

Iagê Zendron Miola<sup>1,2</sup>  
*University of Milan, Italy*

## Between Strictness and Flexibility: How Law Enables the Globalization of the Pulp and Paper Industry

### Abstract

*The article discusses the role of law in the globalization of the pulp and paper industry. The central hypothesis, assessed through empirical research, is that legal frameworks in the global North and South enable the sector's globalization by reacting contradictorily to it. The tensions generated by the European Union's Integrated Pollution Prevention and Control Directive are discussed as an illustration of the increasing strictness of the environmental regulation in the global North. Contrarily to this trend, the production of the environmental zoning for the plantation of eucalyptus in the state of Rio Grande do Sul, Brazil, is taken as an illustration of the flexibilization of environmental regulation in the global South. By comparing these regulations, the study identifies and discusses the contradictory trends in four dimensions: regulatory trend, form, procedures and scale.*

**Keywords:** environmental regulation, transnational business, pulp and paper, law and globalization

### 1. Introduction

The social and political effects of economic globalization constitute a recurrent object of analysis of the social sciences. Most studies have focused on the role of explicit global organizations and processes, such as the financial markets and international institutions. There is another set of dynamics, however, that is also characteristic of this contemporary phenomenon. This set is constituted by what occurs within the limits of regional, national or even local institutional structures, such as the State and the law. These structures become part of a global dynamics, nevertheless, to the extent that they engage in transboundary networks that connect multiple local processes and actors (Sassen, 2007). An illustrative example of this set of phenomena is transnational business and its typical agents, transnational corporations. On the one hand, the economic activity takes place in the very specific and concrete contexts where the productive and commercial activities occur. On the other hand, it is not restricted to these spaces, once it integrates a transnational productive chain as part of a number of activities held by a single transnational corporation.

This is precisely the case of the pulp and paper industry. Pulp and paper factories are present in all regions of the world, and the sector is dominated by transnational corporations that develop

---

1 I am extremely thankful for the insightful comments and suggestions of the three anonymous reviewers of this article. All the remaining flaws and mistakes are, of course, of my own responsibility.

2 PhD candidate in Sociology of Law at the University of Milan, Italy.

simultaneous activities in a diversity of countries. The global expansion of the industry, although recent, has been growing fast: between 2002 and 2006, for instance, the world exports of wood, pulp and paper products grew at an average annual rate of 10,6%<sup>3</sup>. The methods applied in the production of pulp and paper are extremely controversial in environmental matters. Extensive plantations of pine and eucalyptus – the main raw materials for the sector –, are said to consume excessive amounts of water and to promote the desertification of the non-native areas where they are planted. Pulp mills, in turn, are allegedly responsible for the pollution of water resources and air with toxic substances used in the production of paper.

In the early 1990s, the pulp and paper industry, dominated by European and North American corporations, globalized itself. Latin America and Asia became, in this context, the main destinations of new investments of transnational corporations. This move from the global North towards the global South is said to be caused by a variety of factors: the high cost of timber (due to both operational costs and competition from the bioenergy industry) and the limited possibilities of expansion in the long run, as well as the rise of environmentalism in the North; and the attractiveness of the natural landscapes of Southern regions, which offered a good climate and abundant water and energy resources for the plantation of pine and eucalyptus (Lang, 1996). Other factors that are pointed as pushing the industrial plantations and facilities to the South are the less expensive labour costs and the commitment of local governments in the South to receive new investments (Lohmann, 1994).

The objective of the present study is to investigate the role of law in this process. Comparing environmental regulations applied to the pulp and paper industry, law will be discussed as a factor that impacts the globalization of the sector. Under a socio-legal perspective, thus, and taking the pulp and paper industry's globalization process as a case study, the present research is oriented to answer the following question: *are the global North and South's legal responses to the impulses of the pulp and paper industry's transnationalized capital equivalent and, if not, how and why do they differ?* Asking for the "legal" responses of specific contexts is to address the ways in which law is mobilized and how it engages in the globalization of this economic sector. In the terms of the present study, the North represents the homeland of the transnational corporations, while the South emerges as its destination; the first entails the spaces from where the capital of the pulp and paper industry departs towards the second.

The hypothesis constructed to answer the mentioned question is that the responses given in each context – that is, in the global North and South – are distinct and have often opposite directions. Although contradictory, the ways in which legal frameworks are mobilized are part of the same phenomenon and enable the globalization of the pulp and paper industry in a certain orientation. In order to test the hypothesis, empirical evidence will be assessed through the comparative analysis of the environmental regulation in the European Union and in Brazil<sup>4</sup>. Parting from a critical approach on the tensions generated by the European Union's Integrated Pollution Prevention and Control Directive of 1996 (the IPPC) and its revision in 2008, it will be sustained that there is an increasing process of the environmental regulation in the global North. Contrarily to this trend, it will be argued that the global South is facing the opposite process, that is, the flexibilization of

---

3 Data available at <<http://www.global-production.com/wood-pulp-paper/trendstudy/>>.

4 The empirical analysis is based on primary and secondary data. Due to the absence of systematic information about the regulation produced in the European Union and to its limited availability, a questionnaire was applied to the actors involved in its production. Data about the Brazilian case was more easily accessible and complete, so there was no need for the collection of primary data, at least for the purposes of the present article. I rely specially on Gonçalves (2009) to discuss this case. Both datasets were also supplemented by the analysis of public manifestations in local newspapers, specialised publications and official communications, as well as in technical documents and legislation.

environmental regulation over the pulp and paper activity, what is evidenced by the case study on the production of the environmental zoning for the plantation of eucalyptus in the state of Rio Grande do Sul, Brazil. Finally, in a predominantly theoretical level, these two processes will be connected in a broader hypothesis, in order to identify what are the impacts of the transnationalization of a certain economic sector to different normative contexts and how it affects the ideas surrounding the role of law and regulation in globalization.

## 2. European Union's Growing Strictness to the Pulp and Paper Production

### 2.1 A Brief Genealogy of the European Union's Environmental Policy

The environmental protection discourse is not new in the European Union's legal framework formation. It is from the 1980s onward, however, that environment became "one of the fastest growing areas of EU policy" (Jordan, 2000, p. 1307). It is in this decade, more precisely in 1987 through the Single European Act, that a set of articles related to the environmental protection was consolidated as part of the community's foundations (Faria, 1997, p. 22). By defining the protection to the environment as a community's goal, it established a series of objectives to be pursued by the EU in its path towards integration: "to preserve, protect and improve the quality of the environment, to contribute towards protecting human health and to ensure a prudent and rational utilization of natural resources". In 1992, the same year of the United Nations Conference on Environment and Development, known as Rio-92, the approval of the Maastricht Treaty introduced a fourth objective to the EU environmental policy: to "promot[e] measures at international level to deal with regional or worldwide environmental problems".

Besides the creation of a wide range of mechanisms and institutions built to implement the EU environmental policy, this policy has been also expressed in a series of legal instruments. Until July of 2009, the EU has issued 658 acts concerning the environment<sup>5</sup>. Among these are the directives, defined by the EU legislation<sup>6</sup> as being "binding, as to the result to be achieved, upon each member State to which it is addressed". In what concerns the environment, the directives are the most used instruments in order to implement the communitarian policy (López Ramón, 1998; Lupiola, 2009). Among these acts, there is one directive, issued in 1996 (and reedited in 2008), that became a landmark in the communitarian environmental legislation: the Integrated Pollution Prevention and Control, the so called IPPC Directive, under the number 1996/61/EC. The novelty of this act was not properly the regulation over industrial installations, but the integrated approach on the pollution generated by those facilities<sup>7</sup>.

The IPPC was created, in this sense, "in order to achieve a high level of protection for the environment as a whole", laying down "measures designed to prevent or, where that is not practicable, to reduce emissions in the air, water and land" from the industrial activities listed by its Annex I. According to the Directive, the listed industrial activities, covering about 52.000

---

5 These numbers are offered by the Eur-Lex, the digital central for European Union Law. Among the 658 acts concerning the environment, 358 are on pollution and nuisances and 120 on space and natural resources. This database is available at <<http://eur-lex.europa.eu/en/legis/latest/chap15.htm>>.

6 According to the article 288 of the Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union published on Official Journal C 115 , 09/05/2008 P. 0001 – 0388.

7 As it is stated in the preamble of the IPPC Directive of 1996, although Community legislation already existed on the combating of air pollution, of the discharge of dangerous substances into water or of emissions into soil, there was a need to develop a holistic control of the industrial sources of pollution.

installations in the EU<sup>8</sup>, must be submitted by regulatory authorities of the member States to a specific procedure of environmental authorization, that in turn, shall comply with the Best Available Techniques (BAT), a concept created by the IPPC and defined in its article 2 as being:

[...] particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole.

Both new and existing installations were affected by this act, which states that all economic activities listed should be fully implementing the BAT to prevent and reduce their pollution emissions. As the IPPC did not specify the permit conditions it imposes, such as emission limit values, waste management measures and other standards, the European Commission developed an institutional framework “to assist companies and member States authorities” to determine what the BAT are in each economic sector covered by the Directive. It consists of a network formed by experts from the EU member States, industry and environmental organisations that converge in the European IPPC Bureau (EIPPCB), located in Sevilla, Spain.

The Bureau has the role to “organise [the] exchange of information” among these actors, producing reference documents on Best Available Techniques, the BREFs, which specify, accordingly to the industrial activity, the standards to be taken into account by the competent authorities in the member States when issuing operating permits for the installations. Each economic sector covered by the IPPC establishes its network to “exchange information” through a Technical Working Groups (TWG). Usually formed by 40 to 100 experts from different institutional origins – member States, industry associations and environmental organisations –, the TWGs “discuss technical aspects of describing and selecting techniques that further specify the BAT concept” (Lange, 2002, p. 256). It is the TWG, thus, that designs the specific lines that become the BREF to be followed by the member States authorities when translating the BAT standards into national legislation. According to the official institutional discourse, the work is directed by an expert of the EIPPC Bureau, who makes a “scientific and technical analysis” of the information exchanged and writes the BREF<sup>9</sup>. Nonetheless, there is also a political dimension of this institutional space, where policy issues are raised, debated and decided (Lange, 2002), what makes the normativity produced through the definition of the BAT and all the regulatory issues involved with the IPPC a complex phenomenon.

## 2.2 The IPPC Directive Against “Competitiveness and Employment”

As a major European industry, arguably responsible for sizeable industrial pollution and consumption of natural resources, the pulp and paper sector is covered by the IPPC Directive’s Annex I. Cradle of the modern pulp and paper industry, until today Europe has had a fundamental role in the world market of forestry products. Europe is the second largest producer and consumer of paper and, in this sense, of the products related to its production. Regarding the annual production market pulp, for instance, the continent is responsible for 20% of the world’s supply (EC, 2001, p. 02), and for 29,7% of paper and paperboard (FAO, 2008). The wealth generated by the sector is also considerable. In 2005, exports of forestry industry products were valued at €12,8 billion, what corresponds to 1,3% of EU’s industrial exports (p. 91). Of the top-100 paper and packaging industry companies, 28 are based on member States of the European Union and were

---

8 The institutional information about the IPPC was taken from the European Union’s specialized website: <<http://ec.europa.eu/environment/air/pollutants/stationary/ippc/>>.

9 This discourse is part of the text on the “Working procedures to elaborate BREFs”, available at <[http://eippcb.jrc.es/about/working\\_procedures.html](http://eippcb.jrc.es/about/working_procedures.html)>. Access in July 28th.

responsible for almost 36% of the sector's sales in 2007, what corresponds to more than US\$ 123 billion (PWC, 2008, pp. 16-17).

Seeking for higher rates of growth and return, many of those corporations started a move towards the South during the 1980s. In this context of expansion towards the South the European pulp and paper industry started to face the new regulations brought by the IPPC Directive which took effect in 2001, when the BREF for the sector was issued. The opinions about the impacts of the IPPC on the industrial activities it regulates are divided. On the one hand, there is agreement on the fact that the IPPC is part of a growing environmental regulatory impulse that becomes more intense in the 1990s, when "broader initiatives were put into practice, such as the regulation of the consumption of natural resources or pollution prevention" (RAC, 2005, p. 41). On the other hand, the role attributed to the IPPC in the supposed dichotomy economic growth *versus* environmental protection is not consensual.

In order to assess this tension in details, a questionnaire was applied to the current members of the Technical Working Group for Pulp and Paper of the IPPC Bureau<sup>10</sup>. This TWG is formed by 59 members: 38 representing EU member States<sup>11</sup>, 12 representing industrial NGOs, 3 representing environmental NGOs, 4 members of the European Commission, 1 member of a non-EU state and one member responsible for writing the BREF. The response rate was 29%; 17 of the 59 members answered the questionnaire<sup>12</sup>. Of the respondents, 9 were representatives of member States (one from Denmark, one from Finland, one from Germany, one from Portugal, one from Spain, two from the Netherlands and two from Sweden); 5 were representatives of industrial NGOs (from Great Britain, Austria, France, Germany and Norway); 1 from an environmental NGO; and 2 other representatives from the European Commission (one of them being the responsible for writing the BREF and coordinating the TWG activities).

Regarding the respondents' perceptions about the IPPC impacts on the pulp and paper industry, to 9 of them the 1996 Directive significantly or very significantly sharpened the environmental protection standards in the EU. Other 5 respondents suggested, however, that such affirmation depends on how each member State implements the Directive and what were the previous standards applied nationally. This explains why, when asked to compare the environmental regulation on pulp and paper that existed before the IPPC to the ones brought by this Directive, the respondents were divided: 2 affirmed that it is a lot more rigid, 4 answered that it is slightly more rigid, 2 that it is equivalent, and other 2 that is slightly more flexible; other 5 suggested that it depends on the member States existing legislation and implementation.

A similar result was observed when the respondents were asked if the IPPC made licensing a pulp and paper mill harder or not: 2 of them believed it became easier to license a plant; 8 suggest it is harder under the IPPC; 2 understand that it is about the same as before; and 4 affirm that it varies according to the member State. When asked to classify the Best Available Techniques Reference Document (BREF) for the pulp and paper activities, elaborated by the TWG in 2001, the respondents were also divided: for 3 of them, the standards are rigid, for 5 of them, the standards

---

10 The questionnaire was sent by e-mail to the members of the TWG in July 2009. The questionnaire was constituted by 16 both open and closed-ended questions focusing on the respondent's perceptions about the European Union's environmental policy and opinions about the effects of the IPPC on the European pulp and paper industry.

11 The member-states represented in the Technical Working Group are: by one member, Austria, Belgium, Czech Republic, Germany, Greece, Latvia and Poland; by two members, Finland, France, Slovenia and Sweden; by three members, Denmark, Ireland, Italy, Netherlands and the United Kingdom; and by four members, Portugal and Spain. And the non-European Union member-state is Norway.

12 Another member replied without answering it, but stating its impossibility due to political reasons. This response was not be considered for statistical purposes, but will be explored qualitatively further on the analysis.

established by the BREF are not too rigid, nor too flexible; for 5 of them, flexible; other 2 respondents see it as being very flexible; and 1 affirmed that it's rigidity of flexibility depends on the member State implementation<sup>13</sup>.

In what concerns the political dimension of the IPPC impacts on the pulp and paper industry, the members of the Technical Working Group were also asked to give their opinion on whose interests the Directive serve best: for 11 of the respondents, the BREF would be adequate to both industries and environmental organizations interests; for 3 members of the TWG, it would be more adequate to the industries' interests, and for only 2 members it would be more adequate to the environmental organizations' interests. When asked to give their opinion about the existence or not of a causal relation between the creation of the IPPC and the move of European industries abroad, only 3 replied positively; 6 affirmed not to know if it is the case; and 8 suggested that the move of those corporations is due to other factors, such as seeking for more profitable raw materials, low cost energy and labour force. Questioned if the IPPC would make the European pulp and paper industry less competitive in the world market, the responses were quite consensual: for 12 of them, the standards brought in by the 1996 Directive did not make the European industry less competitive. The reasons presented were that the IPPC would imply no relevant additional costs; that competitiveness would depend on other factors (already mentioned above); that it might be even an economical benefit, once consumers would value environmentally responsible business; that it might have an impact on the short term, but would eventually convert to be beneficial; and the BAT standards would be globalized<sup>14</sup>.

These results, however, must be considered as part of an analysis that also takes into account the recent process of revision of the IPPC, which generated a new version of the directive under the number 2008/01. In 2005, when the European Commission published the first IPPC report, which raised "concerns about the slow implementation of this key piece of EU environmental policy"<sup>15</sup>, it also initiated a process of reviewing the IPPC Directive. After two years of debate, the Commission emitted a communication, on 21 December 2007, containing the proposal for a new directive on industrial emissions, which "recasts seven existing Directives related to industrial emissions into a single clear and coherent legislative instrument". The European Commission's communication identified "five main areas for concern" regarding the 1996 IPPC. Among these were the insufficient implementation of BAT, limitations with regard to compliance and enforcement and the insufficient scope and unclear provisions of the current IPPC Directive. On January 2008, based on this diagnosis, the proposal was codified into the new IPPC Directive.

The public debate surrounding the revision indicates that it meant a trend towards stricter regulation. On October 21<sup>st</sup> 2008, at a meeting of EU environment ministers organized to discuss the new IPPC, some member States "raised concerns over compliance costs, reflecting industry fears", and affirmed "they do not want to make new requirements legally binding" (ENDSEUROPE, 2008). On March 16<sup>th</sup> 2009, already in the context of the global financial crisis, "a coalition of leading industry associations has called on the European commission to postpone ongoing and planned reviews of EU environmental rules" (ENDSEUROPE, 2009). According to a

---

13 One respondent affirmed that, in his opinion, the BREF does not give any standards, but only a reference to be used when considering what is BAT.

14 Three respondents referred that it is possible that the European industry became less competitive once the costs of new investments to reduce emissions would be high. One of them also said that if the standards brought by the IPPC are not globalized, the European industry will be affected once "consumers always prefer cheaper products and, for this reason, will buy Asian or Latin American products".

15 About the revision process of the IPPC, see

<[http://ec.europa.eu/environment/air/pollutants/stationary/ippc/ippc\\_revision.htm](http://ec.europa.eu/environment/air/pollutants/stationary/ippc/ippc_revision.htm)>.

major European industry association<sup>16</sup>, “a current overhaul of EU rules on industrial pollution will create significant additional costs”, and increased regulatory burden would “jeopardise the industry's chances of survival as the global economic crisis deepens” (ENDSEUROPE, 2009). In June of 2009, the Confederation of European Paper Industries released a “Manifesto for Competitiveness and Employment”, where it affirms that “European industry must not be faced with additional operating burdens and drain investment that otherwise are needed to keep production within the European Union” (CEPI, 2009). It also claimed, in this sense, for the European Union to “delay the introduction of the new emission limits in the Industrial Emissions Directive”, which is properly what is to be done by the new IPPC Directive.

Three respondents of the questionnaire also made direct reference to the new version of the IPPC. According to one of them – member of an industrial NGO – the 2008/01 Directive is “much more stringent and less flexible”. Concerning the problem of variation on the IPPC implementation among member States, another member of an industrial NGO, “hope[s] this improves with [the] new IPPC directive”. According to a third respondent, representative of a member State, “the changes should represent more strictness and [...] they do by giving the BREFs a more pronounced status, having more precise requirements for monitoring and reporting [...]”.

In this sense, if the 1996 IPPC Directive was characterized by its flexibility among member States, as it was brought by the questionnaires, there is a recent and important transformation materialized by the 2008 version of this norm. The new Directive is an attempt to homogenize the standards all over the EU and guarantee cross-compliance. It also gives new status to the standards defined by the BREFs – from reference values to real legal limits for pollution emissions. As an indicator of the increasing environmental regulation in the global North, the IPPC showed to be not only a communitarian norm with its idiosyncrasies, but a whole process entailing legal and political disputes of a transnational economic sector. If this process is understood to be started in the 1990s, by the IPPC's first version – a period that coincides with the global expansion of the pulp and paper industry – it is important to assess how a context in the global South builds its environmental regulation oriented to the same economic sector. The case to be analysed is the regulation produced by the southernmost state of Brazil, Rio Grande do Sul.

### 3. Flexible Zoning for Eucalyptus Plantations in Rio Grande do Sul

#### 3.1 The Technical-Political Ecological-Economic Zoning

Environmental protection through law in Brazil experienced its consolidation in 1988, when the country's first democratic Constitution was promulgated after more than 20 years under a military dictatorship. Side by side with a whole set of fundamental guarantees that represented a paradigmatic change in the Brazilian legal and institutional structures, the Constitution established a “right to an ecologically balanced environment” (Article 225). In order to implement this right entitled by the “present and future generations”, the same article also prescribed a series of governmental responsibilities. In this context, it is not by chance that most of the institutions nowadays responsible for the duty of environmental protection were redesigned or created in the following years, especially in the 1990s.

The institutional history of Rio Grande do Sul, Brazil's southernmost state, also reflects the consolidation of governmental institutions designed to implement the constitutional goals regarding

---

<sup>16</sup> The industrial association mentioned is the Alliance for a Competitive European Industry, formed in 2004 by 11 major European industry sector associations. Among them, the pulp and paper industry.

environmental protection, as it happened in the national level. In 1990 it was created the State Foundation for Environmental Protection (FEPAM<sup>17</sup>) responsible for enforcing the environmental legislation, supervising its implementation and planning the environmental licensing of activities taking place in the state. In 1999, due to the creation of the Department for the Environment by the state government, the FEPAM was incorporated into the Department's organizational structure, being part, since then, of the State System for Environmental Protection, instituted in 1994 to coordinate and articulate governmental actions in both state and municipal levels concerning the environment.

Integrating governmental policies, however, was not an innovation brought by the regional system of Rio Grande do Sul. Already in 1981 the national government, still dominated by the military regime, issued the federal law number 6.938, establishing a National Environmental Policy. Yet, it was only in 1990 that the decree implementing the provisions of the law number 6.938 was published, specifying the goals to be achieved and the mechanisms of enforcement. Among the instruments created by the 1981 law to be implemented by the as well newborn National System for the Environment<sup>18</sup> was the Ecological-Economic Zoning (EEZ). The EEZ was legally defined as the

instrument for territory organization to be mandatorily followed in the implementation of plans, constructions and private or public activities, establishing environmental protection standards and measures [...]

As an instrument of management, the EEZ plans the economic use of a certain territory in order to protect the environment by dividing it in different areas according to what are the possibilities and limitations of exploitation. In this sense, if an economic activity is incompatible with the general directives of the EEZ – and, therefore, with the main objectives of this instrument (to assure the environmental quality of water sources, soil and the conservation of biodiversity) – it must be not permitted and might be redirected to another region or area.

The framework set by the EEZ, intends, in this way, to organize and, by doing so, bind the decisions of public and private agents in planning any project or activity that affects the environment. The normative nature of the so called environmental zoning implies that, when the zoning is set, the licensing of any installation in the areas by the EEZ regulated must follow the rules established. The governmental agents responsible for licensing, in this sense, are also affected in their activities, once the EEZ constitutes a binding-informative referential for the adoption of decisions by the administration. Although created within the national legal framework, the EEZ is a regulatory tool to be implemented by local authorities of state governments and its own institutional structures.

Although the constitution of this instrument occurs inside the governmental institutions responsible for implementing the National Environmental Policy, according to the Brazilian legislation, the definition of the EEZ is intended to be participative and multidisciplinary. As it is stated by the Decree 4.297/2002, in its Article 4, the elaboration and implementation of the environmental zoning must obey two conditions: wide democratic participation (meaning the sharing of responsibilities among the different levels of the administration and the civil society), and multiple scientific areas

---

17 The acronym refers to the original name of this governmental organism: Fundação Estadual de Proteção Ambiental Henrique Luis Roessler. Once the name FEPAM is recurrent in the discourses that will be analysed further on article, henceforth the references to this institution's name acronym will not be translated in English.

18 The National System for the Environment was created as a space of convergence for environmental agencies of different levels – Federal, State and even municipalities – in order to discuss and implement the National Environmental Policy.

of knowledge. These elements constitute the environmental zoning as a technical-political instrument (Campello, 2006) of environmental policy.

In this sense, the definition of what areas of a certain territory can be used, for what economic purposes and respecting what environmental limitations reaches at least three dimensions: legal (the EEZ and its relations to the general legal framework), technical (the determination of environmental standards and impacts) and political (the dispute among controversial interests). The constitution of the Ecological-Economic Zoning for the plantation of eucalyptus and pine trees in Rio Grande do Sul is an emblematic case of the tensions in equating those dimensions. As it will be discussed further on this article, it is also representative of how a legal instrument for environmental protection such as the EEZ responds to the impulses of economic globalization, especially when facing the transnationalization of the pulp and paper industry.

### 3.2 Environmental Legal Standards Under Review

Despite a history that goes back to the 20<sup>th</sup> century, the pulp and paper industry becomes prominent in the Brazilian economy between the 1940s and 1960s, due to a national policy of incentives to the industrialization of the country. In the 1970s the paper produced in Brazil is consolidated in the international market, a process that lasts until the present. The intensification of this phenomenon in the recent past is explained by the expansion of the sector to the global South, initiated by its transnationalization back in the 1980s. Illustrating this trend is the fact that from 1996 until 2003, while the North American productive capacity felt some 1,6%, Latin America experienced a growth of 27,2% and Asia, 76,4%.

In South America, where the main activity of the pulp and paper industry is the production of raw materials, Brazil is a protagonist. According to the PriceWaterhouseCoopers (PWC, 2007, pp. 06-07), one of the major financial advisory companies in the world, “Brazil dominates the sector regionally”, representing 70% of the region’s industrial harvest of 2005 and 60% of the region’s exports of wood pulp. The country’s plantation harvest, rose from 66 million metres<sup>3</sup> in 1990 to 100 million metres<sup>3</sup> in 2000, and to 151 million metres<sup>3</sup> in 2005 (increasing a further 5 million metres<sup>3</sup> in 2006). Globally ranked in the 7<sup>th</sup> place in terms of area under plantation, 62% of the trees comprises eucalyptus, 32% pine and 6% other species. In Brazil, where the pulp and paper industries’ activities represented some 5,6% of the country’s total exports in 2006 (and the single largest component by value, comprising US\$ 4 billion), the pulp and paper industry concentrates its pine production in the Southern region of the country. Of the total area planted with eucalyptus, 77% is located in the states of Paraná, Santa Catarina and Rio Grande do Sul. When speculating about the possibilities for future investments, the report includes Rio Grande do Sul as one of the “newer areas being planted or where sites are being investigated” (PWC, 2007, p. 16).

It is not by chance, in this context, that among the 16 states and more than 200 corporations involved in the country’s production of pulp and paper (BRACELPA, 2003) Rio Grande do Sul gained more relevance in the recent past. In 2005, the state administration announced the result of the *Proflora*, a governmental programme oriented to support the plantation of eucalyptus and other species of tree in order to attract investments into the state. From 2003 to 2005, according to the announcement, 15 thousand hectares were planted, what corresponded to an investment of R\$ 18 million<sup>19</sup>. The programme aimed to finance the plantation of 100 thousand hectares until 2006. Supposedly in response to the governmental policy, companies such as *Stora Enso*, *Aracruz* and *Votorantim* announced an investment of US\$3 billion in Rio Grande do Sul in the following 10 years.

---

19 This amount corresponds to approximately US\$ 10 million.

Due to the environmental impacts of pine and eucalyptus plantations, such a strong expansion demanded regulation of the governmental authorities. According to the State Environmental Code, there was a need of licensing every activity that potentially affects the environment, of previously analysing the environmental repercussions of any governmental programme and of enabling public participation. The Ecological-Economic Zoning was precisely the instrument for that task. In 2004, the State Government of Rio Grande do Sul started to design the specific version of the EEZ oriented to regulate forestry activities, the Environmental Zoning for Silviculture (EZS).

In that year, the State Department of Agriculture created a Working Group to discuss the EZS, integrated by the State Foundation for Environmental Protection (FEPAM), Rio Grande do Sul's Zoobotanic Foundation and the State Department for the Environment. In the beginning of 2006 the Working Group started detailing the environmental characteristics to be respected in each region where the tree plantations were being planned. Under the responsibility of the FEPAM, the Environmental Zoning for Silviculture was supposed to be concluded by the end of 2006 and analysed in March of the next year by the State Council for the Environment<sup>20</sup>. However, it was only in April 2007 that the EZS was presented.

An important element of the EZS was the concept of Natural Landscape Units, which means, according to the environmental zoning, "the division of the state territory in natural homogenous regions, defined according to criteria that reflect the original characteristics of the landscape" (Rio Grande do Sul, 2007, p. 10). By taking into consideration "the regional environmental peculiarities and evaluation each of them individually and according to its potentialities and vulnerabilities to the [silviculture] activity", the adoption of this instrument would generate units particularly adequate to the environmental management, "following natural physical limits, not political" (p. 10). Of the 45 Natural Landscape Units identified by the EZS study (p. 11), 12 were reported as being of low restrictiveness to the silviculture activities, 16 of medium restrictiveness, and 17 of high restrictiveness (pp. 67-68)<sup>21</sup>.

Because the EZS was being considered "too restrictive" by the corporations, as it would hinder the development of the silviculture in many regions (Gonçalves, 2009, p. 33), the State Government<sup>22</sup> created a new Working Group to analyse the EZS' directives right after the zoning was made public<sup>23</sup>. Integrated by the State Secretaries of Environment, Development and International Affairs, Agriculture and Science and Technology, FEPAM, Rio Grande do Sul Agricultural Federation, Rio Grande do Sul Industries Federation, State Association of Forestry Companies,

---

20 The State Council for the Environment has deliberative and normative functions in the approval and enforcement of the State Environmental Policy. As the National Council, it is integrated by governmental authorities, corporations' representatives, universities' members and non-governmental organizations.

21 According to the EZS, by "low restrictiveness" are understood the Natural Landscape Units where the directives of soil use admit a higher amount of occupation by silviculture activities; "medium restrictiveness" are the Units where the use of some areas for the plantation of pine and other species vary according to the size of the territory and other conditions; "high restrictiveness" are the Units where silviculture activities are totally excluded or authorized in a low scale.

22 Due to the 2006 state elections, in 2007 a new governor, Yeda Crusius, member of the political party PSDB (Partido da Social Democracia Brasileira) is in charge of Rio Grande do Sul's administration, what implied also many changes in the positions in the different State Departments and Foundations.

23 The controversies over the EZS presented by the FEPAM polarized the debate in Rio Grande do Sul. Classifying the environmental zoning as ideological because of its restrictiveness, some state representatives form the "Representatives Group Pro-Foresting". Also during this period social movements intensify manifestations against the plantation of pine in the region, occupying laboratories and lands owned by the pulp and paper corporations. The State Department for the Environment then created the new Working Group through the administrative act n° 006 of February 21st of 2007.

State Federation of Agriculture Workers, among others<sup>24</sup>, the Working Group concluded that the EZS first version had “a great number of mistakes and scientific inconsistencies, besides the fact of not attending to the economic and social aspects, being, therefore, too conservationist” (Gonçalves, 2009, p. 33). Considering the suggestions made by the Working Group to “improve” the first version of the EZS, the Technical Permanent Chamber for Biodiversity and Forestry Policy – an organ of the State Department for the Environment – issued a technical advice determining a series of modifications to be made.

Among the 45 Natural Landscape Units identified by the EZS, only 6 of them were not revised by the Technical Advice in what concerned the restrictions dealing with “protected areas”, “biodiversity”, “soil occupation”, “water sources” and “soil use”. The 6 intact Units, in turn, were composed by 3 of low restrictiveness, 2 of medium restrictiveness and only 1 of high level. This means that, concerning environmental matters, the Technical Advice proposed modifications on the restrictions imposed to 66,66% of the low restrictiveness Natural Landscape Units, 87,5% of the Units of medium restrictiveness and 94,11% of the Units of high restrictiveness. Therefore, the Units where silviculture activities were totally excluded or authorized in a low scale by the EZS were the ones that suffered the highest amount of changes.

The referred changes implied substantial modifications to the protection in the Units affected, as Table 1 illustrates:

<b>TABLE 1.</b>		
<b>Natural Landscape Units regulated</b>	<b>EZS original text</b>	<b>Technical Advice substitutive text</b>
7 units of high and 1 unit of medium restrictiveness.	“In the case of utilizing invasive species (such as pine), forest plantations <i>must be concentrated in one single area</i> , with dispersion controlled” (italics by the author).	“In the case of utilizing species of invader potential (such as pine), <i>it is recommended that, when it is possible</i> , forest plantations must be concentrated in one single area, in order to minimize the risk of dispersion” (italics by the author). <sup>25</sup>
1 unit of medium restrictiveness.	“Do not plant in the areas of reproduction of the grey eagle”.	“In the areas identified as the habitat of the grey eagle [...] forest planting should be done in a way that the species conservation is guaranteed, considering its need for habitat, feeding and reproduction”. <sup>26</sup>
1 unit of high restrictiveness.	“In the South sector of the Unit, planting will be allowed in only 2% of the lands, in groups of 5 hectares”.	Elimination of the restriction. <sup>27</sup>

In April 2008 the State Council for the Environment approved the Environmental Zoning for Silviculture containing all the changes proposed by the Technical Advice. From 2004 until 2008, nevertheless – that is, since the announcement of the governmental programme of incentives and the arrival of a strong foreign investment for the plantation of trees was made until the approval of

<sup>24</sup> No environmentalist organization was invited to be part of the new formation of the Working Group.

<sup>25</sup> Technical Advice’s proposal number 2.3.8.

<sup>26</sup> Technical Advice’s proposal number 2.3.11.

<sup>27</sup> Technical Advice’s proposal number 2.5.6.

the environmental zoning – the corporations were not inactive. Still in May of 2006, before the conclusion of the EZS' first version, some companies were authorized to begin planting trees in the recently bought lands in the State through a negotiation instrument celebrated between the FEPAM and the Prosecutors' Office: *Termo de Ajuste de Conduta* (Conduct Adjustment Term)<sup>28</sup>. This instrument, revalidated in June of 2006, April of 2007 and May of 2007 due to the unsolved dispute over the environmental zoning, authorized the plantations establishing the conditions of respecting the environmental norms of the country as well as submitting the so called Simplified Environmental Reports in order to get the license from the FEPAM (Gonçalves, 2009, p. 31).

These Reports, however, were not the legally established Environmental Impact Studies that are imposed to any installation with harmful potential. Even though the Conduct Adjustment Terms obliged the FEPAM not to license plantations bigger than 1000 hectares without previous Environmental Impact Studies, authorizations given to vast plantations of the corporations *Stora Enso*, *Aracruz Celulose* and *Votorantim* motivated the Prosecutors' Office to judicially demand the implementation of this obligation by the FEPAM. In October of 2007, the Judiciary determined to the FEPAM to stop emitting environmental licenses for silviculture without previous Environmental Impact Studies. This episode constitutes the beginning of the judicialization of the conflicts surrounding the environmental regulation of the silviculture in Rio Grande do Sul. Still in 2007, six non-governmental organizations of environmental protection and the Federal Prosecutors' Office demanded the interference of the federal instances of the Judiciary to impede the flexibilization of the environmental regulation in the State; in 2008, the State Judiciary also determines the licensing authorities to observe a variety of standards in order to protect the environment due to the silviculture expansion. In November 20<sup>th</sup> of 2009, after the formation of a new working group to reformulate the contested zoning during that year, the State Council for the Environment approved the definitive version of the EZS. According to some environmentalists involved in the working group, this new version incorporated important demands, such as the limitation of use of some Natural Landscape Units, but it was still not as rigorous as the environmental organizations claimed. The publication of the latest version of the EZS coincided with an announcement, by the corporations interested in the plantations, that due to the global financial crisis investments could no longer be done<sup>29</sup>.

The disputes surrounding the Environmental Zoning for Silviculture in Rio Grande do Sul until its final version of the end of 2009 evidence a process of flexibilization of the environmental regulation in substance and form. Revising the standards constructed in the first version of the EZS, ignoring legal procedures, or even building legal alternatives that would cooperate with the need of flexibility and agility are facts that denote the character of the law being produced by the global impulse of the pulp and paper companies – at least of the law in the Southern side of chain.

#### 4. Law as a Dynamic Source of Contradictions

The regulations established through the IPPC Directive, in the European Union, and by the environmental zoning, in the Brazilian state of Rio Grande do Sul, entail a variety of legal and political tensions. It is beyond the scope and possibilities of the present article to assess all dimensions of these processes. Based on the empirical analysis developed by the previous two

---

28 This instrument was established in the Brazilian legal system by the law number 7347 of 1985, and can be applied in cases regarding responsibility for harmful behaviour to the environment, consumers and cultural goods.

29 This was a declaration of Stora Enso's vice-president for Latin America, Otávio Pontes, published on a local newspaper on September 5th, 2009. Available at:

<<http://www.clicrbs.com.br/zerohora/jsp/default2.jsp?uf=1&local=1&source=a2643450.xml&template=3898.dwt&edition=13065&section=1008>>.

sections, however, it is possible to discuss some of the implications of these regulations under a sociological view point.

The functions of regulation in constituting transnational economic sectors and markets are often described and analysed in terms of homogeneity and convergence. The role of law in globalization has been theorized, in this sense, with a focus on the diffusion of regulatory patterns (Twining, 2005), the standardization of norms and the emergence of global normative regimes (Teubner, 1997) and of a global legal culture (Gessner, 2005). This article, however, is an attempt to analyse how law enables the globalization of an economic sector through opposite dynamics, that is, through heterogeneity and contradictions.

#### 4.1 Contradictory Responses of Legal Frameworks in the Global North and South

The regulatory processes entailed by the IPPC Directive and the EEZ, as they were described above, take opposite directions. They represent, in this sense, contradictory trends of the normativity applied to the pulp and paper industry in at least four dimensions, as it is summarized in Table 2.

<b>TABLE 2.</b>		
	<b>Integrated Pollution Prevention and Control Directive (IPPC)</b>	<b>Ecologic-Environmental Zoning (EEZ)</b>
<b>Regulatory trend</b>	Towards strictness and formalization	Towards flexibility and de-formalization
<b>Regulatory form</b>	Increasingly institutionalization of regulatory production	Increasingly de-institutionalization of regulatory production
<b>Regulatory procedures</b>	Participatory	Non-participatory
<b>Regulatory scale</b>	Regional	Local

At first glance it is possible to say that the IPPC reflects a certain amount of flexibility characteristic of “soft-law” instruments (Picciotto, 2008, p. 328) once one of its key-concepts – the “Best Available Techniques” – was understood, at least in the 1996 version, as being non-binding. In this sense, it would be correct to affirm that the IPPC’s first version, far from harmonising emission standards applicable to the pulp and paper industry, would have “substantially increase[d] the discretion of national authorities with respect to standard-setting” (Pallemaerts, 1996, p. 174). Nevertheless, there is an important shift in the European Union’s environmental policy regarding integrated pollution prevention and control through the revision of the IPPC Directive in 2008. As it was revealed by the questionnaires’ respondents, and also by the manifestations of pulp and paper industries associations, the 2008 version represented a step towards more regulation and less flexibility. The BAT standards, in this sense, were made much more stringent, and the BREF gained a binding character in this new edition, leaving less space for discretion among national authorities. European Union’s environmental regulation on the pulp and paper activity, in this sense, moved towards more strictness and gained hard-law features.

In the case of the Ecological-Economic Zoning, the regulatory trend is not the same. The flexibilization of the EEZ in Rio Grande do Sul is emblematic regarding the de-formalization of law and the deinstitutionalization of justice. Procedures and even the content of legal norms were made

informal in many senses. Firstly, when the first version of the EEZ was not fitting the interests of the investments in the state once it would be “too restrictive”, it was revised through a special commission designed to do so. There was a clear discretion, in this sense, in redefining legal procedures, in consonance with the question raised by a state representative said to in a news article published by the Rio Grande do Sul’s Association of Forestry Companies: “*Why to apply so rigid laws that are not connected to reality in a third world country in an attempt to try to change a nation’s culture regarding ecology?*”<sup>30</sup>. Secondly, the substantial changes in the environmental standards according to the Natural Landscape Units, revealing another dimension of strategic discretion, in this case concerning policy-making. Thirdly, the process of flexibilization through the Conduct Adjustment Term celebrated among the State Environmental Protection Foundation (FEPAM), the Prosecutors’ Office and the pulp and paper industry corporations. Although it represented a certain amount of formality, once a governmental institution and a legally established procedure were involved, this move implied the deinstitutionalization of justice by implementing a pattern of negotiability in the environmental regulation.

Regulatory forms and procedures were also unevenly mobilized in the two examples analysed. While the IPPC Directive strengthened a more institutionalized and participatory model of environmental regulation production, the disputes surrounding the EEZ resulted in de-institutionalized decision-making processes, less opened to the participation of civil society. In the European case, these trends are reflected by the establishment of a permanent institutional structure (the Bureau responsible for the IPPC and the specific Technical Working Group for pulp and paper), where a variety of actors had a seat. In the Brazilian example, the working groups for the production of the EEZ were constantly being dissolved and recreated, up to a point where environmentalists were no longer allowed to participate.

The difference of scales in which the regulatory responses to the same economic sector are articulated is also an important element for analysis. On the one hand, the strictness of the IPPC is produced in a regional regulatory scale, as part of an environmental policy affecting the same sector in many territories. On the other, the flexibilization of the EEZ occurs in an extremely localized context; the regulatory instrument itself, in the case of Rio Grande do Sul, is of a narrow scope, once it is not even of national applicability. This dimension also constitutes the core of a possible explanation for these contradictory trends.

#### 4.2 The Embeddedness of the Legal Processes in the Political Economy of Globalization

While the legal framework entailed by the IPPC constitutes a supranational regulation in the global North, the environmental zoning in Rio Grande do Sul is an example of an extremely localized and fragmented normative impulse in the South – and both are oriented to regulate the same economic sector which is transnational, that is, beyond and within its jurisdictions. If economic globalization implies a shift of power from the national State to global and supranational institutions (Lee; Stokes, 2008), the European Union is an emblematic example of the latter. The supranational legal and political framework produced within the EU is the result of a long historical process based mainly on the ideal of economic integration. The production of norms that ended up constituting a regional legal system must be understood, thus, through the main objective of the Union: to establish an internal market characterized by the abolition, between member States, of obstacles to the free movement of goods, persons, services and capital, as it is stated by the Maastricht Treaty’s article 3. Although the exclusive competences of the Union are restricted to the fields of

---

30 The author of the question was the state representative Leila Fetter. The news article is available at: <<http://www.ageflor.com.br/index2.php?iProduct=1682&p=productMore>>. Access in July 22nd 2009.

commercial policy, agriculture and anti-trust matters, the environment became an important area of regulation.

Two reasons might be pointed as being responsible for the increasing incorporation, by the EU, of environmental issues in its legal framework. Firstly, the very nature of the environmental problems, that are increasingly being perceived as transnational. If there is one “interdependence” between countries and regions that the idea of globalization made clear is the fact that the risks and costs of environmental damage are being experienced by all the regions in the world<sup>31</sup>. This is illustrated, for instance, by the growing debates on global warming. The consciousness about environmental issues as being without boundaries is even higher in a context where productive relations among countries are intensified. It is to say that the integration process itself, by promoting a considerable amount of economic connections through sourcing, producing and consuming abroad, also generates more risks of environmental damage. Once economies are connected and environmental harm is entailed in the productive activity, prevention and control of risks and damage becomes attached to the integration process in the economic field.

The relation between environmental protection and economic development, which is often conceived as a tension, is also central to a second dimension of the explanation about the growing strictness in the European Union. Environmental regulations are often used as a disguise to protectionist measures. In order to harm the competitiveness of a foreign product or to guarantee the profitability of a national activity, governments often imposed restrictions and more rigorous environmental standards (Krell, 1997, pp. 427-429). Once the objective of the European Union is precisely to make the circulation of products, services and capital as free as possible among the member States, such unofficial customs policy is clearly incompatible: a cohesive environmental policy is needed (McCormick, 1995, p. 38). Homogenizing or at least creating similar standards of environmental protection within all the involved countries, in this sense, is also functional to the common market. Considering that the global economy does not end on the regional borders of Europe, exporting environmental standards all over the world is also necessary in order to guarantee the regional industries’ competitiveness.

In the case of the communitarian regulations on the pulp and paper industry, however, this explanation is less powerful. On the one hand, it is true that the edition of the IPPC and its recent revision represents the consolidation of EU’s environmental policy regarding industrial pollution in the two dimensions mentioned, as both environmental and market policy. In this sense, there is also an attempt of globalizing the concept of Best Available Techniques (BAT) to some places where the pulp and paper industry is expanding to. In the installation of Finnish corporations in Uruguay, since 2003, for instance, the companies sustained that the facilities were designed with the most recent technologies available, and that the mills would operate in compliance with the strictest standards set by the European Union, that is, the BAT. On the other hand, however, while the European Union’s regulations affecting the pulp and paper industry constitute a truly structural environmental policy, the localities that are hosting the facilities react in a contingent way, that is, through isolated and non long-term responses (Krell, 1997, p. 427). Again regional integration – or local fragmentation, its counterpart – is very telling. In the region where the state of Rio Grande do Sul is located, that is the Southern Cone, there is no parallel with the supranational normative

---

31 Whether this interdependence distributes equally the environmental costs of the mode of production constitutes an interesting research question, but beyond the scope of this research. A relevant contribution in this field are the studies on “environmental refugees”, that is, migration processes induced by environmental problems, such as the global warming.

framework developed by Europe<sup>32</sup>. Mercosur would be an intuitive answer, but its asymmetries with the European integration experience are deep. Regarding the legal field, the EU is characterized by an autonomous legal system, based on the primacy of communitarian law over national regulations and on the possibility of mobilizing a regional jurisdiction to enforce these norms (Ventura, 2005, p. 54). The customs union entailed by the Mercosur, however, is much more timid, what implies a minimalist institutional structure and the simple inexistence of a communitarian legal framework (p. 51). In the environmental field, for instance, Mercosur constitutes no parallel to the European Union's legal framework, once there is no common environmental policy, leaving the regulation on this area to the national States. The risks of submitting regional environmental interests to national commercial agendas are, thus, much higher.

## 5. Conclusions

Sustaining that the regulatory responses formulated in Rio Grande do Sul are much weaker and vulnerable to flexibilization does not imply that the European Union, as a counterexample, represents only an obstacle to the expansion of the pulp and paper industry. On the contrary, while the EU is imposing strict environmental legal constraints to the production of pulp and paper within its borders, the European Investment Bank (EIB) contributes to the growth of the European industry internally and abroad. From 1995 until the year 2000, for instance, the EIB provided a total € 1 billion in loans to the European pulp and paper industry's "modernisation projects"<sup>33</sup>. In 2003, the European Bank injected US\$ 80 million to finance the construction of a paper mill in the Brazilian state of Bahia<sup>34</sup>. The corporation responsible for the investment was *Veracel*, a joint-venture between a Brazilian industry and the Finnish *Stora Enso Oyj*.

Although connected by the same transnational economic sector, the two discussed contexts are in different positions in the political economy of pulp and paper. In the globalization of the industry, the movement of capital has a direction: from the global North – the host of transnational corporations – to the global South – the destination of its investments. In this movement, however, as the example of the joint-venture illustrates, local capital is also combined with transnational capital. The alliance of local and foreign capital (as well as State capital<sup>35</sup>) is strategic to both poles of the relation: it enables the global expansion of the sector, and allegedly constitutes a tool of industrialization, through a path of dependent development (Evans, 1979)<sup>36</sup>. Law, under this

---

32 The conflicts motivated by the installation of pulp and paper industries on the border between Argentina and Uruguay in 2002 may also confirm this interpretation. Disagreements over the possibility of building productive facilities on the banks of the Uruguay river initiated a conflict that developed into an international legal controversy between the neighbors, mobilizing the Mercosur and even the International Court of Justice. Although the institutional structure of the Mercosur was accessed as an attempt to solve the controversy, it was limited to commercial matters, once there is no concrete environmental policy or common environmental regulations in the regional block. For a more detailed description and analysis of this case see Ventura and Miola, 2009.

33 Information about the loans provided by the European Investment Bank are available at its institutional website: <<http://www.eib.org/projects/press/2000/2000-042-eur-160-mio-to-stora-enso-group.htm?lang=en>>. Access in November 23rd 2010.

34 According to the EIB, "The pulp mill project is eligible for EIB finance as it complies with the Bank's lending mandate of financing projects in Latin America that represent a mutual interest to the European Union and the country concerned". Available at: <<http://www.eib.org/projects/news/veracel-pulp-mill-project,-brazil.htm?lang=en>>. Access in November 23rd 2010.

35 The role of State capital in the expansion of eucalyptus plantations in Brazil, especially through the National Development Bank (BNDES) is well documented and analysed by Kröger (2010, pp. 54-56).

36 An important branch of the Brazilian and Latin-American scholarship in political economy and sociology has been dedicated to study the specificities of this region's economic development. In this perspective, the modernization and industrialization of peripheral or semi-peripheral countries such as Brazil would be connected to the economic development and hegemony of the capitalist system's centre. The national State (and, as I argue, its legal framework), in this process, both enables and is impacted by this logic. For a detailed approach on the formation of the Brazilian

perspective, not only reflects these strategies, but enables and crystallizes them. Contradictory legal responses entail, in this sense, the deeper contradiction between the growing socialization of production and the concentrated appropriation of its results (Mészáros, 2002, pp. 238-239), be it by the transnational elites or by the local and national groups that benefit from it.

## 6. References

BRACELPA (2003). *A indústria do papel no Brasil*. Associação Brasileira de Celulose e Papel. Available at: <<http://www.bndes.gov.br/conhecimento/seminario/florestal12.pdf>>. Access in July 22<sup>nd</sup>.

CAMPELLO, Livia Gaigher Bósio (2007). *A política nacional de controle da desertificação e o zoneamento ecológico-econômico*. Revista eletrônica da Faculdade de Direito de Campos, Campos dos Goytacazes, RJ, v. 3, Number 3. Available at: <<http://www.fdc.br/Arquivos/Revista/36/01.pdf>>. Access in July 21st.

CEPI (2009). Confederation of the European Pulp and Paper Industry's *Manifesto for Competitiveness and Employment*. Available at: <<http://www.cepi.org/Objects/1/files/manifesto.pdf>>. Access in July 14<sup>th</sup>.

EC (2001). *European Commission Reference Document on Best Available Techniques in the Pulp and Paper Industry*. Available at: <[http://eippcb.jrc.es/reference/\\_download.cfm?twg=ppm&file=ppm\\_bref\\_1201.pdf](http://eippcb.jrc.es/reference/_download.cfm?twg=ppm&file=ppm_bref_1201.pdf)>. Access in August 25<sup>th</sup>.

ENDSEUROPE. (2008). *EU states seek to weaken revised IPPC proposal*. Available at: <<http://www.endseurope.com/15648?referrer=search>>. Access in July 29<sup>th</sup>.

ENDSEUROPE. (2009). *Parliament demands limits for all IPPC sectors*. Available at: <<http://www.endseurope.com/20863?referrer=search>>. Access in July 29<sup>th</sup>.

EVANS, Peter (1979). *Dependent development. The alliance of multinational, State and local capital in Brazil*. Princeton: Princeton University Press.

FAO (2008). Food and Agriculture Organization of the United Nations. FaoStat. Available at: <<http://faostat.fao.org/site/626/default.aspx#ancor>>. Accessed in November 15<sup>th</sup>, 2010.

FARIA, Antonio Augusto da Costa (1997). *A União Européia e a legislação ambiental*. In: Entendendo o meio ambiente, Vol. XI, São Paulo, Secretaria de Estado do Meio Ambiente.

GESSNER, Volkmar (2005). *Complex approaches to understanding global legal cultures: globalization of enabling law*. Draft prepared for the workshop "Polarisation and convergence in socio-legal studies". Oñati, 2005.

GONÇALVES, Veronica (2009). *É verde o que se pinta de verde? Análise do termo 'desenvolvimento sustentável' no processo judicial referente ao plantio de árvores exóticas no Rio*

---

national State as a peripheral State, see the 1960s and 1970s literature, such as the works of Celso Furtado, Fernando Henrique Cardoso, Florestan Fernandes, José Luís Fiori, Maria da Conceição Tavares, Ruy Mauro Marini and Theotonio dos Santos, among others.

*Grande do Sul e no Protocolo de Quioto*. Master thesis presented in the Federal University of Santa Catarina. Florianópolis, 2009.

JORDAN, Andrew (2000). *The politics of multilevel environmental governance: subsidiarity and environmental policy in the European Union*. Environment and Planning A 2000, Vol. 32, pp. 1307-1324.

KRELL, Andreas (1997). *O sistema jurídico de proteção ambiental da Comunidade Econômica Européia: modelo para o Mercosul?* In: BASSO, M. (Org.), Mercosul: seus efeitos jurídicos, econômicos e políticos nos estados-membros. Porto Alegre: Livraria do Advogado, pp. 423-440.

KRÖGER, Markus (2010). *The Politics of Pulp Investment and the Brazilian Landless Movement (MST)*. PhD Thesis presented in the Department of Political and Economic Studies, University of Helsinki, Finland.

LANG, Chris (1996). *Globalization of the pulp and paper industry*. Master thesis, Oxford University. Available at: <http://www.wrm.org.uy/plantations/information/Lang.html#REFERENCES>. Access in August 25<sup>th</sup>.

LANGE, Bettina (2002). *From boundary drawing to transitions: the creation of normativity under the EU Directive on Integrated Pollution Prevention and Control*. European Law Journal, Vol. 08, Issue 2, June 2002, pp. 246-268.

LEE, Robert; STOKES, Elen (2009). *Environmental governance: reconnecting the global and local*. In: LEE; STOKES (Ed.) Journal of Law and Society Special Issue: Economic globalization and ecological localization: socio-legal perspectives, Vol. 36, Number 1, March 2009, pp. 01-10.

LOHMANN, Larry (1994). *Freedom to Plant, Southeast Asia and the Globalization of the Pulp and Paper Industry*. Paper presented at ASEASUK conference, London University. Available at: <http://www.thecornerhouse.org.uk/item.shtml?x=52210>. Access in August 25<sup>th</sup>.

LÓPEZ RAMÓN, Fernando (1998). *Caracteres del derecho comunitario europeo ambiental*. Medio Ambiente & Derecho: Revista electrónica de derecho ambiental, Number 1, 1998.

LUPIOLA, Asier García (2009). *La política medioambiental de la Unión Europea ante el cambio climático*. Medio Ambiente & Derecho: Revista electrónica de derecho ambiental, Number 18, 2009.

MCCORMICK, John (1995). *Environmental policy and the European Union*. In: BARTLETT, R.; KURYAN, P.; MALIK, M. (Eds.), International organizations and environmental policy. Westport: Greenwood Press, pp. 37-50.

MÉSZÁROS, Istvan (2002). *Para além do capital*. São Paulo: Boitempo Editorial.

PALLEMAERTS, Marc (1996). *The proposed IPPC Directive: re-regulation or de-regulation?*. European Environmental Law Review, June, 1996, pp. 174-179

PICCIOTTO, Sol (2008). *Regulatory networks and multi-level global governance*. In: DILLING, O.; HERBERG, M.; WINTER, G. (Eds.), *Responsible business: self-governance and law in transnational economic transactions*. Oxford: Hart Publishing, pp. 315-341.

PWC (2007). *Global Forest: Paper & Packaging Industry Survey - 2006 Results*. PriceWaterHouseandCoopers Report. Available at: <<http://www.pwc.com/>>. Access in March 29th.

PWC (2008). *Global Forest: Paper & Packaging Industry Survey - 2007 Results*. PriceWaterHouseandCoopers Report. Available at: <<http://www.pwc.com/>>. Access in March 29th.

RAC (2005). *Pollution prevention in the paper sector*. Regional Activity Centre for Cleaner Production – Mediterranean Action Plan. Available at: <[http://www.cprac.org/pdf/estudis/sectorials/paper\\_eng.pdf](http://www.cprac.org/pdf/estudis/sectorials/paper_eng.pdf)>. Access in July 13<sup>th</sup>.

RIO GRANDE DO SUL, Governo do Estado do (2007). *Zoneamento ambiental para atividade de silvicultura*, Vol. 1. Available at: <[www.fepam.rs.gov.br](http://www.fepam.rs.gov.br)>. Access in: July 10th.

SASSEN, Saskia (2007). *A sociology of globalization*. New York: W.W. Norton & Co.

TEUBNER, Günther (1997). *Global law without a State*. Aldershot: Atheneum Press.

TWINING, William. (2005) “Social Science and Diffusion of Law” *Jo. Law and Society*, 32: 203-40 .

VENTURA, Deisy (2005). *Las asimetrías entre el Mercosur y la Unión Europea: los desafíos de una asociación interregional*. Montevideo: Fundación Konrad-Adenauer.

VENTURA, Deisy; MIOLA, Iagê Zendron (2009). *Os efeitos da transnacionalização sobre a governança regional: o caso da conflituosa implantação da indústria de celulose no Cone Sul da América*. Contexto Internacional (PUCRJ. Impresso), v. 31, p. 391-427.