avoiding the imposition of uniform solutions. This is exactly the crucial issue explored in this article.

What we know so far is that the interplay between transnational regimes and domestic institutional context may set in motion different types of gradual change (see Figure 4). What we still don't know is under which conditions each type of change becomes possible, whether it has negative or positive impacts, and how to start a sequence of gradual changes which leads to a fuller integration between non-hierarchical governance and legal rules. These issues should be granted a priority status in the research agenda of transnational energy governance.

86 See, e.g., BARTLEY, 2014, with reference to forests sustainability.

87 See e.g. BULL et al., 2015 on regulatory cooperation in mega-regional agreements and BOLLYKY, MAVROIDIS, 2016 on regulatory cooperation in the WTO framework.

FIGURE 4 SEQUENTIAL CHANGES IN TRANSNATIONAL GOVERNANCE.⁸⁸



REFERENCES

AFIONIS, Stavros; STRINGER, Lindsay C.. An energy partnership between the European Union and Brazil for the promotion of second generation biofuels. In: HEFFRON, Raphael J.; LITTLE, Gavin F.M. (eds.), *Delivering Energy Law and Policy in the EU and the US*. Edinburgh: Edinburgh University Press, 2016.

AFIONIS, Stavros; STRINGER, Lindsay C.. The environment as a strategic priority in the European Union-Brazil partnership: is the EU behaving as a normative power or soft imperialist? In: *International Environmental Agreements*, v. 14, pp. 47-64, 2014.

ANDONOVA, Liliana B. Boomerangs to partnerships? Explaining state participation in transnational partnerships for sustainability. In: *Comparative Political Studies*, v. 47, n. 3, pp. 481-515, 2014.

ARAUJO, Billy A.M. *The EU Deep Trade Agenda*. Oxford: Oxford University Press, 2016.

ARMSTRONG, Kenneth. New governance and the European Union: An empirical and conceptual critique. In: DE BÚRCA, Grainne et al. (eds.). *Critical Legal Perspectives on Global Governance*. Oxford: Hart Publishing, 2014.

BAILIS, Robert et al.. Biofuel sustainability in Latin America and the Caribbean - a review of recent experiences and future prospects. In: *Biofuels*, v. 5, n. 5, pp. 469-485, 2014

88 Author's elaboration.

BARTLEY, Tim. Transnational governance and the re-centered state: sustainability or legality ? In: **Regulation & Governance**, v. 8, pp. 93-109, 2014.

BASTOS LIMA, Mairon G.; GUPTA, Joyeeta. The extraterritorial dimensions of biofuel policies and the politics of scale: live and let die? In: **Third World Quarterly**, v. 35, n. 3, pp. 392-410, 2014.

BECKMAN, Jayson. Biofuel use in international markets: the importance of trade. **United States Department of Agriculture, Economic Research Service, Economic Information Bulletin**, Number 44, September 2015.

BOLLYKY, Thomas J.; MAVROIDIS, Petros C.. Trade, social preferences, and regulatory cooperation: the new WTO-think. **Robert Schumann Centre for Advanced Studies Global Governance Programme**, 2016/47

BORRAS, Saturnino M. jr. et al.. The rise of flex crops and commodities: implications for research. In: **The Journal of Peasant Studies**, v. 43, n. 1, pp. 93-115, 2016.

BÖRZEL, Tanja A.. Experimentalist governance in the EU: the emperor's new clothes? In: **Regulation & Governance**, v. 6, pp. 378-384, 2012.

BRADFORD, Anu. Exporting standards: The externalization of the EU's regulatory power via markets. In: **International Review of Law and Economics**, v. 42, pp. 158-173, 2015.

BULL, Reeve T. et al.. New approaches to international regulatory cooperation: the challenge of TTIP, TPP, and mega-regional trade agreements. In: **Law and Contemporary Problems**, v. 70, n. 1, pp. 1-29.

BUNGENBERG, Marc; TITI, Catharine. Precedents in International Investment Law. In: BUNGENBERG, Marc et al. (eds.). **International Investment Law: A Handbook**. München: C.H. Beck – Hart – Nomos, 2015.

CASSUTO, David N.; GUEIROS, Carolina. The evolution of the Brazilian regulation of ethanol and possible lessons for the United States. In: **Wisconsin International Law Journal**, v. 30, n. 3, pp. 477-498, 2013.

CHAN, Sander et al.. Reinvigorating international climate policy: a comprehensive framework for effective nonstate action. In: **Global Policy**, v. 6, n. 4, pp. 466-473, 2015.

CHASE, Peter; PELKMANS, Jacques . This time it's different: turbo-

charging regulatory cooperation in the TTIP, **CEPS Special Report No. 110**, June 2015.

CHEVRY, Jonathan. *Micula v. Romania*. In: **World Trade Review**, v. 14, n. 3, pp. 540-542, 2015.

COSLOVSKY, Salo V.. Flying under the radar ? The state and the enforcement of labor laws in Brazil. In: **Oxford Development Studies**, v. 42, n. 2, pp. 190-216, 2014.

COSLOVSKY, Salo V.; LOCKE, Richard. Parallel paths to enforcement: private compliance, public regulation, and labor standards in the Brazilian sugar sector. In: **Politics & Society**, v. 41, n. 4, pp. 497-526, 2013.

COTTRELL, Patrick M.; TRUBEK, David M.. Law as problem solving: standards, networks, experimentation, and deliberation in global space. In: **Wisconsin Journal of Transnational Law & Contemporary Problems**, v. 21, pp. 359-393, 2012.

CREUTZIG, Felix et al.. Bioenergy and climate change mitigation: an assessment. In: **Global Change Biology Bioenergy**, v. 7, pp. 916-944, 2015

DAUGBJERG Carsten; SWINBANK, Alan. Globalization and new policy concerns: the WTO and the EU's sustainability criteria for biofuels. In: **Journal of European Public Policy**, v. 22, n. 3, pp. 429-446, 2015.

DE BÚRCA, Grainne et al.. New modes of pluralist global governance. In: **New York Journal of Law and Politics**, v. 45, pp. 723-786, 2013.

DIAS DE MORAES, Ferraz et al.. **Production of ethanol from sugarcane in Brazil**. Cham: Springer, 2014.

DONER, Richard; SCHEIDER, Ben R.. The middle-income trap: more politics than economics. In: **World Politics**, v. 68, n. 4, 2016.

DUBASH, Navroz K.; MORGAN, Bronwen (eds.). **The rise of the regulatory state of the South**. Oxford: Oxford University Press, 2013.

ECOFYS et al.. The land use change impact of biofuels consumed in the EU. **Final Report** , 27 August 2015, available at <https://ec.europa.eu/energy/en/studies> (last access 1 February 2017).

EGAN, Patrick J.W.. Crawling up the value chain: domestic institutions and non-traditional foreign direct investment in Brazil, 1990-2010. In: **Brazilian Journal of Political Economy**, v. 35, n. 1, pp. 156-174, 2015.

EKINS, Paul et al. (eds.). **Global Energy**. Oxford: Oxford University Press, 2015.

EUROPEAN COMMISSION. **Draft text on investment protection and Investment Court System in the Transatlantic Trade and Investment Partnership**. MEMO/15/5652, 16 September 2015, available at <http://ec.europa.eu/trade/policy/in-focus/ttip/> (last access 1 February 2017).

EUROPEAN COMMISSION. **Innovating for sustainable growth. A bioeconomy for Europe**, February 2012.

EUROPEAN COMMISSION. **Towards an EU-Brazil Strategic Partnership**, COM(2007)281 of 30 May 2007

FACH GÓMEZ, Katia; TITI, Catharine. International investment law and ISDS: mapping contemporary Latin America. In: **Journal of World Investment & Trade**, v. 17, n. 4, 2016.

FALKNER, Gerda; MÜLLER, Patrick (eds.). **EU Policies in a Global Perspective**. London, New York, N.Y.: Routledge, 2014

GARRETT, Rachel D.; RAUSCH, Lisa L. Green for gold: social and ecological tradeoffs influencing the sustainability of the Brazilian soy industry. In: **The Journal of Peasant Studies**, v. 43, n. 2, pp. 461-493, 2016.

GOLDTHAU, Andreas (ed.). **The handbook of global energy policy**. Chichester: Wiley-Blackwell, 2013

GRIGOROVA, Jenya. EU's renewable energy directive saved by GATT Art. XX ? In: **Oil, Gas & Energy Law**, v. 13, n. 3, pp. 1-21, 2015.

HASTREITER, Michele A. Racionalidade econômica e os acordos bilaterais de investimento. In: **Revista de Direito Internacional**, v. 12, n. 2, p. 284-303, 2015.

HAUGEN, Hans M.. Coherence or forum shopping in biofuels sustainability schemes ? In: **Nordic Journal of Human Rights**, v. 33, n. 1, pp. 52-73, 2015.

HINDELANG, Steffan; KRAJEWSKI, Markus. Towards a more

comprehensive approach in international investment law. In: HINDELANG, Steffan; KRAJEWSKI, Markus (eds.). **Shifting Paradigms in International Investment Law**. Oxford: Oxford University Press, 2016.

HOEKMAN, Bernard. Trade agreements and international regulatory cooperation in a supply chain world. In: TAPP, Stephen et al. (eds.). **Redesigning Canadian Trade Policies for New Global Realities**. Institute for Research on Public Policy, 2016, available at <http://irpp.org/research/international-trade-and-global-commerce/> (last access 1 February 2017).

HOLLEY, Cameron. Linking law and new governance: examining gaps, hybrids, and integration in water policy. In: **Law & Policy**, v. 38, n. 1, pp. 24-53, 2016.

HOPEWELL, Kristen. The transformation of state-business relations in an emerging economy: the case of Brazilian agribusiness. In: **Critical Perspectives on International Business**, v. 10, n. 4, pp. 291-309, 2014.

IEA BIOENERGY. **Mobilizing sustainable bioenergy supply chains. Inter-task project synthesis report**, 2015, available at www.ieabioenergy.com (last access 1 February 2017)

IEA. **Energy Technology Perspectives**. Paris, 2016.

IRENA. **Boosting biofuels**. 2016, available at www.irena.org (last access 1 February 2017).

KHANNA, Madhu et al.. Who pays and who gains from fuel policies in Brazil ? In: **Energy Economics**, v. 54, pp. 133-143, 2015.

KLEINHEISTERKAMP, Jan. Investment protection and EU law: the intra- and extra-EU dimension of the Energy Charter Treaty, **Journal of International Economic Law**, v. 15, n. 1, pp. 85-109, 2012.

LABRUTO, Nicole. Experimental biofuel governance: historicizing social certification in Brazilian ethanol production. In: **Geoforum**, v. 54, pp. 272-281, 2014.

LARSEN, Rasmus K. et al.. Towards ‘hybrid accountability’ in EU biofuels policy ? Community grievancies and competing water claims in the Central Kalimantan Oil Palm Sector. In: **Geoforum**, v. 54, pp. 295-305, 2014.

LAURENT, Brice. The politics of European agencements: constructing a market of sustainable biofuels. In: **Environmental Politics**, v. 24, n. 1, pp. 138-155, 2015.

LAVENEX, Sandra. The power of functionalist extension: how EU rules travel. In: **Journal of European Public Policy**, v. 21, n. 6, pp. 885-903, 2014.

LEAL-ARCAS, Rafael; FILIS, Andrew. Legal aspects of the promotion of renewable energy within the EU and in relation to the EU's obligation in the WTO. **Renewable Energy Law and Policy**, v. 5, n. 1, pp. 3-25, 2014.

LENOBLE, Jacques; MAESSCHALCK, Marc. Renewing the theory of public interest: the quest for a reflexive and learning-based approach to governance. In: DE SCHUTTER, Olivier; LENOBLE, Jacques (eds.). **Reflexive governance**. Oxford: Hart Publishing, 2010.

LIN, Jolene. The Emergence of Transnational Environmental Law in the Anthropocene. In: Kotzé, Louis J. (ed.). **Reimagining Environmental Law and Governance for the Anthropocene**. Oxford: Hart Publishing, 2017

LORENZO, Cristian; VAZQUEZ, Patricio Y.. The rise of biofuels in IR: the case of Brazilian foreign policy towards the EU. In: **Third World Quarterly**, v. 37, n. 5, pp. 902-916, 2016.

MACÍAS, María J.L. Reliance on alternative methods for investment protection through national laws, investment contracts, and regional institutions in Latin America. In: HINDELANG, Steffan; KRAJEWSKI, Markus (eds.). **Shifting Paradigms in International Investment Law**. Oxford: Oxford University Press, 2016.

MAHONEY, James; THELEN, Kathleen. A theory of gradual institutional change. In: MAHONEY, James; THELEN, Kathleen (eds.). **Explaining Institutional Change**. Cambridge: Cambridge University Press, 2010.

MEYER, Timothy. The World Trade Organization's role in global energy governance. In: VAN DE GRAAF, Thijs et al. (eds.). **Palgrave handbook on the international political economy of energy**. Basingstoke: Palgrave McMillan, 2016.

MONEBHURRUN, Nitish. Novelty in international investment law: the Brazilian Agreement on Cooperation and Facilitation of Investments as a different international investment agreement model. In: **Journal of International Dispute Settlement**v. 8, n. 1, pp. 79-100, 2017.

MOROSINI, Fabio C.; XAVIER JUNIOR, E.C.. Regulação do investimento estrangeiro direto no Brasil: da resistência aos tratados

bilaterais de investimento à emergência de um novo modelo regulatório. In: **Revista de Direito Internacional**, v. 12, n. 2, p. 421-447, 2015.

NAIKI, Yoshiko. Trade and bioenergy: explaining and assessing the regime complex for sustainable bioenergy. In: **The European Journal of International Law**, v. 27, n. 1, pp. 129-159, 2016.

OLSEN, Birgitte E.; RØNNE, Anita. The EU legal regime for biofuels. In: LE BOUTHILLIER, Yves et al. (eds.). **The law and policy of biofuels**. Cheltenham: Elgar Publisher, 2016.

PEERENBOOM, Randall; GINSBURG, Tom. **Law and development of middle-income countries**. Cambridge: Cambridge University Press, 2014.

PEÑA, Alejandro M.. Rising powers, rising networks: Brazilian actors in private governance. In: **Oxford Development Studies**, v. 42, n. 2, pp. 217-237, 2014.

PEREIRA DE ANDRADE, Priscila. Biofuels' legal and political framework in Brazil: a critical review through a sustainable development lens. In: LE BOUTHILLIER, Yves et al. (eds.). **The law and policy of biofuels**. Cheltenham: Elgar Publisher, 2016.

PERES, Isabel F.; KESAN, Jay P.. The role of third-party institutions in biomass contracting: a comparative perspective. In: **The Georgetown Environmental Law Review**, v. 28, pp. 219-259, 2016.

POLETTI, Arlo; SICURELLI, Daniela. The European Union, preferential trade agreements, and the international regulation of sustainable biofuels. In: **Journal of Common Market Studies**, v. 54, n. 2, pp. 249-266, 2016.

PONTE, Stefano. 'Roundtabling sustainability: lessons from the biofuel industry. In: **Geoforum**, v. 54, pp. 261-271, 2014.

PONTE, Stefano; DAUGBJERG, Carsten. Biofuel sustainability and the formation of transnational hybrid governance. In: **Environmental Politics**, v. 24, n. 1, pp. 96-114, 2015.

POULSEN, Lauge et al.. **Transatlantic Investment Treaty Protection**. CEPS Special Report No. 102, March 2015, available at www.ceps.eu (last access 1 February 2017)

PRADO, Mariana M.. Bureaucratic resistance to regulatory reforms:

contrasting experiences in electricity and telecommunications in Brazil. In: DUBASH, Navroz K.; MORGAN, Bronwen (eds.). **The rise of the regulatory state of the South**. Oxford: Oxford University Press, 2013.

RAINERI, Ricardo et al.. Latin America energy integration: an outstanding dilemma. In: Sioshansi, Fereidoon P. (ed.). **Evolution of global electricity markets**. Waltham, Ma. et al.: Academic Press, 2013.

RICHARDSON, Ben. Making a market for sustainability: the commodification of certified palm oil. In: **New Political Economy**, v. 20, n. 4, pp. 545-568, 2015.

RICHARDSON, Ben. The governance of primary commodities: biofuel certification in the European Union. In: PAYNE, Anthony ; PHILLIPS, Nicola (eds.). **Handbook of the international political economy of governance**. Cheltenham: Elgar Publisher, 2014.

ROBLEDO-ABAD, Carmenza et al.. Bioenergy production and sustainable development: science base for policymaking remains limited. In: **Global Change Biology Bioenergy**, early view 23 March 2016.

RUTHERFORD, Angelica P.. Regulatory framework for biofuels in Brazil: history and challenges under the law of the WTO. In: **Journal of Energy & Natural Resources Law**, v. 34, n. 2, pp. 213-238, 2016.

SABEL, Charles F. Self-discovery as a coordination problem. In: SABEL, Charles F. et al. (eds.). **Export pioneers in Latin America**. Inter-America Development Bank, 2012

SABEL, Charles F.; ZEITLIN, Jonathan. Experimentalism in the EU: common ground and persistent differences. In: **Regulation & Governance**, v. 6, pp. 410-426, 2012.

SABEL, Charles F.; ZEITLIN, Jonathan. Learning from difference: the new architecture of experimentalist governance in the European Union. In: SABEL, Charles F.; ZEITLIN, Jonathan (eds.). **Experimentalist governance in the European Union**. Oxford: Oxford University Press, 2010.

SCARLAT, Nicolae et al.. Renewable energy policy framework and bioenergy contribution in the European Union – An overview from national renewable energy action plans and progress reports. In: **Renewable and Sustainable Energy Reviews**, v. 51, pp. 969-985, 2015.

SCHLEIFER, Philip. Orchestrating sustainability: the case of European Union biofuel governance. In: **Regulation & Governance**, v. 7, pp. 533-546, 2013.

SCHLEIFER, Philip. Private governance undermined: India and the roundtable on sustainable palm oil. In: **Global Environmental Politics**, v. 16, n. 1, pp. 38-58, 2016.

SCHLEIFER, Philip. Transnational sustainability governance in the Global South: A comparative study of producer support in Brazil. In: **European University Institute**, Robert Schuman Centre for Advanced Studies, Working Paper 2015/13.

SCHNEIDER, Ben R. **Hierarchical capitalism in Latin America**. Cambridge: Cambridge University Press, 2013.

SCHNEIDER, Ben R.. The developmental state in Brazil: comparative and historical perspectives. In: **Brazilian Journal of Political Economy**, v. 35, n. 1, pp. 114-132, 2015.

SCOTT, Joanne. The new EU “extraterritoriality”. In: **Common Market Law Review**, v. 51, n. 5, pp. 1343-1380, 2014.

SELFA, Theresa et al.. Interrogating social sustainability in the biofuels sector in Latin America: tensions between global standards and local experiences in Mexico, Brazil and Colombia. In: **Environmental Management**, v. 56, pp. 1315-1329, 2015.

SHAFFER, Gregory. How the World Trade Organization Shapes Regulatory Governance. In: **Regulation & Governance**, v. 9, pp. 1-15, 2015.

SOLOMON, Barry D. et al.. Policies for the sustainable development of biofuels in the Pan American region: a review and synthesis of five countries. In: **Environmental Management**, v. 56, pp. 1276-1294, 2015.

SPAROVEK, Gerd et al.. Sustainable bioproducts in Brazil: disputes and agreements on a common ground agenda for agriculture and nature protection. In: **Biofuels, Bioproducts & Biorefining**, v. 10, pp. 204-221, 2016.

STATTMAN, Sarah L. et al.. Governing biofuels in Brazil: a comparison of ethanol and biodiesel policies. In: **Energy Policy**, v. 61, pp. 22-30, 2013.

STATTMAN, Sarah L., MOL, Arthur P.J.. Social sustainability of Brazilian biodiesel: the role of agricultural cooperatives. In: **Geoforum**, v. 54, pp. 282-294, 2014.

STUENKEL, Oliver; TAYLOR, Matthew M. (eds.). **Brazil on the global stage**. Basingstoke: Palgrave MacMillan, 2015.

TITI, Catharine. International investment law and the protection of foreign investments in Brazil. In: **Transnational Dispute Management**, n. 2, 2016.

TÖMMEL, Ingeborg. EU Governance of Governance: Political Steering in a Non-Hierarchical Multilevel System. In: **Journal of Contemporary European Research**, v. 12, n. 1, pp. 406-423, 2016.

TRUBEK, David M. et al. (eds.). **Law and the New Developmental State**. Cambridge: Cambridge University Press, 2013.

UNCTAD. **Investment policy framework for sustainable development**. 2015a.

UNCTAD. **Second generation biofuels markets: state of play, trade and developing countries perspectives**. 2016.

UNCTAD. **World investment report**. 2015b.

UNCTAD. **World Investment report**. 2016.

USDA. **EU biofuels annual 2015**. Foreign Agricultural Service, Global Agricultural Information Network, 15 July 2015.

VAN DE GRAAF, Thijs; COLGAN, Jeff. Global energy governance: a review and research agenda. In: **Palgrave Communications**, pp. 1-12, 26 January 2016.

VAN DER HEIJDEN, Jeroen. Through Thelen's Lens: layering, conversion, drift, displacement and exhaustion in the development of Dutch construction regulation. In: **Australian National University, Regulatory Institutions Network Research Paper No. 2014/46**, available at <http://ssrn.com/abstract=2497838> (last access 1 February 2017).

VAN HARTEN, Gus. The European Commission and UNCTAD Reform Agendas. In: HINDELANG, Steffan; KRAJEWSKI, Markus (eds.). **Shifting Paradigms in International Investment Law**. Oxford: Oxford University Press, 2016.

WALTER, Arnaldo; DOLZAN, Paulo. Brazil country report 2014. In: **IEA Bioenergy Task 40**, December 2014.

WESTBERG, Johan C.; JOHNSON, Francis X. The path not yet taken: bilateral trade agreements to promote sustainable biofuels under the EU renewable energy directive. In: **Environmental Law Reporter**, v. 44, n. 7, pp. 10607-10629, 2014.

WIENER, Jonathan B.; ALEMANNINO, Alberto. The future of international regulatory cooperation: TTIP as a learning process toward a global policy laboratory. In: **Law and Contemporary Problems**, v.78, pp. 103-136, 2015.

YOUNG, Alasdair R. The European Union as a global regulator ? Context and comparison. In: **Journal of European Public Policy**, v. 22, n. 9, pp. 1233-1252, 2015.

ZEITLIN, Jonathan (ed.). **Extending Experimentalist Governance?** Oxford: Oxford University Press, 2015a.

ZEITLIN, Jonathan. Conclusions. In: ZEITLIN, Jonathan (ed.). **Extending Experimentalist Governance?** Oxford: Oxford University Press, 2015b.

