

The London School of Economics and Political Science

*Reaping the Seeds of Discord: Advocacy Coalitions
and Changes in Brazilian Environmental Regulation*

Flavia M. M. Donadelli

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DECLARATION

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ABSTRACT

This is a thesis about the main drivers of regulatory change. Departing from theoretical approaches focused on the 'policy process' – such as the Advocacy Coalition Framework (ACF) and the Narrative Policy Framework (NPF) – this work investigates the main reasons behind the marked changes that occurred in the regulation of three Brazilian environmental policy areas between 2005 and 2015. The policy areas under investigation are Forestry, in particular the approval of a new Forest Code in 2012; Access to Genetic Resources and Benefit Sharing, specifically the new 2015 law on the topic (Lei 13.123/2015); and Pesticides, in particular, regulatory changes concerning the registration and use of new products.

In order to assess the reasons for regulatory change in these three areas, this thesis qualifies the latest version of the Advocacy Coalition Framework's explanation for policy change as developed by Weible and Nohrstedt (2013). The thesis explores the role of the four causal factors advanced in the ACF – external events, internal events, learning and negotiated agreement – and assesses them in relation to the three case studies. It does so through process-tracing of each sector's history and content analysis of arguments proffered in National Congress debates, interviews with key actors and in the national media.

The findings of this thesis qualify the ACF expectations regarding policy change and suggest that events external and internal to the policy areas analysed might be sufficient sources of regulatory change. Negotiated agreement and learning were not necessary sources of regulatory change in two of the three cases investigated. Among the external events identified as relevant for the regulatory changes are the increased relevance of commodity production and export between 2008 and 2013 and the consequent increase in the political and economic power of the agribusiness sector. The main internal events identified point to the importance of the beginning of the enforcement of previously non-enforced regulations; the limits of the state's capacity to enforce previous regulations; international negotiations; and media scandals. Finally, incentives generated by international negotiations were found to be crucial determinants of negotiated agreement and learning between coalitions, in the only case in which these occurred (Access to Genetic Resources and Benefit Sharing).

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LIST OF ABBREVIATIONS

ABC	Brazilian Association of Sciences
ABIFINA	Brazilian Association of Chemical Industries and Biotechnology
Abracelpa	Brazilian Pulp and Paper Association
ABRAF	Brazilian Association of Forest Plantation Producers
ABRASCO	Brazilian Association of Collective Health
ABS	Access and Benefit Sharing
ACF	Advocacy Coalition Framework
AENDA	National Association of Pesticides
AGAPAN	Association for the Protection of Natural Environment
ANDA	National Association for the Diffusion of Fertilizers
ANDEF	National Association of Vegetable Defence
ANVISA	National Health Surveillance Agency
APP	Permanent Preservation Area
BNDES	Brazilian Development Bank
CBD	United Nations Convention of Biological Diversity
CEPAL	United Nations Economic Commission for Latin America
Cgen	Council for Genetic Resources Management
CI	Conservation International
CIDE	Contribution of Intervention in the Economic Domain
CNA	Confederation of Agriculture and Cattle Ranching
CNPQ	National Council for Scientific and Technological Development
COFINS	Contribution for Public Welfare Finances
CONASQ	National Commission of Chemical Safety
CONTAG	National Confederation of Agricultural Workers
DEM	Democratic Party
DIAP	<i>Departamento Intersindical de Assessoria Parlamentar</i>
Embrapa	Government Agency for Agronomic Research
Esalq	Department of Agriculture at University of Sao Paulo
FBCN	Brazilian Foundation for Nature Conservation
FFEX	Fund for Exports Financing
Fiocruz	Brazilian Health Research Agency
GDP	Gross Domestic Product
GHG	Greenhouse Gas Emissions
GTA	<i>Grupo de Trabalho da Amazonia</i>
IBAMA	Brazilian Environmental Monitoring Agency
IBDF	Brazilian Institute of Forestry Development
ILO	International Organization of Labour
IMF	International Monetary Fund
Inpa	National Institute for the Research in Amazonia
IPAM	Institute of Amazonia's Environmental Research
ISA	Socio-environmental Institute
LMMC	Like-Minded Mega-Diverse Countries
MAPA	Ministry of Agriculture
MCTI	Ministry of Science, Technology and Innovations
MDA/MDS	Ministry of Agrarian Development/Ministry of Social Development

MDIC	Ministry of Industry and Commerce
MMA	Ministry for the Environment
MP	Provisional Measure
MPV	Provisional Measure
MST	Landless Workers' Movement
NGOs	Non-governmental Organization
NPF	Narrative Policy Framework
PCdoB	Brazilian Communist Party
PDT	Democratic Workers' Party
PEC	Proposal of Constitutional Amendment
PIS/Pasep	Social Integration Programme
PL	Law Project
PLP	Complementary Law Project
PLV	Conversion Law Project
PMDB	Brazilian Democratic Movement Party
PP	Progressivism Party
PPCDam	Plan of Prevention and Control of Deforestation in the Legal Amazon
PPS	Popular Socialist Party
PSB	Brazilian Socialist Party
PSDB	Brazilian Socio-democratic Party
PSOL	Liberty and Socialism Party
PT	Worker's Party
PV	Brazilian Green Party
SBPC	Brazilian Society for the Progress of Science
SINDAG	National Union of Agriculture Defence Products
SINDIVEG	Syndicate of Agricultural Defence Products Industry
SIVAM	Amazon Surveillance System
TRIPS	Trade-Related Intellectual Property Rights
UFMT	Federal University of Mato Grosso
UN	United Nations
UNEP	The United Nations Environment Programme
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNESP	Sao Paulo State University
Unicamp	University of Campinas
USP	University of Sao Paulo
WWF	World Wildlife Fund

PART 1: ANALYTICAL FRAMEWORK

CHAPTER 1 - FRAMING THE PROBLEM

1.1. Introduction

This thesis explores the main drivers of changes in environmental regulation in Brazil in three core areas between 2005 and 2015. It provides support to claims about the occurrence of an environmental ‘roll-back’ (*retrocesso ambiental*) in Brazilian environmental standards over this time period and assesses the reasons underlying these changes.¹ The policy areas under investigation are forestry, specifically the approval of a new Forest Code in 2012; access to genetic resources and benefit sharing, specifically the new 2015 law on the topic (Lei 13.123/2015); and pesticides, in particular changes concerning the registration of new products. The three cases selected represent remarkable policy changes in terms of the content of standards and were identified as the most salient changes in each of these areas over the time period investigated. The assessment of the drivers of change is pursued through a process-tracing of each sector’s history, thematic coding of main arguments and narrative analysis of debates occurring in the National Congress, interviews and in the media.

To explore the factors motivating these changes, this thesis draws on and extends the Advocacy Coalition Framework (ACF), examining, in particular, ACF’s claims about the drivers of policy change. The thesis builds on the four sources of policy change identified by Weible and Nohrstedt (2013)² as necessary, but not sufficient, sources of policy change: external events, internal events, learning and negotiated agreement. In short, *external* (i.e. systemic) *events* refer to changes in

¹ The occurrence of an environmental roll-back (*retrocesso ambiental*) in Brazilian environmental regulation has, since at least 2009, become almost a ‘mantra’ repeated *ad nauseum* by the national media, scholars and environmental activists. As noticed by Lima & Garcia (2014, p. 273), for instance, ‘after decades of progress, in the past years Brazilian Environmental Law began to go through shocks and regulatory roll-backs, demonstrating a real tendency of diminishing, adulteration and elimination of environmental protection standards previously achieved¹.’ The debate about the legal ‘principle of environmental roll-back prohibition’ (*Princípio da Proibição do Retrocesso Ambiental*) even motivated a colloquium financed by the Higher Chamber of the National Congress, which occurred in 2012 with the participation of several environmental legal experts.

² The ACF’s hypothesis states that “*significant perturbations external to the subsystem, a significant perturbation internal to the subsystem, policy-oriented learning, negotiated agreement or some combination thereof, are necessary, but not sufficient sources of change in the policy core attributes of a governmental programme*” (Weible and Nohrstedt, 2013, p.133).

socioeconomic conditions, changes in public opinion, changes in the systemic governing coalition and changes in other policy subsystems (Sabatier and Weible, 2007, pp. 198–199). *Internal events* are events that are directly related to the policy sector under investigation. *Policy-oriented learning* is defined as “relatively enduring alternations of thought or behavioural intentions that result from experience and/or new information and that are concerned with the attainment or revision of policy objectives” (Sabatier and Jenkins-Smith, 1999, p. 123).³ Ultimately it refers to the impact experience and information have in actors’ thoughts and behavioural intentions. Finally, *negotiated agreement* consists of “agreements involving policy core changes [that] are crafted among previously warring coalitions” (Sabatier and Weible, 2007 p. 205). This is clearly the source of policy change for which there is the least research and debate within the ACF.

The main contributions of this thesis are fivefold. Firstly, it contributes to empirical knowledge by investigating three cases of regulatory change in Brazil and by providing a systematic analysis of the alleged ‘roll back’ in Brazilian environmental standards between 2005 and 2015, in relation to the three cases chosen. The results of the analysis point to an actual weakening in the stringency of standards in terms of environmental protection, and to the important role of the political and economic power acquired by the agri-business sector, as well as of a legitimising narrative adopted by the government in motivating these changes.

Secondly, in terms of theoretical contributions, it considers the causal mechanisms linking the four above-mentioned ACF factors to policy change. Echoing scholars who have argued in favour of the consideration of material interests in the application of the ACF (Nohrstedt, 2005; Nohrstedt, 2010; Hoberg, 1996; Hann, 1995; Ladi, 2005; Szarka, 2010; Schlager, 1995), this thesis adds the role of changes in incentives (i.e. changes in the calculations of costs and benefits) to the causal pathways through which these four sources of policy change are said to operate. This thesis provides, therefore, a contribution to the literature by systematically incorporating the role of material interests in the empirical application of the ACF.

³ Sabatier and Jenkins-Smith (1988, p. 155) find that the first condition needed for policy-oriented learning to occur is that “both sides have sufficient technical resources to be able to criticize the other’s causal model and data”. It is, therefore, the “analytical debate among different coalitions” that refines actors’ understandings of the seriousness, causal relationships and consequences of the policy problem on the agenda.

Third, the thesis analyses the ACF's hypothesis about the four sources of policy change (see footnote 2) and advances that negotiated agreement and learning might not be necessary sources of policy change. It maintains, in addition, that internal and external events might be both necessary and sufficient, depending on the context. In this way the thesis qualifies Weible and Nohrstedt's (2013) claim regarding the necessity and non-sufficiency of these four factors. In two of the three case studies presented, no learning or negotiated agreement could be identified among coalitions, despite remarkable regulatory/policy changes. Negotiated agreement and learning, when they occurred, were directly related to contextual drivers (internal and external events). They were, therefore, considered intermediate rather than independent variables.

Because learning and negotiated agreement occurred in only one of the three cases, the fourth contribution of this thesis consists in the identification of the differences between cases that might have motivated this variance. In other words, the results of the empirical analysis unexpectedly allowed for an analysis of the drivers of learning and negotiated agreement (which have, in this case, assumed the role of dependent variables). Finally, the Brazilian case proved to be propitious for the analysis of the impact of contextual variables (or 'opportunity structures') on the application of the ACF. Brazil does not frequently provide the context for the application of the framework (which has been predominantly used for the analysis of US and Western European cases), and so it is perceived to provide a challenging test for the assumptions of the ACF, and great potential to foster its development.

Based on what is described above, four questions were formulated to be answered by this thesis:

1. Do regulatory changes actually point to a 'roll-back' in Brazilian environmental standards?
2. Are each of the four sources of policy change advanced by the ACF (or some combination of them) sufficient motivators of policy change?
3. Are the four sources of policy change advanced by the ACF (or some combination of them) necessary motivators of policy change?

4. What factors favoured the occurrence of learning and negotiated agreement among coalitions, when they occurred?

1.2. Importance

This section justifies specific choices made in the research design of this thesis. It will answer four questions. First, why was the Advocacy Coalition Framework chosen as the main theoretical perspective? Second, why is it relevant to the of study environmental regulations? Third, why is it important to focus on Brazil and on the specific timeframe chosen? And, finally, why have these three case studies been chosen for this analysis?

1.2.1. Why the Advocacy Coalition Framework?

This sub-section intends to briefly present the ACF and explain the reasons for choosing it as the main theoretical lens for analysis. It starts by briefly presenting the framework and proceeds by contrasting the ACF with other relevant approaches in the debates about policy changes and by providing four reasons why the ACF is considered the most suitable framework for this analysis, despite its limitations.

The Advocacy Coalition Framework (ACF) is an actor-based approach focused on three main topics: coalition formation and behaviour; learning; and policy change (Sabatier and Jenkins-Smith, 1993; Sabatier, 1998; Weible *et al.*, 2009; Jenkins-Smith *et al.*, 2014). It was developed in the early 1980s by Paul Sabatier and Hank Jenkins-Smith in response to the perceived limitations of public policy research in the 1970s and 1980s, including the lack of causal explanations provided by the prominent policy cycle or 'stages heuristic' approach (DeLeon, 1999; Jann and Wegrich, 2006). Furthermore, the necessity of expanding the understanding of policy-making beyond governmental institutions (executive, judiciary and legislative), integrating top-down and bottom-up approaches to policy-making, and the perceived need to give more emphasis to the role of scientific and technical information in political debates also acted as a stimulus to its creation (Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014).

In addition to the ACF, several theoretical approaches have been used for the study of policy change (and stasis). Pierson (2000), for instance, emphasises the

importance of institutional 'Path Dependency' which makes institutional alterations not only difficult but also unattractive. Baumgartner and Jones (1993), on the other hand, stress the importance of considering longer time-frames in order to expose alternations between periods of policy stability and dramatic policy change. Streeck and Thelen's (2005) take on the dynamics of policy change puts emphasis on the importance of processes of 'incremental institutional changes', which after some time result in drastic ruptures with the past. Downs' 'issue attention cycle' emphasises the role of the media and attention spans in the recognition and management of social and environmental problems and in policy change. Kingdon's 'multiple streams model' contributed to this debate by describing a less organised or predictable process of policy change that is dependent on the convergence of problem perceptions, favourable political contexts and pre-elaborated policy solutions during 'windows of opportunity' that could eventually lead to policy change. Lodge and Hood's (2002) analysis of 'forced choices' emphasises the role of media frenzies in forcing policy makers to take action, and how such scandal-led impulses are mediated by institutional filters. Finally, authors such as Hajer (1995) and Fischer (2003) point to the role of normative values and social meanings as essential drivers of policy change. Each of these frameworks emphasises the importance of specific factors for policy change or stasis such as the role of history, institutions, public scandals, chance, media attention and normative values and emotions.

Although the valuable insights provided by each of the above-mentioned scholars have certainly contributed to the analysis pursued in this thesis (and also to the elaboration of ACF), there are three reasons why the ACF has been the preferred theoretical approach. First, following a 'policy-focused political science' approach, according to which the increase in areas regulated by the state or 'policy density' has turned the activity of interest groups into a more widespread and important phenomenon in contemporary policy-making, individual interest groups are considered a better unit of analysis than institutions, votes or the media as a whole (Hacker and Pierson, 2014). Apart from Hajer (1995) (who professes the importance of 'discourse coalitions'), none of the theoretical frameworks mentioned above pays as much attention as the ACF to the role of coalitions of actors and how their interactions shape policy change. Additionally, although Hajer (1995) directly addresses the importance of coalitions in policy change, the author associates coalitions with the

discourses they adopt, which, in turn, are ultimately based on normative values. The author describes discourses as socially constructed and resulting mainly from socialisation and the emotional attachment of actors to particular groups and ideologies (driven by the 'logic of appropriateness'), and interests as intersubjectively formed through discourses themselves. Hajer's theoretical framework, therefore, places little emphasis on the role of material interests in policy change. The ACF, on the other hand, allows for the consideration of both normative values and material interests as causal drivers, more directly accommodating the kind of factors identified as relevant in this analysis.

Second, none of the above-mentioned theoretical approaches is as well suited to the analysis of the complex relations between the ecological and the human environment as the ACF. This framework was initially developed to study environmental and energy policy-making in the US, which makes it particularly well-suited for the study of complex technological-environmental-human relations marked by high political adversity (Nohrstedt, 2010, p. 311). The high level of uncertainty and complexity that characterises the three case studies investigated in this thesis as well as the, at least hypothetical, potential for scientific and technical information to play an important role in these subsystems makes the ACF particularly useful. Moreover, the fact that environmental debates are usually both normative (in the sense of advancing values and beliefs) and interest-driven requires a theoretical framework that can accommodate both drivers, a task that the ACF can, as observed above, accomplish.⁴

A third advantage of the ACF concerns its focus on 'policy subsystems'. Policy subsystems were found to be a useful analytical unit and scale for the intended comparison of different sub-areas of environmental policies. They allow analysis to be focused on policy problems and not on the agencies or on the specific government institutions in which they occur, providing more flexibility and broadening the scope of analysis.⁵ It also allows for the consideration of interdependencies and overlaps between the activities of many different government sectors as well as other private or informal institutions. The approach allows, therefore, for a very comprehensive

⁴ The possibility of applying the ACF to include both interests and normative values among its analytical considerations is attested, for instance, by studies of wind power policies in Europe (Szarka, 2010).

⁵ Even if the same institutions are often investigated, my three case studies are considered independent because they refer to three different policy problems and regulatory apparatuses.

empirical observation of the policy processes and relevant interest groups involved, moving away from the need to exclude potentially relevant actors and institutional venues.

1.2.2 Why Environmental Regulation?

There are two reasons why I have chosen to focus specifically on environmental regulation. First, environmental regulation is an important domain in itself, which combines national and international dynamics, as well as the values and interests of practically every social group, such as those concerned with economic development, commodity exports, small farmers, researchers, activists and the media. Therefore, many areas and concerns overlap in environmental debates, making it highly representative of broader social trends. Second, environmental policies are considered an ideal sector for the further development of the ACF due to the significant scientific uncertainties that commonly affect it, and, consequently, the extensive possibilities this sector offers for the investigation of the role of technical knowledge in policy-making and regulatory change. This is evidenced by the very common use of this framework in the analysis of environmental regulations and policies worldwide, representing 57% of the total number of applications of the ACF between 1987 and 2013 (Jenkins-Smith *et al.*, 2014).

1.2.3 Why Brazil?

There were three main motivations for the choice of Brazil as the focus of this analysis. The first relates to the fact that Brazilian environmental policies are of particular interest to the international community due to their significant current and future impact on the worldwide effectiveness of international environmental regimes (i.e. biodiversity, climate change, industrial chemical pollutants). In this regard, it is important to note that Brazil is considered the most biodiverse country in the world, holding approximately one tenth of all species on earth (Lambertini, 2000). In terms of cultural diversity, Brazil is also amongst the world leaders. It is home to 305 different

ethnic minorities, speaking around 274 different languages and who possess an unimaginable amount of traditional knowledge (for example, about biodiversity), which is still unknown to the rest of society (FUNAI, 2011). The regulation of access to biodiversity and traditional knowledge in Brazil (one of the case studies in this thesis) is, consequently, of crucial global importance. Additionally, analysing the evolution of the Brazilian environmental regime on access to biodiversity and benefit sharing – a pioneering regulatory enterprise – can also provide valuable insights for other countries that have not yet regulated the issue.

Brazil's forestry policies are highly relevant to global regulatory regimes for a number of reasons. In addition to the fact that Brazil features the second largest forested area within a single country in the world (being second only to Russia) as well as the world's largest area of remaining tropical forests (Hall, 2012, p. 04), it was estimated by the Brazilian Inventory of Greenhouse Gas Emissions (MCTI, 2009) that at least 61% of Brazilian greenhouse gas (GHG) emissions result from deforestation and forest degradation. Moreover, according to the most recent world comparative statistics, in 2005 Brazil was the sixth largest greenhouse gas emitter in the world (WRI, 2013). Therefore, Brazilian strategies for tackling deforestation and forest degradation are crucial for the global efforts to reduce CO₂ emissions that define the international regime of climate change.

Finally, the international relevance of studying pesticide regulation in Brazil goes beyond the fact that since 2009 the country has been the largest consumer of pesticides in the world. Not only does Brazil consume approximately one fifth of all pesticides produced worldwide, but its consumption is increasing exponentially. While the world market for pesticides has grown by 93% from 2002 to 2012, the Brazilian market has experienced a 190% growth rate spike in the same period (ANVISA and UFPR, 2012). The Brazilian national market for pesticides, which was worth US\$ 7.3 billion in 2010, increased to US\$ 12.25 billion in 2014, an increase of approximately 68% in four years (SINDIVEG, 2014). In addition to the potential impacts that an ineffectively regulated increase of such magnitude might have for global ecological balance or world health (through food trade, for example), possible shortcomings in pesticide regulation in Brazil might also severely undermine international efforts to keep specific hazardous chemical substances under control, such as those encompassed in the Rotterdam Convention of 1998, which regulates international

trade in chemicals, and the Stockholm Convention of 2001, which focuses on the production, use, trade, and disposal of persistent organic pollutants.

The second reason is related to the gaps in the application of the ACF to the context of developing countries and in particular to Brazil. Although the ACF has proved useful for the analysis of policy changes in Western European and North American contexts, it has seldom been applied to Latin American cases. Out of 224 total empirical applications of the ACF that resulted in publications in English up until 2014, only 27 examined cases outside these two regions and only one in Brazil (Henry, Ingold, Nohrstedt and Weible, 2014, p. 303). The particularities of the Brazilian context, namely the medium level of consensus required for decisions to be made and the low openness of the political system (debated in further detail in chapter 2, section 2.3.5 and in chapter 8, section 8.2.1), characterise a context in which the importance of interest calculations and power resources are magnified, providing an ideal context for the analysis and inclusion of these variables in the ACF.⁶ Additionally, these two contextual elements reduce the potential role of participation of less powerful actors, reducing as a consequence the potential role for negotiated agreement and learning between different coalitions. There is, therefore, a significant gap in the application of ACF to political systems with these types of characteristics and vast potential for theory development in the empirical application of ACF to the Brazilian context.

The third motivation concerns an under-studied (but frequently mentioned) trend of environmental regulatory change in the country, which is often referred to by the media, academics or environmental activists as 'environmental roll-back'. As observed by Lima and Garcia (2014, p. 273), for instance, "after decades of progress, in the past years Brazilian environmental law began to suffer shocks and regulatory roll-backs, demonstrating a real tendency towards the diminishment, adulteration and elimination of environmental protection standards previously achieved".⁷ Providing a

⁶ The analysis of the characteristics of Brazilian political system and Brazilian society and its impact on coalition behaviours draws inspiration from Sabatier's (2007) use of Liphart's (1999, pp. 3–4) analysis on the types of democracies and openness of political systems. According to the application of these authors' criteria to the Brazilian case it has been concluded that Brazil is characterised by intermediary requirements of consensus among institutions for decisions to take place, and low accessibility to power by different interests. This is perceived to be a scenario which magnifies the importance of interest and power based explanations because participation/negotiation and consensus among coalitions are institutionally limited. This analysis is provided in the concluding chapter of this thesis (Chapter 8, section 2.a).

⁷ In Portuguese: "*Após décadas de avanços, o Direito Ambiental brasileiro passou a sofrer abalos e retrocessos normativos nos últimos anos, demonstrando uma verdadeira tendência de diminuição,*

more systematic assessment of this alleged trend will provide a much-needed redress of the lack of study of this issue by Brazil-focused academics.

Thus, Brazilian environmental policies have been through marked changes during the decade between 2005 and 2015, but little comprehensive analysis has been produced as to the reasons for these changes. In addition to the regulatory changes in the three areas under investigation, at least three other important changes are identified in this thesis, including the proposition of a new Mining Code (PL 37/11, to be voted on in 2016), which intends to permit mining in protected areas; changes in the types of protected areas preferred by the government and in the speed of the creation of new areas during Dilma Rousseff's government (see Shalynn *et al.*, 2016)⁸; changes in the regulation of the licensing of large construction projects in environmentally sensitive areas (see Fearnside, 2016) and the emphasis on the promotion of bio-ethanol in the Brazilian *cerrado* (a vast tropical savannah ecoregion covering 23% of the country), despite environmental concerns (see Freitas, 2015). This analysis, therefore, opens up an avenue for further scrutiny of the broader trend of environmental regulatory 'roll-back' in Brazil.

1.2.4 Why these Cases and Timeframe?

The three areas selected for this analysis were chosen because they experienced marked regulatory changes between 2005 and 2015, which were highly salient according to National Congress debates. They also have in common the fact that they involve significant uncertainty and could fundamentally benefit from the contribution of scientific analysis, making them ideal cases for the application of the ACF.⁹ These three areas, moreover, involve different interest groups that, taken together, represent all or at least a very representative share of the groups that are

descharacterização ou eliminação dos padrões de proteção ambiental já alcançados" Lima and Garcia (2014, p. 273).

⁸ For further details on policy changes in protected areas' policies you may also see the author's conference paper available at: <http://www.icpublicpolicy.org/conference/file/reponse/1434991108.pdf>

⁹ Among the several possible choices of cases of marked environmental regulatory change that occurred in Brazil between 2005 and 2015, however, these three specific cases were chosen due to the access obtained to relevant actors for interviews during fieldwork (September 2014 – January 2015). Other areas considered in the outline of this research (such as protected areas policies) were set aside after fieldwork due to limitations of the empirical data collected. Environmental licensing, mining, and protected area policies are, however, also potentially good candidates for this analysis and will be assessed in future research.

currently active in Brazilian environmental policy debates, namely agri-business, environmentalists, bio-industry, scientists, small farmers, indigenous and traditional communities, politicians of the National Congress and of the different Ministries of the Executive Power, such as the Ministry for the Environment (MMA), the Ministry of Agriculture (MAPA), the Ministry of Industry and Commerce (MDIC), the Ministry of Science, Technology and Innovations (MCTI) and the Casa Civil (the executive office of the presidency – a governmental institution that oversees and coordinates the actions of all these different ministries).

Each specific change in standard within each of the areas was chosen, in turn, according to saliency. In the forestry case, debates about the new “Forest Code” are investigated. This law, which regulates native vegetation, was first established in 1934 and altered in 1965 and 2001, and was in 2012 once again reformulated. As demonstrated by the saliency analysis in chapter 4 (section 4.2), this later reformulation was by far the most-cited forestry issue in the National Congress News Agency between 2005 and 2015. Additionally, it was mentioned during interviews as one of the most serious defeats for environmentalists over the past decades (interviews 18, 43).

In the pesticide case, the regulatory changes investigated are Law 12.873/2013, which allowed unregistered pesticides to be produced and used in cases of phytosanitary or zoo-sanitary emergencies, and Bill 209/2013, which proposed to substitute the tripartite registration system of new pesticides (which had to be assessed by the environmental, health and agriculture ministries) with a new, unified registration process under the exclusive control of the Ministry of Agriculture. Although the bill has not yet been approved at the time of writing, these two standards were already among the most salient issues in pesticide policy according to the analysis of congress debates and one participant observation in a governmental meeting about chemical security (see chapter 5, section 5.2).

The third regulation investigated is the new 2015 law on access to genetic resources and the sharing of benefits arising from their utilisation. The issue was first regulated in the country in 2001, but on the 20th May, 2015, a new access and benefit sharing (ABS) law was published. The saliency analysis of this case also revealed that it generated a considerable amount of debate and animosity in Brazil’s congress and society (chapter 6, section 6.2).

The timeframe (2005–2015) was selected on the basis of the ACF principle that no process of policy change or of coalition dynamics can be analysed over less than a decade. Additionally, this time period is characterised by a series of changes in other environmental policies (as already mentioned), which points to a potentially generalisable trend of regulatory and policy change that has not yet been subjected to sufficient systematic academic analysis. Finally, the selection of this time period allows for a clear observation of the supposed differences in environmental policies resulting from the change in government from Lula da Silva (2003–2010) to Dilma Rousseff (2011–2016), a factor frequently raised in interviews and in the literature as relevant for changes in environmental standards in the country (interviews 9, 42; Castro and Motta, 2015).¹⁰

1.3. Research Design

This is a small-n qualitative study based on the comparative analysis of three case studies, featuring case-by-case analysis and within-case comparison based on historical process-tracing, content and narrative analysis. The three cases selected are of highly salient and adversarial regulatory changes in Brazilian environmental regulations that occurred between 2005 and 2015. Because they are all highly adversarial and involve high levels of complexity and uncertainty (a domain familiar to ACF-based analyses), they characterise ‘most-likely tests’ for the assumptions of the ACF regarding the importance of the four sources of policy change analysed (Nohrstedt, 2010, p. 311). These cases are particularly easy tests for policy oriented learning and negotiated agreement (most-likely cases for them to occur) due to the many technical uncertainties and risks associated with the different policy alternatives. These were however, precisely the two variables that (counter-intuitively) were not identified as relevant necessary sources of regulatory change in two of the three cases studied. Therefore, in addition to ‘most-likely tests’ of the hypotheses of the ACF,

¹⁰ The Minister of the Environment, Izabella Teixeira (2011 – 2016), and President Dilma Rousseff (2011 – 2016) have been noted in interviews and in the literature as provoking a change in the administrative style of the Ministry of Environment, which had previously been considered a ‘governmental environmental activist’ but after their mandates was seen as acting more in accordance with other ministries (such as agriculture and government) and to be promoting systemic government priorities such as economic development.

these cases can also be characterised as ‘most-similar cases’ with different outcomes in terms of negotiated agreement and policy oriented learning (Mill, 1843).

One of the merits of this research design, therefore, is that it allows for within-case comparison. Processes of policy change are compared and contrasted across the three cases and this exercise allowed for the identification of important empirical factors that are not directly considered by the framework but which affected the results obtained by this analysis (such as, for example, the distribution of power among the coalitions in each of the cases). This is a particularly unique contribution to ACF research - which is most frequently based on the analysis of single case-studies – and, therefore, provides a crucial opportunity for theory development.

The case study approach, defined as “the detailed examination of an aspect of a historical episode to develop or test historical explanations that may be generalizable to other events” (George and Bennett, 2005, p. 5), was chosen because it can be used for cumulative knowledge-building, both in terms of empirical and theoretical knowledge. According to George and Bennett (2005, p.9), case studies are useful for theory development and can incorporate both material and ideational variables across a large spectrum of epistemological traditions. Finally, case studies allow for the detailed examination of causal mechanisms and for the inductive observation of any unexpected intervening variables in the operation of the specific causal mechanisms under investigation – which may contribute to theory development. This is seen as a particularly well-suited strategy for applying new and still largely untested (at least in the Brazilian context) theoretical frameworks, such as the ACF.

Theory-oriented historical process-tracing is used to assess whether the causal mechanisms established by this thesis’s revised version of the ACF – i.e. between the independent variables (internal events, external events, policy-oriented learning and negotiated agreement) and the dependent variable (policy change) – are in fact evident in the cases analysed. I hold that detailed historical understanding of social phenomena and their assessment, based on theoretical expectations, can contribute to the development of the ACF. Moreover, the low number of case studies and detailed case-by-case analysis allow for in-depth assessment, while comparison between them provides some room for generalisability, at least within the narrower context of Brazilian environmental policy.

1.4. Methods of Data Analysis and Collection

This section starts by describing the methods of data analysis used and the theoretical debates that directed the choice of methods. It sequentially presents the methods through which empirical data was collected, presents the data used, and assesses the potential limits and biases of the data and the strategies employed to attenuate these.

1.4.1. Methods of Data Analysis

The steps followed for the data analysis are summarised below, in the order they were pursued, and then explained in detail in the paragraphs that follow:

1. Country-level and subsystem historical process-tracing for the identification of relevant internal and external events.
2. Identification of the most salient subsystem-wide policy changes through measurement of the number of times different issues were mentioned in debates in the National Congress and the media (content analysis).
3. Identification of the main arguments (narratives) used in relation to the most salient policy debates through thematic coding. A typology of environmental policy discourses was used to facilitate the codification of narratives. This typology is presented in chapter 3. It was developed through the historical process-tracing of the main environmental debates in the country since the 1930s and through analysis of secondary literature.
4. Identification of coalitions and of the actors within each coalition through content analysis (thematic coding of actors' arguments and arguments' mapping).
5. Analysis of the content of final regulations and comparison with previous regulations in order to identify winning and losing coalitions.
6. Assessment of the relevance and reasons for the occurrence of policy-oriented learning and negotiated agreement through the observation of

specific criteria in debates (chapter 2 section 3 provides a description and justification of the criteria chosen)

In sum, the methods of data analysis used in this thesis were, firstly, process-tracing of relevant internal and external events (through secondary literature on the history of each subsystem and original data about debates). Following the definitions of the ACF of external events, the process-tracing focused, for instance, in the analysis of country-level socioeconomic indicators (i.e. imports and exports, economic production), governing coalition change (i.e. the composition of the Congress) and presidential campaign donations. For the analysis of internal events, on the other hand, inputs from the secondary literature were organised in order to build a historical overview of the regulatory regimes under investigation, which paved the way for a more detailed subsequent analysis of the 2005–2015 period. A saliency analysis of the most salient regulatory changes occurring in the subsystem between 2005 and 2015 was pursued by counting the number of the times that specific bills were mentioned in publications of the National Congress News Agency over this period. After the identification of the most salient regulatory changes (or proposed regulatory changes) in each case, texts related only to debates about the most salient changes were examined for the identification of coalitions and narratives.¹¹

The identification of coalitions departed from Sabatier's (1998, p.103), definition of 'advocacy coalitions' as "actors from various governmental and private organizations who both (a) share a set of normative and causal beliefs and (b) engage in a non-trivial degree of co-ordinated activity over time". According to this definition, the two crucial aspects that should allow for the empirical identification of advocacy coalitions are shared 'core beliefs' and a 'non-trivial degree of co-ordinated activity'. 'Belief-systems' are described by the framework according to a tripartite and hierarchical structure involving: 1) deep core beliefs, 2) policy core beliefs, and 3) secondary aspects of beliefs. Deep core beliefs are related to fundamental normative and ontological axioms held by actors, which are close to religious beliefs. This is the highest level of the belief system hierarchy, constraining both policy core and

¹¹ Although it might be argued that analysing data only from a national venue would lead to the under-representation of international contributions and opinions, it is maintained, that based on the procedural rules of public hearings in the National Congress there is no formalised constraint for the presentation of international evidence in the National Congress.

secondary aspects beliefs. Policy core beliefs consist in policy positions that orient basic strategies for achieving core values. Policy core beliefs are described by the ACF literature as being either normative or empirical, reflecting ‘basic orientations or value priorities’ on the normative level or empirically including the ‘overall assessment of the seriousness of the problem, its basic causes, and preferred solutions for addressing it’ (which is referred to as ‘policy core policy preferences’) (Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014, e-book 45%). This level of belief is considered to be the fundamental ‘glue’ responsible for holding coalitions together and the most efficient guide to behaviour¹². Finally, the secondary aspects of a coalition’s belief system are associated with ‘narrower’ instrumental decisions such as decisions concerning administrative rules, budgetary allocations or desirable regulations (Sabatier, 1998, pp. 103–104).

In initial attempts to empirically identify coalitions according to the theoretical guidance of the ACF (trying to assess policy core beliefs and levels of non-trivial coordination among actors), several difficulties emerged. The difficulties lay in assessing actors’ normative beliefs through data that only contained actors’ statements in public debates or recorded interviews (corresponding to the empirical side of policy core beliefs or ‘policy core policy preferences’ in ACF’s terms). The difficulties were also related to the limitations imposed on the size and territorial scope of identifiable coalitions by the requirement of a ‘non-trivial degree’ of coordination among actors¹³.

First, in what concerns to the utilisation of coordination as a criterion for the identification of coalitions, the cases analysed by this thesis expose four challenges: first, because the cases refer to federal level regulations, the involved actors are not geographically proximate from each other and, therefore, have substantial spacial barriers for coordination (particularly in face of the continental size of Brazilian territory and severe limitations of transportations infra-structure that affect some areas of the country). Second, and especially regarding indigenous communities and small NGOs the lack of resources (internet, fuel for travelling to

¹² The analysis of different types of discourses in Brazilian environmental policies provided in chapter 3 refers to this level of beliefs.

¹³ These challenges of ACF’s definition of coalitions have been previously pointed out by critics who have highlighted the ACF’s concept of coalitions as too limited and inflexible a concept to be operationalised (e.g. Hajer, 1995; Fisher, 2003).

distant locations, availability of time) might represent considerable barriers to establishing 'non-trivial levels' of coordination even though these groups might sponsor similar positions and be willing to coordinate. Third, the lack of strong leaderships (counting both with sufficient resources and broad geographical scope) might be another impediment for coordination, which although happening regionally, might not reach the federal level and involve all interested actors. Finally, the lack of information channels that affect less developed areas of the country (which may have no internet, for example) might contribute to the difficulties of establishing national level coordination and leaderships.

Second, in relation to the usage of a set of common 'normative and causal beliefs' or 'core beliefs' as the basis for the identification of coalitions the challenges were predominantly methodological and refer to the difficulties of ascertaining normative beliefs through the analysis of publicly stated positions. It is proposed, therefore, that the identification of coalitions should continue to be based on policy core beliefs, but should be restricted to 'policy core policy preferences' or strictly speaking, those empirical/causal beliefs that are publicly stated. In other words, the difficulty faced in the operationalisation of ACF's original definition of coalition is that it was not possible (or reasonable) to infer normative beliefs from public statements. As a consequence, because relying on normative beliefs as a criterion would require a more in depth analysis of the beliefs of each of the actors investigated (with in depth interviews for the investigation of their underlying motivations and values for example), and because the research design and resource limits of this project did not allow for such a comprehensive assessment, the analysis will be based only on the empirical and publicly stated aspect of policy core beliefs.

It is important to remark, moreover, that the arguments that constitute these positions are perceived as dynamic. They might change over time as a result of changes in strategic calculations. Finally, the same actor might also adopt contradicting positions in different settings, making their categorisation as part of one, single coalition problematic. This was not, however, perceived to be a problem during the empirical analysis as actors tended to always have a dominant position. This thesis adopts, therefore, a slightly revised definition of coalitions, which are here conceptualised as *a group of actors within a specific policy domain (or subsystem) who, although not necessarily coordinating or possessing the same normative beliefs, adopts*

*the same positions in relation to a policy problem.*¹⁴ The importance of this revised definition of coalitions is fundamental for the successful application of the ACF to the Brazilian cases investigated by this thesis and contributes to theory development by emphasising important contextual and methodological aspects that have not yet been considered in previous applications of the framework.

As a consequence of this slightly different definition of coalitions (based on 'policy core policy preferences' rather than on normative beliefs), this thesis applies methods advanced by scholars who support the use of 'narratives' as an important empirical element in the study of public policies (e.g. Stone, 1989; Hajer, 1993; Fischer and Forester, 1993; Roe, 1994; Jones and McBeth, 2010; Jones, McBeth, and Shanahan, 2014; Ney, 2014; O'Bryan, Dunlop, and Radaelli, 2014; Jones and Radaelli, 2015). According to the 'Narrative Policy Framework' (NPF), a narrative is "a story with a temporal sequence of events unfolding in a plot that is populated by dramatic moments, symbols, and archetypal characters that culminates in a moral to the story" (Jones and McBeth, 2010, p. 329). Thus, a policy narrative contains four fundamental elements that can be identified through content analysis: 1) a setting – or basic assumptions; 2) characters – who can be specified as victims, heroes and villains; 3) a plot – advancing causal mechanisms and the relationship between the setting and the characters, and 4) a moral to the story – corresponding to the specific policy solution, goal or policy change proposal being advanced by the narrative (Jones and McBeth, 2010). Because narratives are necessarily associated with specific actors, narrative analysis was a useful tool for categorising actors into coalitions.

In addition to making coalitions more easily identifiable through the analysis of public statements, there are other advantages in associating ACF hypotheses with NPF methods. Both frameworks advocate a pluralist perspective of policy formulation and change, according to which a broad range of actors can be part of the policy process and not only traditional policy-makers. The NPF, however, allows for the use of public debates for the identification of relevant stakeholders, and

¹⁴ This definition of a coalition bears some similarity to Hajer's (1995, p. 65) definition of a 'discourse-coalition' as an "ensemble of (1) a set of story-lines; (2) the authors who utter these story-lines; and, (3) the practices in which this discursive activity is based". The two definitions cannot be entirely juxtaposed, however, due to the different ontological grounds from which they depart. As opposed to Hajer (1995), who describes story-lines as socially constructed and resulting mainly from socialisation and the emotional attachment of actors to particular groups and ideologies (driven by a 'logic of appropriateness'), I follow the assumption that, most of the time, the adoption of specific positions is based on strategic interests (cost and benefit instrumental calculations).

eliminates concerns that actors might not express their actual beliefs in these debates as beliefs are not ultimately relevant for the identification of coalitions. Additionally, the use of narratives (which are mainly in textual form) narrows the universe of potential data sources and modes of analysis to textual and content analysis.

In practical terms, therefore, coalitions were identified through the coding of the main arguments related to contentious points in the debates and through the categorisation of actors according to their position in relation to these contentious points. The different arguments were, in turn, organised according to four 'interpretive schemes' or 'discourses' historically used in Brazilian environmental debates (and presented in chapter 3)¹⁵ in order to facilitate cross-case comparison. The use of narrative analysis in association with a pre-defined typology of environmental discourses is supported by the NPF. According to Jones and McBeth (2010, p. 341),¹⁶ for example, this association helps to reduce the 'relativity' of the content expressed by narratives in different policy sub-systems and facilitates cross-case comparisons. Additionally, as suggested by Jones, McBeth and Shanahan (2014, p. 5), "NPF rejects the post-structural claim that narratives are completely relative" and suggest that any analysis has to begin from "a clear and concise operationalisation of policy narratives".

Finally, the assessment of policy-oriented learning and negotiated agreement is pursued through content analysis of the data collected. The former is assessed through the consideration of the relevance of technical information in actors' debates and the latter is considered according an analysis of specific observable implications, which are described in detail in chapter 2, section 2.3.

1.4.2. Methods of Data Collection and Data Utilised

The methods of data collection utilised during this analysis were: 1) review of secondary literature on the history of each environmental regime, 2) semi-

¹⁵ The ideological framework described in chapter 3 provided a systematisation tool in a way that allowed for the comparison of coalitions across cases. It was not meant to imply that actors held the specific normative values associated with each of the discourses, but simply that their narratives could be associated with these shared interpretive schemes.

¹⁶ According to the authors: "A common assessment of narratives professed by post-positivists is that narratives are relative and thus immune to attempts at generalization and quantification. The NPF, as a structural approach to narratives, rejects such a claim. Rather, we suggest that to avoid the charge of relativity, narratives must be anchored in generalizable content to limit variability".

structured interviews, 3) review of media publications and publications of the National Congress News Agency, 4) attendance at and recording of public hearings of the National Congress and ministerial open meetings.

The interviews were pursued with policy-makers and actors of various affiliations who took part in debates about these three regulatory changes, in Brazil and London between September 2014 and July 2015. In total, 58 interviews were conducted and 57 of them were recorded over this period (one of the interviews was not recorded due to the request of the interviewee). The interviewees were selected based on snow-ball sampling, meaning that each interviewee was asked to recommend others that could contribute to the analysis. Relevant sections of the interviews were transcribed in Portuguese and translated into English when necessary for citations. In addition to the data collected through interviews, several documents were collected online to complement the analysis. The online archives of the National Congress News Agency were thoroughly searched through the use of its keywords search engine. Practically all articles published between 2005 and 2015 that mention the regulations under investigation were selected, read and content analysed. Additionally, the national media and websites (such as those of relevant NGOs) were searched and when opinion articles were found (revealing the positions of specific actors active in the debate) these were also used to complement the analysis. Some records of government officials' declarations at public events (such as Rio+20 or at the launch event of the new ABS law) were also transcribed and used when considered relevant (table 1 below provides a complete overview of all the documents used for the analysis of each case). Finally, notes and recordings from one public hearing of the National Congress about the new ABS law (11/11/2014), one roundtable of experts and representatives of indigenous communities (04/12/2014 at the University of Brasília), and one meeting of the National Commission of Chemical Safety (CONASQ) (26/11/2014 in Brasília) were also used both to provide background information and as evidence of the position of actors and coalitions.

One of the biases of the sources obtained regards the higher occurrence of environmentalist's positions in public debates. Argumentation and public awareness promotion was usually the only strategy that environmentalist groups had to advance their claims, which led their statements to be over-represented in the textual data collected. Business and economic groups, on the other hand, often did not have to

make their perspectives public in order to influence the course of regulatory changes, and often had privileged forums, negotiating their demands behind closed doors. These limitations were addressed through an active search for occasions when the positions of economic or business groups had to be made public (such as through analysis of the public hearings of the Lower Chamber, where all groups have to be represented) and through the interviews pursued with members of these groups. Additionally, even though their arguments were not always necessarily made explicit, the reactions and arguments of the environmentalist coalitions were, when possible, used as evidence of the position of these groups.

Table 1 - Data used in each case study

<p>Forestry</p>	<ul style="list-style-type: none"> • 6 opinion articles published in the newspaper <i>Folha de Sao Paulo</i>. • One public declaration by the environmental Minister Izabela Teixeira during the Rio+20 UN Conference. • 5 semi-structured interviews conducted in 2014; • 1,495 articles from the Lower Chamber News Agency, corresponding to all the articles containing the expression 'forest code' published between 2005 and 2015 on the Chamber's website. From these 1,495 articles, 207 articles were selected according to their relevance (based on their titles and summaries) for a more in-depth analysis.
<p>Pesticides</p>	<ul style="list-style-type: none"> • 30 articles from the Lower Chamber News Agency – selected based on the occurrence of the word 'pesticides' between 01/01/2005 and 15/07/2015 (all articles mentioning pesticides were analysed). The analysis was focused on those parts quoting or referring to the opinion of stakeholders. • 31 articles from the Senate News Agency – the selection criteria and analysis procedures were the same as above. • 3 semi-structured interviews conducted between September 2014 and July 2015 • 1 interview with a former member of ANVISA (the Brazilian 'National Health Surveillance Agency'), available online at the website <i>Determinantes Sociais da Saude</i>: http://dssbr.org/site/entrevistas/a-regulacao-fiscalizacao-e-normatizacao-do-uso-de-agrotoxicos-no-brasil/. • The transcription of a public hearing organised by the Commission of Agriculture and Land Settlement Reform of the Senate on the 2nd July, 2015 in order to discuss the process of pesticide registration. The invited speakers were: Ana Maria Vekic, general manager of toxicology of ANVISA; Júlio Sérgio de Britto, general coordinator of pesticides in the Ministry of Agriculture; Márcio Freitas, general manager of evaluation and control of chemical substances in the environmental agency IBAMA; Reginaldo Minaré, of the Brazilian Confederation of Agriculture and Cattle Ranching (CNA) and Silvia de Toledo Fagnani, executive vice-president of the National Union of the Industries of Vegetable Defence Products (SINDIVEG). Senators Ana Amelia (PP-RS - President of the Commission), Blairo Maggi (PR-MT), Waldemir Moka (PMDB-MS), and Donizete Nogueira (PT-TO) also participated in the debate, which was recorded and is fully available online at the 'Electronic Citizenship Portal' of the Senate (http://www12.senado.gov.br/ecidadania/visualizacaoaudiencia?id=4309). • Although not transcribed and coded, the author's participant observation in the 42nd meeting of the National Commission of Chemical Safety (CONASQ), which occurred on 26/11/2014 in Brasília, was used as background information for the analysis of the documents. Members of the executive government, research institutions and civil society were present at the meeting and one of the topics on the agenda was the discussion of bills that 'make pesticide control more flexible', particularly the

	change in registration procedures.
ABS	<ul style="list-style-type: none"> • 13 semi-structures interviews conducted with members of all coalitions between September 2014 and January 2015 in Brazil. • 47 articles published by the Lower Chamber News Agency found through a keyword search for bill '7735' and selected based on their relevance and usefulness in representing the position of specific actors. • The participation and transcription of one public hearing of the Lower Chamber (11/11/2014) when members of society were invited to debate the bill. • One roundtable of experts and indigenous communities' representatives on 04/12/2014 at the University of Brasília titled 'Sustainability in Indigenous Territories'. • 6 online articles about the topic published by the NGO <i>Instituto Socioambiental</i>. • 2 public declarations (letters) from civil society to President Dilma Rousseff on the topic. • 1 public declaration of 'businesses for the conservation and sustainable use of biodiversity'. • 6 newspaper articles (everything that could be found on the topic in the two largest Brazilian newspapers <i>Folha de São Paulo</i> and <i>Estado de São Paulo</i>). • 2 online articles addressing the position of the Brazilian Society for the Progress of Science. • 'Veto message' 147 of the president, published on of 20/05/2015 explaining the reasons behind presidential vetoes. • Public declarations made at the launch event of the new law on 20/05/2015 by President Dilma Rousseff and Minister Izabela Teixeira.

Source: Produced by the author

1.5. Overview of the Thesis

This thesis is organised as follows. After this brief introduction on the relevance of the topic, research design, and clarification of the methods of data analysis and collection, chapter 2 is dedicated to the description of the theoretical basis, implementation and observable implications of the four sources of policy change investigated, namely external events, internal events, learning and negotiated agreement. Chapter 3 will present the typology of Brazilian environmental discourses that was developed in order to allow for cross-case comparability of the types of arguments adopted in the debates of each case study. The first three chapters constitute the first section of the thesis (section 1).

Section 2 of the thesis presents the empirical research. It is formed of chapters 4, 5 and 6, which present the three case studies, forestry, pesticides, and access to genetic resources and benefit sharing, respectively. Each of the empirical chapters is divided into three parts: the first provides a historical overview of regulation in the subsystem and the most salient regulatory changes that occurred between 2005 and 2015. The second part presents the content analysis (thematic

coding of arguments and narrative analysis). It provides an assessment of the main active coalitions, and identifies their positions in the debate. This content analysis is restricted to debates related to those regulatory changes identified as most salient in the period analysed. The third part of each case study chapter is dedicated to an analysis of the four sources of policy change identified by the ACF and relies on the analytical strategies and observable implications which will be provided in chapter 2. One of the four sources of policy change, namely external events, is only debated in the first of the empirical chapters (chapter 4), as it is equally applicable to the other two cases.

Section 3 of the thesis is formed of chapters 7 and 8. Chapter 7 is dedicated to the systematisation of the main findings of section 2 and a cross-comparison of the three empirical chapters. The main findings and contributions of this thesis to the literature of public policy and regulations as well as to Brazilian environmental policy studies are also presented in chapter 7. Finally, the conclusion re-states the main findings and draws out the main implications of it for wider debates, highlighting, lastly, some of the avenues this thesis opens for future research.

CHAPTER 2 - ANALYTICAL FRAMEWORK I: THE ADVOCACY COALITION FRAMEWORK

2.1. Introduction

This chapter presents the main premises of the Advocacy Coalition Framework, their evolution over time, and how this thesis applies or qualifies them. The second part of the chapter (after this introduction) notes some of the difficulties in operationalising the framework and suggests ways of tackling these difficulties, particularly regarding the identification of coalitions and the association (advanced by the ACF) of policy changes with belief changes. In doing so, it qualifies some of the main assumptions of the ACF and refines the framework to make it more suitable for interest-based explanations. The third part of the chapter revises the four pathways to policy change proposed by the ACF and specifies the observable outcomes that will be investigated in this thesis in relation to each of them. Part 2.3.5 further refines the ACF by suggesting how the four sources of policy change interact. It also considers the importance of the context, in particular of the Brazilian context (or opportunity structure), for the analysis of these four sources of policy change, and suggests that Brazil is characterised by medium degree of consensus required for political decisions to take place and low openness of the political system.

2.2. The Advocacy Coalition Framework

The ACF was initially developed in 1988 in a seminal article published by Sabatier and Jenkins Smith (1988), which highlighted six key assumptions and premises upon which the framework is built.

First, in any policy debate *actors form coalitions*. Coalitions are groups constituted of individuals or collective representatives from different circles, including politicians, NGOs, regulatory agencies, social movements, scholars, journalists, private companies or any other active participants in a debate. The ACF states that to be part of the same coalition, actors should share a specific “belief system” and demonstrate a “non-trivial degree of coordinated activity over time” (Sabatier, 1988, p. 139).

Second, *policies are translations of the belief systems*. Therefore, “public policies or programs can be conceptualized in the same manner as belief systems, i.e. as sets of value priorities and causal assumptions about how to realize them” (Sabatier, 1988, p. 131).

Third, in addition to *significant perturbations external to the subsystem*, *technical information (or ‘policy research’)* is predicted by the ACF to *play a central role in the process of policy change* (Sabatier 1988, pp. 148–155).

Fourth, the ACF establishes that the understanding of processes of policy change and of learning necessitates a *time perspective of at least 10 years or more*. This premise implies a recognition that historical contextualisation is important (Sabatier, 1988, p. 131).

The fifth principle of the ACF points to *the importance of ‘policy subsystems’* as the most appropriate scale and unit of policy change analysis (Sabatier, 1988, p. 131). Policy subsystems are defined as “semi-autonomous decision-making networks of policy participants that focus on a particular policy issue” (Weible, Pattinson and Sabatier, 2010, p. 523). These systems contain several components that interact to produce policy results, namely, physical and institutional characteristics, belief systems and political resources. They are semi-autonomous but they interact and are nested in other policy subsystems. Usually, each policy subsystem accommodates between one and four main coalitions.

The sixth and final tenet of the ACF is that *individuals are boundedly rational*. Thus, although they are motivated by instrumental goals they have limited capacity to process stimuli and are often not certain on how to achieve them (Simon, 1997; Sabatier, 1988, p. 143). Bounded rationality includes a tendency to remember losses more easily than gains, and makes individuals prone to a phenomenon known as ‘devil shift’. Inversely related to trust, devil shift makes individuals perceive their opponents as being more powerful and capable of causing harm than they actually are (Leach and Sabatier, 2005; Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014; Weible, Pattinson and Sabatier, 2010).

Over the years, the ACF has been adjusted but continues to be built on these six key premises, which are at the heart of this thesis. The latter three premises described above (the importance of a time perspective of a decade or more, considering policy subsystems as the main units of analysis, and viewing actors as

boundedly rational) are not disputed and are wholly adopted by this thesis. The former three premises, however, are adopted here in a revised form, which stand in dialogue with, and advance, debates that are at the centre of more recent applications of the framework.

The revision of the assumption concerning the definition of coalitions (the first premise described above) has already been anticipated in the methodological debates in chapter 1, section 1.4.1. According to the perspective adopted here (which is based on the Narrative Policy Framework), actors do not have to display non-trivial degrees of coordination or shared normative belief systems in order to form a coalition but simply share the same ‘policy core policy preferences’ (or empirical, publicly stated positions) in relation to specific policy problems (or, in other words, the same narratives) (Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014, e-book 45%). Directly related to the revision of this first premise is the revision of the second, which proposes that policies as translations of beliefs. Although the framework assumes that policies “can be conceptualized and measured hierarchically like belief systems” (Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014, e-book 48%) this definition has not been found to be completely analytically operationalisable in the analysis of policy change due to difficulties involved in assessing normative beliefs with the kind of data collected (mainly public statements). Additionally, it takes an explanatory variable of the ACF (belief change) as a definition of the response variable (policy change). Hoberg (1996, p. 137) notices this problem in relation to learning becoming a synonym for policy change, which adds difficulties to the analysis. Building upon this criticism of the ACF, policies are not considered here to be translations of beliefs, but refer simply, as sustained by Dye (1972), to choices made by government to undertake some course of action. Policy change, therefore, refers to a change compared to previous governmental courses of action, which can be observed through noticeable changes in the content of policies or regulations.¹⁷ Finally, in addition to ‘technical information’, as emphasised by the third premise described above, any new source of information is considered here to be relevant for policy change. These revisions are debated in more

¹⁷ Although it might be argued that changes in the content of written regulations might not necessarily lead to changes in actual policy practices, it is maintained here that even if regulatory changes do not lead to changes in policy practices, they are a good indicator of the predominant intentions of the dominant coalitions and of the most likely direction of future changes in policy practices.

detail in chapters 7 and 8, which advance the main contributions of this thesis to the ACF.

Regarding the drivers of policy change, although initial versions of the framework only considered the role of events external to the subsystem and of policy learning, later versions highlighted the importance of including negotiated agreement and internal subsystem events as an important motivators of policy change (Sabatier and Weible, 2007, p. 204). The inclusion of these new drivers was in response to criticism about the unsuitability of the ACF for the analysis of corporatist European regimes (as opposed to the traditionally adversarial American reality in which it was born) and to the perceived need to include insights from the ‘focusing events’ literature (Kingdon, 1995; Birkland, 1997, 1998, 2004), which emphasises the importance of subsystem shocks and scandals in tipping the balance of power among coalitions (Sabatier and Weible, 2007, p. 204). The resulting and most recent hypothesis of the framework in relation to policy change is the following:

Significant perturbations external to the subsystem, a significant perturbation internal to the subsystem, policy-oriented learning, negotiated agreement or some combination thereof, are necessary, but not sufficient sources of change in the policy core attributes of a governmental programme (Weible & Nohrstedt 2013 p.133).

The next section describes and analyses each of these four sources of policy change, both in terms of the original causal pathways linking them to policy change as proposed by the ACF, and of the version advanced by this thesis, which is a slightly adapted version based on the revised premises presented above.

2.3. Analytic Parameters and Observable Implications

This section describes each of the four sources of policy change identified by later versions of the ACF. It considers the causal pathways through which each of these drivers leads to policy change as proposed by the framework, and emphasises the importance of considering the role of coalitions’ interests as an important motivation for policy change. It relies on a distinction between sources of policy change (explained in the previous section), causal mechanisms and observable outcomes as advanced by the ACF literature. Causal mechanisms are understood here

to refer to the underlying mechanisms through which change takes place. The ACF literature refers to five distinct types of causal mechanisms leading to policy change, namely the redistribution of resources among coalitions; the mobilisation by minority coalitions to exploit an event; heightened public and political attention to an issue; learning and analytical debate (Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014, e-book, 48%). It maintains that the observable outcome (or final result) of all these five phenomena is a process of change in policy core beliefs – which as observed in the previous chapter is constituted by both a normative aspect which reflects the ‘basic orientations or value priorities’ and an empirical part, characterised by the ‘overall assessment of the seriousness of the problem, its basic causes, and preferred solutions for addressing it’. Accordingly, I maintain in this thesis that the change in the empirical aspect of core beliefs corresponds to changes in interests (or calculations of costs and benefits between coalitions), and that this aspect should be given more emphasis as an underemphasised observable outcome of the ACF (Nohrstedt, 2010, p. 325). I elaborate moreover, on the causal mechanisms involved in the operation of negotiated agreement, which is still an under-studied source of policy change within the ACF. Below, I present a summary of the ACF’s sources of policy change, causal mechanisms and observable outcomes (table 2), followed by my slightly more elaborated version (table 3). Each of the lines of these tables will now be explained in detail.

Table 2 - Summary of ACF's sources of policy change, causal mechanism and observable outcomes

Source of policy change	Causal mechanism	Observable outcomes
External events	<p>Redistribution of resources among coalitions</p> <p>Mobilisation by minority coalitions to exploit the event ('framing contests')</p> <p>Heightened public and political attention to the issue/agenda change</p> <p>Learning</p>	Change in policy core beliefs
Internal subsystem events	<p>Redistribution of resources among coalitions</p> <p>Mobilisation by minority coalitions to exploit the event ('framing contests')</p> <p>Heightened public and political attention to the issue/ agenda change</p> <p>Learning</p>	Change in policy core beliefs
Learning	Analytical debate (consideration of new technical information)	Change in policy core beliefs
Negotiated agreement	Not specified – the framework only specifies the factors that foster negotiation, but not how negotiation leads to policy change.	Change in policy core beliefs

Source: Produced by the author based on the review of Sabatier, 1988; Sabatier and Weible, 2007; Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014; Nohrstedt and Weible, 2010.

Table 3 - Sources of policy change, causal mechanisms and observable outcomes proposed by this thesis

Source of policy change	Causal mechanism	Observable outcomes
External events	<p>Redistribution of resources among coalitions</p> <p>Mobilisation by minority coalitions to exploit the event ('framing contests')</p> <p>Heightened public and political attention to the issue/agenda change</p> <p>Learning</p>	Change in policy core beliefs
Internal subsystem events	<p>Redistribution of resources among coalitions</p> <p>Mobilisation by minority coalitions to exploit the event ('framing contests')</p> <p>Heightened public and political attention to the issue/ agenda change</p> <p>Learning</p>	Change in policy core beliefs
Learning	Analytical debate (consideration of new technical information)	Change in policy core beliefs
Negotiated agreement	<p>Frequency with which coalitions seek to influence decisions through instruments that are not based on personal interaction and negotiation (such as vetoes, amendments and judicial actions)</p> <p>Change in the number of venues used by actors during the negotiation process.</p> <p>The incidence of 'devil shift'</p>	Change in policy core beliefs

Source: produced by the author

2.3.1. External Events

External policy events or factors are defined by the ACF as changes in socioeconomic conditions, public opinion, the systemic governing coalition or other policy subsystems (Sabatier and Weible, 2007, pp. 198–199). As opposed to 'relatively stable parameters' (such as the basic attributes of the problem area, the distribution of natural resources, fundamental sociocultural values and social structure, and basic

constitutional structure), external events commonly change over a period of ten years, making their consideration crucial for the analysis of policy changes (Jenkins-Smith *et al.*, 2014).

The literature considers at least four mechanisms or causal pathways through which external events lead to policy change. First, external events may cause the redistribution of resources among coalitions, such as changes in access to authority, financial resources or technical information that make specific groups more or less powerful (Sabatier and Weible, 2007; Nohrstedt and Weible, 2010). Second, minority coalitions might pursue a 'skilful exploitation' of particular events (Mintrom and Vergari, 1996). In this case, policy changes are dependent on how ready and capable minority coalitions are to take advantage of 'windows of opportunity' to promote changes (Kingdon, 1995). Third, external events may lead to policy change through heightened public and political attention around the topic (Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014, e-book, 48%), which ultimately contributes to the possibility of the redistribution of resources and of skilful exploitation of the event by minority coalitions. Finally, the ACF holds that external events lead to policy change through learning (Sabatier and Jenkins-Smith, 1999, p. 123)¹⁸.

As observed in table 2, the observable outcome of the operation of these four mechanisms is the changes in policy core beliefs. I agree with this interpretation but emphasise the importance of also considering changes in interests (calculations of losses and gains) as an important aspect of policy core beliefs. In addition to being more easily identifiable than the normative side of core belief changes with the data obtained for this research, the importance of upgrading "interests as a separate category of motives guiding coalition behaviour" (Nohstedt, 2010, p. 325) has been frequently emphasised in the ACF literature (Nohrstedt, 2005; Nohrstedt, 2010; Hoberg, 1996; Hann, 1995; Ladi, 2005; Szarka, 2010; Schlager, 1995).

¹⁸ Although the framework treats learning and external events as two distinct paths to policy change, the framework clearly states that "changes in policy core aspects of a governmental program require a perturbation in non-cognitive factors external to the subsystem" (Sabatier and Jenkins-Smith, 1999, p. 123). Following this basic argument, learning is also considered here as a possible pathway through which external events lead to policy change.

2.3.2. Internal Events

As mentioned before, more recent versions of the ACF have added internal events to the group of relevant sources of policy change (Sabatier and Weible, 2007, p. 198). These events can be of various types, including “crises, policy fiascos, scandals and failures” (Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014, e-book, 48%). Nohrstedt and Weible (2010, p. 20) propose a two-dimensional typology to categorise internal events: 1) policy proximity and 2) geographical proximity to the subsystem under investigation. The former denotes “the degree that policy subsystems share policy design components such as a subsystem’s statutes, laws, and policies, including the instruments, ideas, and symbols therein”, the latter refers to the physical location where the event takes place. The main idea is that the higher the geographical and policy proximity of the event, the greater the likelihood of policy changes as a consequence of internal events. Nohrstedt and Weible (2010) do not, however, discard the idea that more distant crises might provide strong impetus for change through policy transfer and learning.

Internal events are said to promote policy change through the same causal mechanisms as external events (Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014, 48%)¹⁹. Following this logic, the main observable implication of internal events would also be belief change, according to the ACF. They differ, nonetheless, in terms of the way through which they are assessed. While external events refer to macro-political, economic and ideational changes, internal events will use historical process-tracing to assess the specific events characterising the history of the subsystem analysed, such as crises, media scandals, policy fiascos and international regulations in the same policy area.

2.3.3. Policy-oriented Learning

The third main pathway to policy change advanced by the ACF is policy-oriented learning. This is defined as “relatively enduring alternations of thought or behavioural intentions that result from experience and/or new information and that

¹⁹ However, because they more directly point to failures in the policies and behaviours of a subsystem (Sabatier and Weible, 2007, p. 205), the links between internal events and policy change might be more explicit and easier to trace.

are concerned with the attainment or revision of policy objectives” (Sabatier and Jenkins-Smith, 1999, p. 123). As initially conceived by the ACF, policy-oriented learning occurs when beliefs about the causes of a policy problem, its severity, and the potential impact of proposed solutions, change after new information and analysis is added to the debate. Sabatier (1988, p. 155) states that the first condition for policy-oriented learning to occur is that “both sides have sufficient technical resources to be able to criticize the other’s causal model and data”. It is, therefore, through the causal mechanism of “analytical debate among different coalitions” that actors refine their understandings of the seriousness, causes and consequences of the policy problem on the agenda (Sabatier and Jenkins-Smith, 1988, p. 155).

Technical/scientific information has, therefore, a crucial ‘enlightenment function’ that should be considered, according to the ACF, in any analysis of policy change through learning. Although the framework does not claim that this is a superior form of knowledge or the only one that may lead to learning, it states that scientific and technical information are a “major source” of influence on “belief systems” (Jenkins-Smith *et al.*, 2014, e-book 45%), and that external researchers (university scientists, consultants, policy analysts) are among the most central players in policy processes that lead to policy change (Sabatier and Weible, 2007, p. 192). Learning can also be a consequence of new insights precipitated by external or internal events, which must be mediated by analytical debate. Therefore, according to the ACF, the ultimate causal mechanism through which learning leads to policy change is analytical debate and the observable outcome of the impacts of analytical debate – similarly to the other factors – is belief change.

The production and use of scientific/technical information in ‘analytic debates’ remain, therefore, crucial in the identification of policy-oriented learning. Policy-oriented learning will be assessed in four ways. First, through the tracing of all of instances of the direct participation of scientists in debates (and in arguments) and in every quote of a scientific argument made by a policy-maker or other coalition member. Second, the analysis will identify whether scientific arguments have contributed to changes in the position of coalitions through a temporal analysis of the production of scientific evidence and any changes in the narratives of different actors and coalitions. Third, scientists’ own perception of their level of contribution and the receptivity of policy-makers to scientific arguments was assessed through interviews

and other declarations. Finally, in cases in which official scientific studies have been produced, the impact of these studies on the final policy or regulatory decisions was investigated through comparison of the scientific findings and final changes to the policy or regulation.

2.3.4. Negotiated Agreement

The concept of 'negotiated agreement' is defined by the ACF as "situations in which coalitions that have been fighting for decades come to a negotiated agreement representing a substantial change from the status quo" or, in other words, it refers to "agreements involving policy core changes [that] are crafted among previously warring coalitions" (Sabatier and Weible, 2007, p. 205). This concept emerged from a combination of the ACF's hypotheses about policy-oriented learning and inputs from the 'alternative dispute resolution' literature (e.g. Bingham, 1986; Carpenter and Kennedy, 1988; O'Leary and Bingham, 2003; Susskind, McKearnan and Thomas-Larmer, 1999; Ury, 1993). It was added to the framework in later versions in an attempt to tackle criticisms that the ACF was not suitable for the analysis of more consensual or corporatist European regimes (which are less adversarial than the US system, in the context of which the ACF was initially applied) (Sabatier and Weible, 2007).

Although the causal mechanisms through which negotiated agreement results in policy change are not clearly elucidated by any of the contributions to the framework assessed during this literature review, nine elements are proposed by Sabatier and Weible (2007, pp. 206–07) as drivers of negotiated agreement. These are: 1) a hurting stalemate – a situation in which all parties agree to negotiate seriously because they see the continuation of the status quo as unacceptable; 2) broad representation of all relevant stakeholder groups during negotiations; 3) leadership by neutral mediators or brokers; 4) consensus decision rules – related to the inclusion of all parties in the negotiation and the granting of veto power to all of them; 5) funding for negotiations from diverse coalitions; 6) commitment by actors – characterised by continuous meetings with regular participation; 7) the importance of empirical issues, i.e. the seriousness of a problem and its causes, as opposed to normative issues; 8) trust – necessary for participants to listen carefully to each other's views and, 9) the

lack of alternative venues for negotiation, or of other alternative courses of action apart from negotiation (Sabatier and Weible, 2007, pp.205–06).

Apart from the observation that “the most important [element] for instigating negotiations between coalitions is a hurting stalemate” (Weible and Nohrstedt, 2013, p.132; Weible and Jenkins-Smith, 2016, p.24)²⁰ no other guidance is provided by the framework for the empirical observation of the mechanisms through which negotiated agreement leads to policy change. Thus, based on the nine motivators of negotiated agreement provided by the ACF and on the availability and nature of the data obtained during field work, this thesis proposes the use of three causal mechanisms to assess the impact of negotiated agreement in policy change:

- 1) How often coalitions seek to influence decisions through instruments that are not based on personal interaction and negotiation (such as vetoes, amendments and judicial actions). The analysis of this observable implication was based on the assumption that the higher the frequency of recourse to these non-agreement based mechanisms, the lower the level of negotiated agreement in the case.
- 2) The number of venues used by actors during the negotiation process. The assumption here is that the higher the number of venues used for negotiation, the lower the level of negotiated agreement. The logic underlying this assumption is that if coalitions restrict negotiations to specific institutional venues (for example, within the National Congress or within specific commissions within the National Congress) and do not seek to include other venues such as courts, other agencies or the media, that means that actors are satisfied with the level of collaboration that is taking place in that environment, so actors consider it legitimate to continue with it as the sole forum for debates (Weible, Pattinson and Sabatier, 2010). On the other hand, if the

²⁰ It is interesting to note in this regard that the identification of a hurting stalemate as the main factor leading to negotiated agreement and policy change bears close resemblance to explanations provided by the literature on ‘deregulation’, according to which the depletion of economic rents puts those previously satisfied with an earlier regulatory bargain in an unstable position, motivating them to seek new ways of rearranging the regime. See, for example, Stigler (1971) and Peltzman (1989).

debate is taken to courts, media, independent agencies or any other venue, it indicates less negotiation and more disagreement.

- 3) The identification of personal attacks and offenses during debates was also considered evidence of reduced levels of negotiated agreement. This implication was derived from debates about the phenomenon of ‘devil shift’, which refers to situations in which “actors tend to view opponents as being more powerful than they actually are” (Leach and Sabatier 2005, p. 494) and exaggerate their maliciousness (Jenkins-Smith *et al.*, 2014, 45%; Sabatier, Hunter, and McLaughlin, 1987).

2.3.5. Pathways to policy change and the impact of opportunity structures

a. Causal pathways

The previous independent analysis of each of the four sources of policy change and their respective causal mechanisms is clarifying in formal terms, but lacks a more realistic consideration of the interdependencies and overlaps between these four sources of policy change. This section intends to provide an analysis of the different potential causal pathways of policy change, or, in other words, of the different ways in which these four sources of policy change might interact to produce policy change. Two interdependencies that have been discussed in the literature will be emphasised. First, according to the ACF *learning depends on the occurrence of events that alter non-cognitive factors* and motivate the production and receptivity of actors to new technical information (Sabatier and Jenkins-Smith 1999, pp. 123–24). According to this view, therefore, external and internal events precede learning. Second, according to the ACF, negotiated agreement accounts for policy change only in situations in which “in the absence of major internal or external perturbations agreements involving policy core changes are crafted among previously warring coalitions” (Sabatier and Weible, 2007, p. 205). The concept of negotiated agreement was developed, therefore, to explain situations of policy change that seem to arise strictly from negotiation between the parties (and are not influenced by events). The dynamic reality of any real policy subsystem is, however, so distant from this static assumption that finding an instance in which negotiated agreement can be genuinely isolated and securely pointed out as ‘the’ pathway to policy change becomes unlikely –

a difficulty that has been noted by Weible and Jenkins-Smith themselves (Weible and Jenkins-Smith, 2016). This analysis suggests, as a consequence, that negotiated agreement should be brought back to the 'real world' of policies, and integrated into broader ACF causal pathways in a way that not only includes it but also advances the types of relationships that are to be expected between this and the other three sources of policy change. I argue therefore, based on the empirical findings of the ABS case, that in the same way that learning depends on external and internal events to change core aspects of a policy, negotiated agreement depends on learning (see figure 1, causal pathway 3). This proposition is seen as an original contribution of the empirical analysis of this thesis to the theoretical development of the ACF.

The importance of learning in the causal pathway that leads to negotiated agreement has also been emphasised by other authors who argue that negotiated agreement "can be conceptualised as a specific form of policy-oriented learning" (Mauersberger, 2014, p. 58). This thesis departs from this assertion, however, investigating learning and negotiated agreement as separate phenomena. It does acknowledge, nonetheless, that negotiated agreement requires learning among coalition actors in order to occur. Learning is, therefore, considered here an intermediate variable that leads to negotiated agreement (see figure 1, below, which summarises the relationship between the four sources of policy change).

Although negotiated agreement is empirically found by this analysis to require learning between coalitions in order to take place, an interpretation of ACF literature points to the hypothesis that learning does not necessarily entails negotiated agreement. This latter situation was represented by line 2 of figure 1 (below). In these cases, learning might lead to policy change without implying the necessity of negotiations, simply by redistributing resources and progressively altering the cost and benefit calculations of different courses of action. However, because none of the case-studies analysed in this thesis provided an example in which only learning occurred (without negotiated agreement), this specific pathway of policy change is not empirically assessed by this thesis.

Line 1 corresponds to situations in which external and internal events alter incentives (costs and benefits) and redistribute resources to effect policy change even without learning or negotiated agreement taking place. These are situations in which power resources (such as political power or public opinion support) are concentrated

in one of the coalitions to such an extent that cognitive debate is minimal and unnecessary in the process of policy change. Both internal and external events were considered in tandem in terms of the extent of their impact because the empirical material did not provide us with situations in which it is possible to analytically separate both.

Line 3 refers to situations in which a hurting stalemate occurs, leading to negotiated agreement. The definition of a hurting stalemate was inspired by the collaborative governance literature (e.g. Ansell and Gash, 2008; Emerson, Nabatchi, and Balogh, 2011; Hudson, Hardy, Henwood and Wistow, 1999; Thomson and Perry, 2006; Wood and Gray, 1991) and consists of three criteria:

1. *Consequential incentives* – situations that present issues as salient to participants and the timing and pressure for their solution as ripe.
2. *Interdependence* among actors.
3. *Uncertainty*.

The resulting causal pathways arising from the interpretations, systematisation and elaborations of the ACF literature provided in this section are the following:

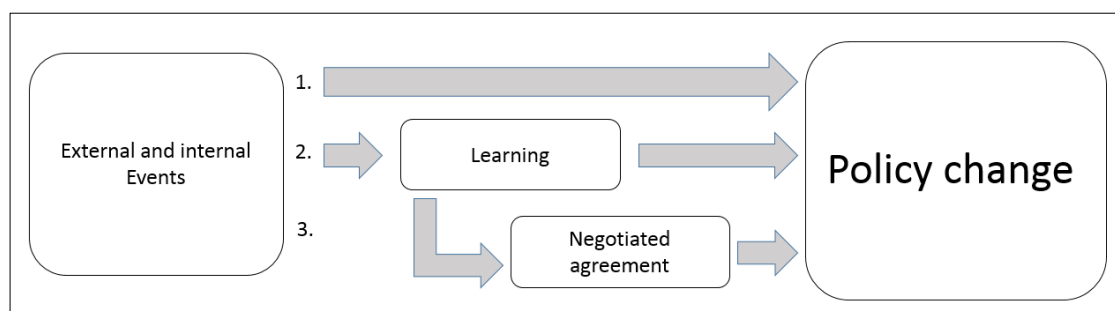


Figure 1 - The relationship between different sources of policy change
Source: produced by the author

b. Opportunity Structures

The characteristics of the events, subsystems (in particular, the distribution of power among the actors involved) and the overall context of the country (which also impacts the distribution of power among actors) are important factors in determining

which of these three paths of policy change will occur. Regarding the characteristics of the context in determining which of the pathways will manifest, the ACF provides a relevant debate about the ‘opportunity structures’ of different countries (Sabatier and Weible, 2007, p. 200). Defined as “relatively enduring features of a polity that affect the resources and constraints of subsystem actors”, opportunity structures are country-specific institutional features that affect the resources and behaviour of coalitions. Sabatier and Weible (2007) borrow two types of variables from Lijphart’s (1999) work to describe what affects coalitions’ resources and behaviour. These are:

- 1) The degree of consensus needed for major policy change.
- 2) The openness of the political system.

The first criterion relates to the majoritarianism versus consensus dimension, used by Lijphart (2009, pp. 1–2) to categorise types of democracies. This criterion holds that democracies can be placed somewhere on a continuum between adversarial majoritarian democracies – in which simple majorities tend to win – and ‘negotiation’ or consensus democracies – in which negotiation and bargaining matter more and the central goals tend to be that decisions are as inclusive as possible. Typical examples of the first are the UK and New Zealand, while the second type is represented by countries such as Switzerland, Austria and the Netherlands.

The second criterion identified by Sabatier and Weible (2007, p. 200) is *openness of the political system*, and is associated with the notion of the ‘diffusion of power’ described by Lijphart (1999, p. 5). Following this notion, countries might be differentiated according to whether responsibility for outcomes is seen as collective and jointly shared by all institutions, or whether it is seen as divided between them. Countries such as the US, which features rigid separation of powers, several decision-making venues organised in federal units, in addition to a strong culture of accessibility to these venues, represent the most open type of political system – in which power is extremely diffuse. In contrast, countries in which decisions are restricted to central government authorities, which do not share responsibility with other units or institutions (usually unitary and corporatist systems), or which have a more paternalistic culture with less popular involvement in decisions (such as Brazil) exemplify a less open type of political system.

As a result, Sabatier and Weible (2007, p. 201) propose that when countries have limited needs in terms of consensus (i.e. are majoritarian), but open political systems (diffuse power), they characterise ‘pluralist systems’. In these systems, many can participate in political decision-making but their participation requires super-majorities to have any impact. ‘Corporatist’ structures, on the other hand, are described by the authors as having high requirements in terms of consensus, but as being relatively closed to participation (i.e. power is concentrated). Westminster systems, in turn—are described as having low requirements for both consensus and participation. Decisions tend to be highly centralised in this latter type of system. They are not as centralised, however, as many developing countries, which are characterised as ‘authoritarian executive’ regimes. Table 1, below, reproduces Sabatier and Weible’s (2007, p. 201) categorisation:

Table 4 - Typology of coalition opportunity structures

Openness of Political System	Degree of Consensus Needed for Major Policy Change		
	High	Medium	Low
High	Pluralist	Pluralist	
Medium	Recent Corporatist	Westminster	
Low	Traditional Corporatist		Authoritarian executive

Source: Sabatier and Weible, 2007, p. 201

The characteristics of Brazilian political system and Brazilian society shall, in turn, be considered as they directly impact the opportunity structure of coalitions to exploit internal and external events. An analysis of the dimensions²¹ advanced by

²¹ Lijphart (1999, p. 3-4) provides ten crucial dimensions for the analysis of democracies, which are divided in two categories, those related to executive-parties’ organisation and those associated with federal-unitary characteristics. These 10 dimensions are fully reproduced below:

Executives-parties dimension

- ‘1. Concentration of executive power in single-party majority cabinets versus executive power-sharing in broad multiparty coalitions.
2. Executive-legislative relationships in which the executive is dominant versus executive-legislative balance of power.
3. Two-party versus multiparty systems.
4. Majoritarian and disproportional electoral systems versus proportional representation.
5. Pluralist interest group systems with free-for-all competition among groups versus coordinated and “corporatist” interest group systems aimed at compromise and concertation.’

Federal-unitary dimension

Lijphart (1999 p. 3-4) for the characterization of democracies as consensual or majoritarian indicates that Brazil cannot be easily categorised neither as a majoritarian nor as a consensual democracy. Brazil is a presidential, federalist country, with a clear separation of powers between the legislative, the executive and the judiciary. This should, according to Lijphart (1999), imply in high levels of consensus requirements due to the need of agreement between the different powers, and the different states of the federation. On the other hand, however, Brazil counts with several formal and informal 'majoritarian' mechanisms to promote governability and avoid gridlock which concentrate power in the president. Among these mechanisms are the possibility of issuing 'provisional decrees' (executive laws, with immediate effect); 'urgency petitions' – the capacity of the executive power to impose the prioritisation of certain issues in the voting process of the Congress, extensive executive budgetary powers (Pereira & Orellana, 2009 p. 58), the power to veto bills in part or in whole, and also extensive possibilities of political appointments, a practice according to which ministerial positions are allocated to diverse parties in order to assure political support of the Congress to the executive power. On an informal (and often illegal) level, the mobilisation of resources to bargain the support of the legislative power has also been extensively used by the executive power, as attested by recent corruption scandals such as the *Mensalão* (in 2004) and the *Petrolão* (in 2014), both related to the illicit remittance of public money from the executive power to law makers in exchange for political support. As a consequence, the executive tends to have extensive powers, which although not turning the Brazilian system in an 'authoritarian executive'²² (due to the division of powers and federal system), places it, at least in the middle of the consensus variable spectrum (table 5).

'1. Unitary and centralized government versus federal and decentralized government.

2. Concentration of legislative power in a unicameral legislature versus division of legislative power between two equally strong but differently constituted houses.

3. Flexible constitutions that can be amended by simple majorities versus rigid constitutions that can be changed only by extraordinary majorities.

4. Systems in which legislatures have the final word on the constitutionality of their own legislation versus systems in which laws are subject to a judicial review of their constitutionality by supreme or constitutional courts.

5. Central banks that are dependent on the executive versus independent central banks.' (Lijphart 1999 p. 3-4)

²² As the recent case of removal of President Dilma Rouseff, in May 2016, from office by and impeachment trial coordinated by the Congress may attest.

Second, in what concerns to the openness of the Brazilian political system, although Brazil has a high number of decision venues due to the division of power between separate institutions and the federal system, the accessibility of these venues to different groups is considerably low. Characterised by a deep-seated history of clientelism and patronage according to which personal favours have been exchanged by political support and benefits (Nunes, 1997) for centuries, current political strategies are still largely driven by the capacity of politicians to use log-rolling and appointment tools (Valença, 2000). In this plutocratic context, access, voice and actual interference within political institutions tend to be relatively limited and conditioned to personal connections. For these reasons, the opportunity structure provided by Brazil is characterised here as presenting low levels of political openness. Table 5 demonstrates the position of Brazil within Sabatier and Weible’s (2007) categorisation of opportunity structures.

Table 5 - Summary of Brazilian opportunity structure

Openness of political system	Degree of consensus needed for major policy change		
	High	Medium	Low
High	Pluralist	Pluralist	
Medium	Recent corporatist	Westminster	
Low	Traditional corporatist	Brazil	Authoritarian Executive

Source: Produced by the author with inspiration from Sabatier and Weible (2007 p. 201)

Accordingly, this opportunity structure analysis will be used to put this thesis’ results in context when drawing implications from the empirical analysis.

2.4. Conclusion

As maintained by this chapter, at least three main analytical issues will be addressed by this thesis. First, the empirical analysis will engage with Weible and Nohrstedt’s (2013) hypothesis regarding the necessity, but insufficiency, of the four sources of policy change. In this process the observable implications of each of the four factors will be analysed, the explanatory power of the causal pathways will be assessed, and the empirical validity of the theoretically-derived relationships between the four factors (figure 1) will be tested (when allowed by the case-studies). Second,

the analysis will emphasise changes in interests as part of what constitute changes in policy core beliefs. This effort directly contributes to the development of the framework and to arguments in favour of a more explicit incorporation of interest-based explanations in the formulation of the ACF (Nohrstedt, 2005; Nohrstedt, 2010; Hoberg, 1996; Hann, 1995; Ladi, 2005; Szarka, 2010; Schlager, 1995). Third, the specific characteristics of the events and subsystems that are conducive to learning and negotiated agreement will be scrutinised, aiming to contribute to the debate on the reasons for the occurrence of different paths to policy change. Finally, this analysis will consider the empirical impact of the 'opportunity structures' of Brazil in policy change through a comparison of the results obtained in the three cases, thereby contributing to the use of the ACF in the Brazilian context.

CHAPTER 3 - ANALYTICAL FRAMEWORK II: BRAZILIAN ENVIRONMENTAL DISCOURSES

3.1. Introduction

The ACF hypothesises that “actors within an advocacy coalition will show substantial consensus on issues pertaining to the policy core [beliefs]” (Sabatier and Jenkins-Smith 1999, p. 124). This chapter will develop a framework of policy core beliefs or interpretive schemes that appear in Brazilian environmental policy debates past and present. This will allow for the later categorisation of arguments and actors according to specific interpretive schemes facilitating cross-case comparison in terms of coalitions. I do not assume, however, that the narratives (or discourses) adopted by actors is necessarily a manifestation of their core beliefs. It is acknowledged here that discourses may be used strategically and might be both a consequence of cost and benefit calculations, or be strategically used to redistribute resources among coalitions (i.e. enhancing the legitimacy of specific positions).

This framework was developed through a theoretically-guided analysis of the history of Brazilian environmental debates. The four discourses are considered to be exhaustive and mutually-exclusive narratives adopted by actors across different environmental debates. The framework was developed on the basis of theoretical inputs from Cultural Theory²³ (Douglas and Wildavsky, 1982; Hood, 1998; Hoppe, 2002; Verweij *et al.*, 2006), a ‘checklist’ of items for the analysis and scrutiny of environmental discourses developed by Dryzek (2013, p. 20), and by the Narrative Policy Framework (Jones and McBeth, 2010)²⁴. These theoretical guidelines (what

²³ Other authors have already begun to apply Cultural Theory to the analysis of coalition formation (see, for example, Ripberg, Jenkins-Smith and Herron, 2011) and this approach is considered to be part of the future research agenda of the ACF (Jenkins-Smith *et al.*, 2014).

²⁴ The necessity of identifying a framework of recurrent interpretive schemes (or discourses) arises from the considerations of previous scholars concerning the difficulties of generalisation, quantification and cross-case comparison entailed in the unguided (or exclusively inductive) identification of narratives. According to Jones and McBeth (2010, p. 341), this method might lead to a situation of excessive relativity in which so many different views are identified among actors that they become useless for cross-case comparison. They, therefore, emphasise the importance of anchoring analyses of different views in generalisable content in order to avoid the problem of excessive relativity, a recommendation

should be looked for in the identification and analysis of discourses) are applied in the analysis of secondary literature on the history of Brazilian environmental movements and perspectives, and of primary data gathered during fieldwork (such as interviews and analysis of National Congress and media debates) for the identification of the four discourses.

Whilst the discursive framework was developed specifically for this analysis, it is based on four main secondary sources: first, on Hochstetler and Keck's (2007) seminal analysis of the three distinct waves or defining periods of Brazilian environmental movements. Second, on studies of the new ideological orientation and the redefinition of Brazilian economic policies after the election of President Lula da Silva, from the Worker's Party in 2003 (i.e. Bresser-Pereira, 2009; Panizza, 2013; Trubek, 2014; Trubek *et al.*, 2014). Third, on analysis of the history and political importance of the 'extractivist movement' of Amazonian rubber tappers for Brazilian environmental policies and laws (e.g. Santilli, 2005; Inoue and Franchini, 2014; Inoue and Lima, 2007; Hochstetler and Keck, 2007). Finally, insights provided by Dryzek on environmental discourses in general were adapted to the Brazilian context. With the exception of one of the discourses ('administrative economic rationalism', which is a mix of two different discourses described by Dryzek), the labels and characteristics of the discourses were entirely drawn from the literature.

This thesis provides an original contribution by systematising the insights from these different sources into one unified theoretical framework, as well as by providing a more in-depth characterisation of each of these views in context. The framework has two advantages. On the one hand, it constitutes a potentially useful contribution to other analyses of Brazilian environmental politics as these categories can be easily applied to any area of Brazilian environmental debates. On the other hand, because they have been developed according to the history and analysis of the Brazilian context, they might not be as well suited to the analysis of other contexts (even though the insights derived from Dryzek's checklist for the analysis of environmental discourses are easily transferable). It is argued, as a consequence, that this framework provides an adequate balance between parsimony and detailed, in

which is followed here. The use of narrative analysis (via the pre-defined typology of environmental discourses presented in this chapter) is, therefore, not only compatible with, but expands on, recent additions to the ACF.

depth, contextual analysis. It takes into consideration the important role of domestic processes²⁵ in the definition of Brazilian environmental perspectives but still provides categories that are generalisable, at least within Brazilian environmental debates.

This chapter proceeds as follows. After this brief introduction, section 3.2 presents the theoretical base for the analysis of different Brazilian environmental discourses. It explains Dryzek's (2013) framework for the analysis of environmental discourses and the adaptations undertaken for its use in this thesis. Section 3 identifies the four environmental discourses predominant in Brazilian environmental debates according to the data on Brazilian environmental debates obtained for this research and secondary literature. It describes the main characteristics and history of each of the four discourses according to the features of environmental discourses highlighted by Dryzek, cultural theory and the Narrative Policy Framework. The four discourses are preservationism, socio-environmentalism, administrative economic rationalism and neo-developmentalism. Together they offer an exhaustive and mutually exclusive list of the main interpretive schemes in Brazilian environmental debates between 2005 and 2015. Section 3.4 concludes by reinstating the relevance of this discursive framework for the analysis of coalitions and of the ACF's hypotheses about coalition formation and policy change.

3.2. A framework of Brazilian Environmental Discourses

A *discourse* is "a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them into coherent stories or accounts" (Dryzek, 2013, p. 9). This definition is different from the definition of *policy core beliefs* provided by the ACF, (which "represent a coalition's basic normative commitments and causal perceptions" [Sabatier and Jenkins-Smith 1999, p. 121]), because it emphasises the importance of 'language' and of interpretation instead of 'basic normative commitments'. It is therefore perceived

²⁵ Although stories about the international diffusion of environmental norms and institutions often portray countries like Brazil as receptor countries in the diffusion of transnational ideas and environmental institutions (see, for example, Finnemore and Sikkink, 1998), these macro-level studies tend to overlook the real mechanisms by which environmental perspectives develop in domestic countries and over-generalise complex national interpretations (Hochstetler and Keck, 2007; Inoue and Franchini, 2014).

to be more empirically observable than *policy core beliefs*, and for this reason it was adopted here.

The checklist of elements for the analysis of discourse advanced by Dryzek (2013, pp.17–20) is complemented in this section by insights from Cultural Theory and the Narrative Policy Framework. The resulting theoretical framework (which will now be described) is then applied to the analysis of the Brazilian context (through the investigation of secondary literature and primary data) in order to allow for the identification of the main Brazilian environmental discourses (see table 2)²⁶. Dryzek’s ‘checklist’ is based on two main criteria and four complementary ones.

The main criteria are, first, the degree to which a discourse takes ‘industrialism’ as given (meaning “the long dominant discourse of industrial society” [p. 12] and its drive towards producing goods and services as part of what is considered the most desirable achievement for society) and, second, the character of alternatives proposed, which can be either ‘prosaic’ or ‘imaginative’. Prosaic alternatives propose to solve problems but do not point to a new kind of society. Imaginative alternatives, on the other hand, “seek to redefine the chessboard” and “may dissolve old dilemmas, treating environmental concerns not in opposition to economic ones, but potentially in harmony [with them]” (p.15).

The four complementary criteria are: (i) ‘basic entities whose existence is recognized or constructed’, (ii) ‘assumptions about natural relationships’, (iii) ‘agents and their motives’, and (iv) ‘key metaphors and other rhetorical devices’ (see table 1 for a summary of Dryzek’s checklist for the identification of environmental discourses).

Table 6 - Summary of Dryzek’s Checklist of Elements for the Analysis of Environmental Discourses

1. The degree to which a discourse takes ‘industrialism’ as given (reformist or radical axis)
2. The type of alternatives proposed (prosaic or imaginative axis)
3. Basic entities
4. Assumptions about natural relationships
5. Agents and their motives
6. Key metaphors and other rhetorical devices

Source: Inspired by Dryzek (2013)

²⁶ Thus, although the resulting theoretical framework can be used for the analysis of other contexts, table 2 presents an application that is specific to the Brazilian context.

The 'basic entities whose existence is recognised and constructed' are referred to by Dryzek (1988; 2013) as the 'ontology' of a discourse. Entities such as ecosystem (which are recognised by some actors but not by all), different interpretations of human motivation (rational, egoistic, compassionate, etc.) and levels of analysis (states, populations, gender) are some examples of these basic entities. When Dryzek presents the analysis of discourses, however, the entities he identifies are as heterogeneous as 'finite stocks of resources', 'nature as a brute matter', 'liberal capitalism' and 'markets'. The lack of pre-defined entities to look for in this thesis hindered comparability between discourses and made the replicability of coding a daunting task. In order to address this difficulty and render this category of analysis comparable and replicable, insights from Cultural Theory have been used to restrict the analysis of the 'ontology' of environmental discourse to four specific 'views of nature'.

'Views of nature', 'myths of nature' or 'interpretations about ecosystem stability' refer to an analytical category originally developed by ecologists who studied the reactions of different ecosystem-managing institutions to certain situations (Holling, 1979; Schwarz and Thompson, 1990; Forsyth, 2003). Inspired by the work of Mary Douglas on Cultural Theory (1982), these authors categorised the 'myths of nature' as *capricious*, *tolerant*, *benign* and *ephemeral*. Nature as *capricious* comes from the fatalist orientation in Cultural Theory, in which world events and relationships are seen as random. There is no point, no logic and no learning involved in trying to manage the environment, as changes will occur regardless of any human attempt at control. A *tolerant* (also known as *perverse*) perspective acknowledges that humans can interfere with, and alter the balance of, the environment without risk, but only up to a certain point. After a certain threshold of interference there can be no return to equilibrium, so society should aim to establish rules that prevent this threshold being passed. This perspective is associated with the concept of 'hierarchy' in Cultural Theory, which suggests centralised control of behaviour by an authority. Nature as *ephemeral* describes nature as fragile and susceptible to major and possibly permanent changes. It presupposes a very cautious attitude towards environmental changes and degradation, involving all actors potentially affected ('egalitarian' in Cultural Theory terms) because everyone's potential to alter the equilibrium is very high. Nature as *benign* is the opposite of nature as *ephemeral*. In this view, nature is

resilient enough to be subjected to practically any human interference without its overall equilibrium being jeopardised. This understanding implies an ‘individualist’ mode of social organisation according to which everyone pursues their interests without the need to consider the whole (Schwarz and Thompson, 1990; Forsyth, 2003).

The graphical representation of these views is presented in figure 2. The line represents nature’s limits and the sphere’s potential movements stand for human interference, which is seen to alter environmental equilibrium in different ways. For instance, in the *perverse/tolerant* view of nature, human interference must reach a certain threshold before ecological balance is completely destroyed. In the *ephemeral* view of nature, the balance is very unstable and minimal interference might cause irreversible consequences. In *benign* nature we have the opposite perspective, while in *capricious* nature it does not really matter how humans interfere with the environment, as it is unpredictable how it would affect ecological equilibrium.

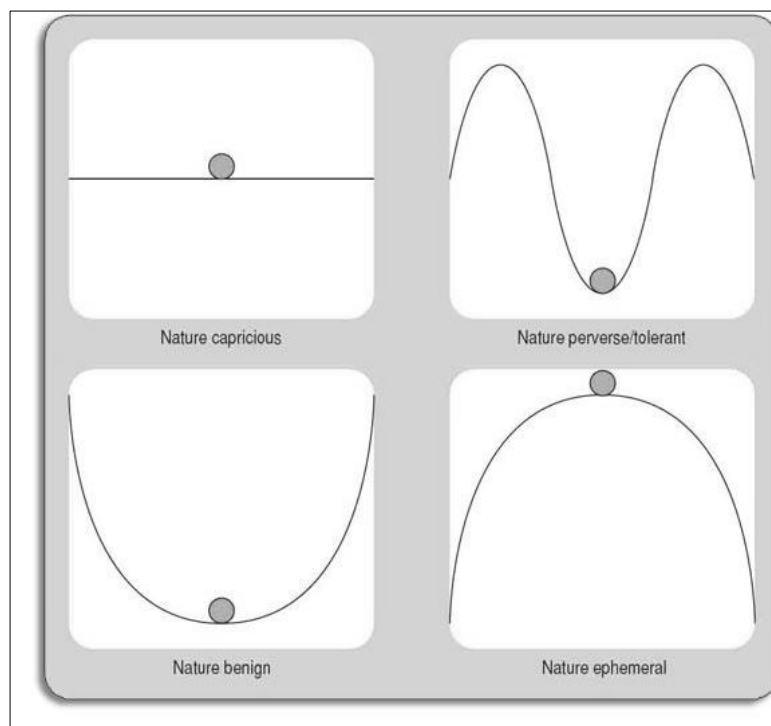


Figure 2 - The Myths of Nature

Source: Adapted from Schwarz and Thompson, 1990, p.5

Regarding ‘assumptions about natural relationships’, Dryzek (2013, p.18) observes that “all discourse embodies notions of what is natural in the relationships among entities” – which may comprise humans or natural environments. Dryzek mentions competition, cooperation and hierarchy as possible natural relationship

assumptions. In order to further specify and facilitate comparability across cases I have divided this criterion into two further criteria. First, the relationship between humans and nature, and second, relationships between humans. Drawing inspiration from Cultural Theory (which is close to Dryzek's categories), four codification possibilities are attributed to these two sub-criteria: hierarchical relations, cooperative relations, competitive relations and fatalistic/accepting relations. The observable implications emerging from each of these categories will be described in section 3, which will deal with the identification of each specific discourse.

The third complementary criterion of analysis advanced by Dryzek (2013) is 'agents and their motives'. Contrary to what the name might suggest, this category does not refer to those who actively participate in a debate, but it is defined as how individuals and collectivities, human and nonhuman actors, are portrayed in debates and the way in which their motivations are seen. In order to endow this criterion with more empirical utility and allow for higher levels of comparability between cases, it was operationalised through the definition of 'characters' provided by the Narrative Policy Framework, which involves an analysis of whether actors are described as villains, victims or heroes in other actors' narratives. The identification of similar villains, victims and heroes by different actors will be interpreted as a sign that these actors are employing the same conceptions in terms of 'agents and their motives'.

Finally, the fourth criterion proposed by Dryzek (2013) is 'key metaphors and other rhetorical devices', meaning figures of speech used as "rhetorical devices, deployed to convince listeners or readers by putting a situation in a particular light" (Dryzek, 2013, pp. 17–19). The main metaphors expected to be present in each discourse is briefly presented in table 7. Their identification was inductive and based on empirical data and secondary literature analysis. The identification process for this and the other six categories in table 7 is described and justified in the next section.

Table 7 - Ideology Frame of Brazilian Environmental Narratives

<i>Discourses</i> <i>Analytical Categories</i>	Neo-Developmentalism	Preservationism (Green ecology)	Administrative Economic Rationalism	Socio-environmentalism (Democratic Pragmatism)
Main story-line	'Only when we are sufficiently rich we can afford the luxury of caring about the environment'	Conservation of natural resources has an intrinsic value and must be pursued against all odds.	Governments shall help market actors to exploit natural resources, but also establish some controls and maintain the prerogatives to benefit from it.	Conservation of natural resources requires the protection of traditional communities.
Views of industrialism	Reformist	Radical	Reformist	Radical
Alternatives proposed	Prosaic	Imaginative	Prosaic	Imaginative
View of nature	Benign	Ephemeral	Tolerant	Capricious
Men versus nature relationship	Hierarchical	Cooperative	Hierarchical	Hierarchical
Men's relationship	Competitive	Hierarchical (strongly reliant on science)	Hierarchical	Cooperative/egalitarian
Key-metaphors and other rhetorical devices	<ul style="list-style-type: none"> • Progress; • Modernity • National self-sufficiency and self-determination; • Pragmatism; • 'Civilizing mission' • Private property is sacrosanct 	<ul style="list-style-type: none"> • Catastrophe; • Urgency; • Passionate personal stories; 	<ul style="list-style-type: none"> • Efficient use; • Sustainable development; • Control; 	<ul style="list-style-type: none"> • The 'noble savage' • Participative • People's rules • Alternative ontologies • Environmental justice

Source: Produced by the Author

3.3. The Four Discourses

This section describes the main characteristics and history of each of the four discourses identified, and supports the proposition that these four environmental discourses are and have been the main environmental discourses in the history of Brazilian environmental debates. It maintains that these four patterns are a jointly exhaustive and mutually exclusive list of the main perspectives in Brazilian environmental debates past and present. Their mutual exclusivity, however, refers only to specific arguments, meaning that it is practically impossible to accommodate two different types of discourses in the context of the same argument and preserve coherence. Although actors can still adopt different discourses under different circumstances, it was observed during the analysis of National Congress debates (between 2005 and 2015), interviews and media publications that the majority of

actors tended to maintain coherence and, when they did not, their predominant positions (or ‘policy core policy preferences’) could still be inferred so they could be categorised into coalitions²⁷.

As noted by Hochstetler and Keck (2007; 25% Chapter 2, Introduction, e-book), there were three distinct waves or defining periods of Brazilian environmental movements. The first occurred is the ‘developmentalist’ period (described below), which lasted from the early 1950s to the early 1970s, and gave rise to the first conservation organisations and environmental research institutions. The first environmental organisations were commonly attached to a ‘preservationist’²⁸ perspective of conservation, meaning that they based their activities on the view that ‘set-asides were the safest way to conserve the nation’s environmental heritage’ (Hochstetler and Keck, 2007; 26% Chapter 2, Section 2, e-book).

This initial ‘preservationist’ group was joined by (or changed to) a more politicised group that emerged during the period of political liberalisation that began in the 1970s and continued until the late 1980s. The emergence of this second wave of Brazilian environmentalism, as will be described in more detail in the following subsections, cannot be detached from the broader context of the re-democratization of the country, characterised by demands for the inclusion of environmental concerns and representatives in formal politics. The success of this group in gaining access to electoral politics paved the way for the emergence of a third group in the 90s, which emphasised the idea of social justice in environmental policies and has become known as the ‘socio-environmentalist’ movement (Hochstetler and Keck, 2007, Chapter 4,

²⁷ For example, the two most similar ideologies identified – preservationism and socio-environmentalism – both of which are radical discourses according to Dryzek’s (2013) characterisation (i.e. that oppose industrialism), cannot be mutually supported in the same kind of policy argument due to the fundamental differences in their assumptions about natural relationships. While the former perspective does not support the domination of nature by humans (due to its strict egalitarian perception of this relationship) and would, therefore, advocate the non-interference in nature, the latter would assume some level of human domination through the use and steering of nature. Similarly, while the first view places a much larger emphasis on the role of science and experts in the relationship among humans, the second would not accept a hierarchical social organisation. Thus, if an actor argues, for example, that parks shall be closed for research and touristic appreciation, it becomes very unlikely that s/he will also be able to simultaneously defend communitarian management and use of natural resources and so on. Therefore, at the level of specific arguments, these views are mutually exclusive.

²⁸ The terms in inverted commas are a literal reproduction of these authors’ terms and are used for the labelling of the discourses identified in this chapter.

section 10, 60% e-book). The timeline in figure 3 provides a historical overview of the predominant discourses throughout the history of Brazilian environmental politics²⁹.

Figure 3, represents, therefore, this thesis' systematisation and interpretation of the literature and data on the history of Brazilian environmental discourses. It relies on the discursive features identified in the theoretical framework presented in the previous section (which merges theoretical considerations from Dryzek, Cultural Theory and the Narrative Policy Framework) and applies them to the Brazilian context through an analysis of secondary literature (mainly Hochstetler and Keck, 2007) and empirical data (interviews, analysis of debates in the National Congress and in the media). These findings are explained in detail in the following four subsections, which cover each discourse and their histories in Brazilian environmental debates (and also in section 7.2 of chapter 7, which focuses on justifying the identification of winning and losing coalitions). The shifting dominance of these discourses was found to be linked to political changes, international pressures and treaties, disappointment effects (for example, with the recommendations and conditionality of international organisations such as the IMF) and/or economic changes (such as commodity booms).

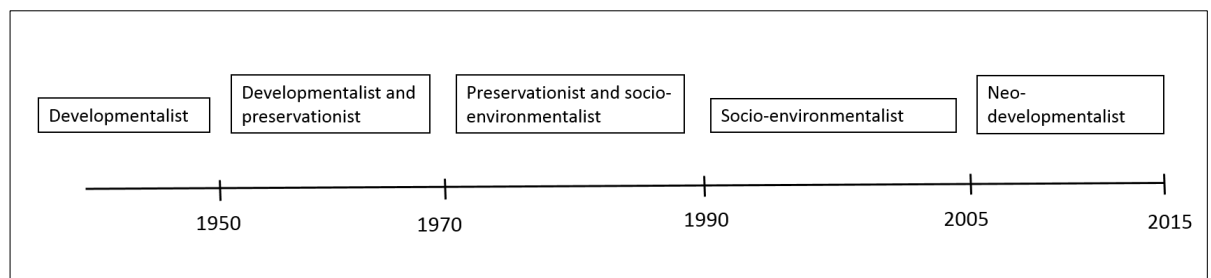


Figure 3 - Dominance of Discourses in Brazilian Environmental Politics
Source: Produced by the Author

3.3.1. Neo-developmental

Neo-developmental is a discourse that takes industrialism as given (a *reformist* discourse in Dryzek's terms) and sees economic development as a priority, even though environmental balance may be impaired in the process of securing it.

²⁹ Although administrative economic rationalists were not found to predominate at any specific time, they have been part of debates since at least the early 90s and have markedly influenced the environmental administration of Dilma's government between 2010 and 2016 (especially the guiding principles of the Ministry of Environment).

Because environmental damage is not seen as an important problem, if solutions are proposed to tackle it, they tend to be *prosaic*, proposing no drastic changes to social organisation. It is associated with a 'Promethean' environmental perspective according to which "there is nothing wrong with projecting economic growth into an indefinite future" (Dryzek, 2013, p. 54). Another characteristic of this paradigm is the denial of nature and ecosystems as relevant factors in the formulation of policies, apart from their role as a "store of matter and energy" (Dryzek, 2013, p. 59). This discourse portrays, therefore, a *benign* view of nature, as the indefinite continuation of economic development is not perceived to irreversibly affect ecological balance. The relationship between humanity and nature is *hierarchical*, in the sense that the domination of the latter by the former is the standard view, but human relationships are perceived as *competitive* because of the limits of resources and the need to continue increasing economic development indefinitely. Among the rhetorical devices and key metaphors used in this discourse (as identified during the historical and content analysis) are *progress*, *modernity*, *national self-sufficiency and self-assertion* (national pride), *pragmatism* in achieving economic development, the *civilizing mission* of those who promote development, and the importance of protecting and guaranteeing *property rights* and complete freedom in the use of property (especially land).

This discourse is rooted in Brazil's colonial past. During colonial times, development was understood as the exploitation, by European countries, of the resources of the non-European world (Wallerstein, 2005). After World War Two, however, the strengthening of anticolonial movements in Asia and Africa and renewed nationalist sentiment in Latin America (see Franco and Drummond, 2009, on the origins of nationalism in Brazil), led to 'development' being seen as something for countries of the so-called 'global South' to pursue themselves, in a self-assertion of their political and economic maturity and capacity. The central idea underlying this new perspective was that, if the right policies were adopted, countries of the global South would be able to equal the levels of technological modernisation and wealth of the countries of the North (Wallerstein, 2005). Based on this specific understanding of 'development' as the achievement of the economic and technological standards comparable to those of the North, a comprehensive corpus of academic literature was produced by Latin America. These works advanced several economic and political

prescriptions on how to achieve 'development' and generated a school of thought often referred to as 'developmentalism'.

In Brazil, the political implementation of this view can be traced back to policies implemented by President Getulio Vargas during his first mandate (which began in 1930). Vargas' signature policies consisted in the promotion of state-owned companies and import-substitution industrialisation. These policies and the goals underpinning them were later systematised as a coherent economic model by a group of scholars from the United Nations Economic Commission for Latin America (ECLAC or CEPAL) in 1949. During his period at CEPAL, the distinguished Argentinian economist Raul Prebisch laid the foundation for a structuralist account of how Latin America would achieve development. According to him, the structure of the global markets – in which countries at the 'core' export manufactured products to countries on the 'periphery', which usually specialise in the production of primary products – generates persistent inequality. The proposed solution for this structural problem was a change in the profile of exports by peripheral countries, through a policy of import-substitution industrialisation. The interventionist and centralising state required to implement this policy was supposed to actively create national companies and directly promote the development of technology and competition to free developing countries from having to import technology-intensive goods.³⁰

Although the developmentalist perspective has been considerably influential since its creation in the early 50s and throughout the entire military period (1964–1986) it did not survive the historical and economic changes of the 1980s. These included the exhaustion of the import-substitution industrialization model (due to the fact that the excessive support was impeding the development of internationally-competitive companies in Brazil), a huge foreign debt crisis, an inflation boom, the ascension of neoliberal ideas associated with the 'Washington Consensus', and the increasing dependency of the Brazilian economy on International Monetary Fund (IMF)

³⁰ Prebisch and other scholars from CEPAL (such as Furtado and Anibal Pinto) inspired a group of scholars who later created the Latin American structuralist tenet of 'dependency theory', strongly influencing Brazilian political and academic circles. Formed by important names of Brazilian academic (and in some cases political) history such as Fernando Henrique Cardoso (former president of the country from 1995 until 2003); Enzo Faletto, Maria Conceição Tavares, José Serra, Cardoso de Mello, Osvaldo Sunkel and Francisco Oliveira (the '*dependentistas*' as they are often referred to) helped to bring the enhancement of systemic competitiveness in international markets to the centre of Brazilian political agenda (Vernengo, 2004).

loans (Bresser-Pereira, 2009). These factors led to a marked change in the predominant development model adopted in the country, which, during that decade, shifted from the 'national-developmentalism' strategy of strong state interventionism to a more hands-off approach (Bresser-Pereira, 2009).

In the 2000s, however, it has been argued that predominant political and economic ideologies changed again (Trubek *et al.*, 2014). After more than 30 years of unsatisfactory results from the neoliberal consensus for Latin American countries, and in face of renewed economic autonomy from international institutions such as the IMF, neoliberal paradigms started to lose their grip. In this context, studies have highlighted changes in Brazilian economic policies and the ideological orientation of the government since the second mandate of President Lula (2007–2010) (i.e. Bresser-Pereira, 2009; Panizza, 2013). These changes, which might also be related to the establishment/consolidation of the Workers' Party (traditionally an opposition party) in power, which have been commonly interpreted in the literature as bringing to light a new development model, often referred to as 'neo-developmentalism' (in a clear reference to the afore-mentioned Prebisch-inspired school of developmentalists)³¹ (Trubek *et al.*, 2014).

Similar to the original national-developmentalism, the developmentalism of the twenty-first century (or 'neo-developmentalism', as it will be called hereafter), also focuses on state intervention with the purpose of the enhancing the country's competitiveness in international markets. The new model, however, promotes a growth strategy largely reliant on exports of commodities and founded on the perspective that states should be heavily interventionist but not become a substitute for the market (as in the previous type of developmentalism). States should, therefore, simply aim to help markets by removing structural barriers to growth (Trubek, 2014). Accordingly, market opportunities ought to be expanded by stimulating research, facilitating exports, promoting public-private partnerships and removing legal and economic barriers to market expansion.

³¹ This new political orientation is not exclusive to Latin American countries, and has also been described to refer to other developing countries as 'new developmental state' or 'state capitalism', defined as a 'system in which the state functions as the leading economic actor and uses markets primarily for political gain.' (Bremmer, 2009).

In the operation of this new paradigm, some economic precepts such as central bank independence and inflation targets are combined with state support to a few national champions in strategic areas (chiefly energy production) and an expressive infusion of resources from national development banks (such as the Brazilian Development Bank [BNDES]) in large infrastructure projects. Additionally, a heightened focus on direct cash redistribution programmes (such as *'Bolsa Família'* or family stipend in English) is a crucial aspect of the new model, which has given rise to the oft-mentioned 'new middle class' in Brazil, which has been used to legitimise the adoption of this new paradigm (Trubek, 2014). Finally, similarly to the previous model, it features a strong rhetorical component, which argues in favour of nationalism and self-assertiveness against foreign interferences in pursuit of development (Bresser-Pereira, 2009).

The ideological enthusiasm and governmental reinforcement of this neo-developmental paradigm cannot, however, be detached from the circumstances from which they emerged. The 2008 world economic crisis has turned inelastic commodity exports into a safe and extremely lucrative trade alternative, especially for countries with natural comparative advantages such as Brazil. Also incentivised by the increasing demand of the Chinese market, commodity prices went through a boom around 2010, directly benefiting countries such as Brazil, which were suddenly flooded with unexpectedly large amounts of international currency. This change in commodity exports was, therefore, a crucial external event underpinning the predominance of neo-developmental discourse at this time. It increased the power of the agribusiness sector, competition for natural resources (such as land, wood, water, minerals) and led to the intensification of environmental conflicts (see section 2 of chapter 7 for a detailed description of this external event). It was found, moreover, that the 'fetishization of development' (Dirlik, 2014) that accompanies neo-developmental thought has resulted in lower priority being given to environmental topics in government agendas (interviews 18, 37, 46), a move that can also be linked to the so-called 'roll-back' in environmental standards for which the case studies in this thesis provide support (Lima and Garcia, 2014, p. 273).³²

³² The case studies in this thesis will be used to qualify and discuss this argument in further detail.

3.3.2. Preservationism (Deep Ecology)

Preservationism is the view that the conservation of natural resources has intrinsic value and must be pursued against all odds. It is a *radical* discourse as it directly opposes the idea of ‘industrialism as given’ and *imaginative* as its proposed alternatives to current reality imply drastic changes in the contemporary relationship between humanity and nature. Its view of nature is *ephemeral* because nature is perceived as an extremely unstable equilibrium, which a minimum of human interference can change irreversibly. The *relationship between humans and nature* is marked by *egalitarianism* centred on the notion of ‘biocentric equality’, according to which all species have intrinsic value and which criticises the ‘anthropocentric arrogance’ of considering humans superior to any other species. It also promotes ‘self-realisation’, meaning the “identification with a larger organic ‘Self’ beyond the individual person”, which also points to an egalitarian view of the relationship between humanity and nature (Dryzek, 2013, pp. 187–188). The *relationship among humans*, on the other hand, is characterised by a strong reliance on the authority of scientific knowledge and is therefore *hierarchical*. The rhetorical devices characteristic of this discourse invoke a sense of urgency, catastrophe and are frequently based on passionate personal stories to do with the relationship between humanity and nature. In practical terms, preservationists defend an agenda of preserving, expanding and protecting wilderness areas from the perceived deleterious influence of humans.

Preservationism began to gain relevance in Brazilian environmental debates in the 1950s (Hochstetler and Keck, 2007). This first wave of environmental movements was a reaction to the developmentalist notion prevalent up to that period, but was also influenced by the international context in which ‘deep ecology’³³ movements had emerged. The international influence of deep ecology movements on Brazilian environmental leaders started to materialise with trainings promoted by agencies such as USAID in the 1970s. The influx of deep ecological thought was reinforced in the south of Brazil by scholarship programs and debates promoted by the Association of Ex-Scholarship Holders, whose members had returned from scholarships

³³ Deep ecology is a term coined by the philosopher Arne Næss in 1973. It refers to an ecological movement that maintains that all living beings are inherently worthy, regardless of their utility to humans. It proposes, therefore, a restructuration of society according to this perspective.

in Germany; by the international Rotary Club and by the return of Brazilian exiles, mainly from Europe, at the end of the 1970s (Hochstetler and Keck, 2007, 25% eBook).

The first deep ecology organisations in Brazil were consolidated shortly before the military coup (1986). These organisations did not undertake high levels of public exposition and activism (possibly due to the political context of the military regime) but strongly relied on scientific research as their main persuasion strategy. The organisations themselves were mainly composed of scientists.³⁴ Additionally, ‘the language of science’ used by representatives of this perspective “resonated with the technocratic and modernizing orientations of developmentalist governments of the time”, which might have helped the group to gain credibility in the military regime (Hochstetler and Keck, 2007, 26%). The hierarchical perception in terms of humanity’s relationship with nature is, thus, similar to the developmentalist tradition, which strongly values technocratic and modernising initiatives. This fact favoured many instances of cooperation between developmentalist governments and preservationist groups in Brazil, such as in closing large areas of land (parks) both to protect nature and assure territorial sovereignty and national defence (Foresta, 1991).

3.3.3. Socio-environmentalism

Socio-environmentalism is often referred to in the literature as a particularly Brazilian environmental perspective (Santilli, 2005; Inoue and Franchini, 2014). Largely associated with social justice (which was strongly incorporated into Brazilian social movements during the redemocratization), this discourse advances the idea that ecological and social sustainability cannot be promoted separately (Inoue and Franchini, 2014, p.12). Its main message, therefore, is that the protection of the rights of traditional and indigenous communities, as well as of small farmers³⁵ is the pathway towards sustainability. Its view of industrialism is *radical* and the alternatives proposed are *imaginative* because this discourse values traditional forms of social organisation over industrialism for the protection of the environment. The view of nature espoused

³⁴ Such as the biologist Maria Tereza Jorge Padua (IBDF), the agronomist and bio-geographer Alceu Magnannini (FBCN) and the ecology professor and natural history researcher Paulo Nogueira Neto.

³⁵ I argue that movements such as MST (Landless Workers’ Movement) in Brazil, also adopted this perspective, especially in relation to debates about empowering small farmers through the maintenance of traditional practices (such as the use of seeds which are not genetically modified, and therefore generate more seeds to be replanted) and agroecology.

by this perspective is *capricious* because the focus is on responding and adapting to (instead of actively managing) environmental changes. Similar to the preservationist view of *the relationship between humanity and nature*, socio-environmentalists consider themselves to be part of a larger whole and not managers of nature, implying a sense of *equality*. *Relationships between humans* is based on *egalitarian* assumptions, according to which everyone should participate in and contribute to social organisation. Among the main rhetorical devices of this discourse is the appreciation of alternative social traditions, which approximate Rousseau's notion of the 'noble savage', symbolising innate goodness and purity not corrupted by civilisation. The ideas of social networks and the rule of the people are also featured. Accordingly, three broad principles or concepts provide the basis of the socio-environmental tradition: *ecological sustainability*, *social sustainability* (the need to alleviate poverty and social inequality in order to protect nature) and, finally, the promotion of *cultural diversity* and *social participation* in managing the environment (Santilli, 2005).

Although socio-environmentalism has many similarities with what Dryzek (2013, pp. 209–115) has named 'social-ecology' and 'environmentalism of the global poor', the term socio-environmentalism will be used here in order to stress the particularities of the Brazilian version, which is closely linked to the historical moment of democratisation in which it emerged in the 80s, and to the context of the political organisation of traditional rubber tapper communities in the Amazon rainforest. This tradition of environmental activism emerged in Brazil as a direct reaction to exogenous and authoritarian projects implemented during the military period (Inoue and Franchini, 2014), which were frequently associated, as pointed before, with preservationist perspectives³⁶. Although science still played a relevant role for many participants of the socio-environmentalist discourse, Hochstetler and Keck (2007) maintain that the earlier adherents of this new perspective tended to reject the notion of scientific rationality, and focused primarily on public environmental education and awareness-raising campaigns. Additionally, three historical events are highlighted by these authors as crucial in understanding the emergence and strength acquired by this

³⁶ Preservationists, similarly to authoritarian regimes, also adopt a top-down conception of the organisation of territory. The idea of closing large parks and removing those living there was positively seen by the adepts of both perspectives, even if the latter were concerned about sovereignty and territorial protection, and the former were interested in environmental preservation.

movement. The first is the end of the military dictatorship. The second is the murder of the environmental activist and rubber tapper Chico Mendes, an important political leader in the state of Acre in the North of the country, and, lastly, the preparations preceding the United Nations Conference on Environment and Development (or the Earth Summit) that took place in Rio de Janeiro in 1992. The way in which each of these events impacted the history of environmental discourses and policies in Brazil will now be discussed in detail.

First, the opportunities for political participation arising from re-democratisation allowed environmental groups to become formally involved in the process of elaborating a new constitution and promote environmental ideas through formal politics³⁷ (Hochstetler and Keck, 2007). According to Cardoso (1989), these new opportunities for participation resulted in a considerable degree of popular autonomy for popular movements in general, a new phenomenon in the country. Because of the long history of clientelistic relations, which had dominated Brazilian politics, social movements of all types were united by a strong plea for social participation and environmental groups were no exception. Accordingly, “their rejection of clientelism leads them to affirm both the independent display of each citizen’s will and respect for the rights of the poor communities” (Cardoso, 1989, p.19).

The second factor frequently associated with the strengthening of the socio-environmentalist tradition in Brazil is the murder, by a cattle rancher, of Chico Mendes, a rubber tapper and activist for the rights of the ‘peoples from the forest’ who had strong connections with international environmental organisations. The construction of roads, dams, and the expansion of farming in the Amazon region throughout the military period threatened the lifestyle of several indigenous communities and traditional populations whose subsistence was based on the extraction of forest products. These groups organised a social movement led by Chico Mendes – the ‘Alliance of the Peoples of the Forest’ – in order to defend their

³⁷ Two environmental groups were distinguishable in the Brazilian political scene of the 80s. The first, mainly constituted by returned exiles from Europe who had been inspired by the ecological ideas of the European Green Party, formed the Brazilian Green Party and chose to act in politics through an organised party (although they also considered themselves an environmental movement). The second group objected to the first group’s choice to pursue environmental goals through a specific party and chose to advance environmental ideas within the other parties or through lobbying. This second group feared that associating environmental goals with one specific party could undermine the influence of the movement and was also suspicious of the quality of Brazilian democracy in allowing new and ‘counter-cultural’ parties to act freely on the political stage.

traditional extractivist way of life and oppose the destruction of the forest. This movement consistently promoted the ideas that the social and the environmental cannot be separated and that environmental protection is intimately connected to poverty alleviation, two of the central claims of socio-environmentalism.

Mendes and his movement benefited from considerable international visibility during the 80s, epitomised by the awarding of prizes such as the UNEP's Global 500 Roll of Honour and the American Ecology Society Better Life award, conferred to Mendes in 1987 in recognition of his environmental achievements. In 1988, Mendes' murder by local farmers who opposed his pleas further increased the international visibility of Brazilian environmental situation³⁸ resulting in the strengthening of socio-environmentalist demands and fresh momentum for environmental legislation to be approved by the government. Additionally, Mendes' movement continued through the leadership of Marina Silva, a former rubber tapper and close ally of Mendes who was later appointed by President Lula as environmental minister in 2003 (remaining environmental minister until 2008, when internal governmental conflicts over the approval of infrastructure projects in the Amazon region resulted in her resignation).

The success of the demands and of the discourse advanced by the Peoples of the Forest Alliance is evidenced by several pieces of new environmental legislation and policies enacted since the initiation of the movement. As remarked by Santilli (2005), a very restrictive, command-and-control tendency of the environmental legislation that predominated in Brazil before the 1990s was partially substituted by more participatory and community-oriented laws after that decade. This change is epitomised by laws such as the Water Resources Law (9.433/1997), which established the requirement that management of water resources involve communities and users, and the Law of the National System of Conservation Units (9.985/2000), which recognised 'extractive reserves' as areas of sustainable use and conferred property rights to communities dependant on the extraction of natural resources such as rubber, nuts or medicinal plants for subsistence. In the late 1980s, moreover, a strong and successful resistance movement against the construction of hydroelectric plants in

³⁸ The murder was even published by the New York Times: Simons, Marlise. Brazilian who fought to protect amazon is killed. New York Times, 24/12/1988. Available at: <http://www.nytimes.com/1988/12/24/world/brazilian-who-fought-to-protect-amazon-is-killed.html> Accessed: 23/07/2015.

the Xingu River, a river surrounded by indigenous communities and the Amazon forest, emerged. The alliance between environmental activists, human rights supporters and indigenous communities resulted in a broad process of social debate and pressure against this construction, culminating in the participation of more than 3,000 people in what has been named the 'Altamira meeting' of 1989. The meeting gained national and international visibility when a native Brazilian put a knife against the throat of the president of the state electricity provider. The resulting social commotion associated with the strength and international visibility of socio-environmentalist arguments delayed the beginning of the construction until 2011, when the discourse lost strength.

A final important factor for the development and consolidation of the socio-environmentalist tradition in Brazil was the selection of the country as the host of the 1992 UN Conference on Environment and Development. The preparations for the Conference increased the connections between national and international environmental organisations and raised international awareness of, and funds for, the demands of national movements such as the Alliance of the Peoples of the Forest. An example of the benefits of international awareness of these movements was the creation of the Mamurauá Sustainable Development Reserve in 1991. As demonstrated by Inoue and Lima (2007), without the influence of transnational networks involving local actors and international NGOs (such as WWF, Conservation International (CI) and Wildlife Conservation Society), it would have been very difficult for movements such as the 'Lake Preservation Movement of Mamurauá', who demanded to have the right to stay within the Mamurauá reserve and to participate in the elaboration of its management plan, to have made their demands known to the government. Hence, all these historical events directly point to and strengthen the underlying precept of Brazilian socio-environmentalism that social and environmental sustainability are not separable elements of environmental policy-making.

3.3.4. Administrative economic rationalism

The administrative economic rationalist view holds that governments should help market actors to exploit natural resources, but also establish some controls and be allowed to benefit politically or economically from this process. Thus, from this perspective, as long as resource use follows governmental priorities and

guidelines, irreversible ecological imbalances are not considered a risk. *Industrialism is taken for granted* in this discourse as no drastic social changes are proposed and *prosaic* alternatives to social organisation, based on traditional governmental control, are advanced. Nature, therefore, is perceived as *tolerant*, enduring changes up to a certain point, which should be established by central authority. *The relationship between humans and nature is hierarchical* because humans determine how much interference nature can endure and subject it to their plan. Little attention is devoted to the potential contributions of social participation in this discourse, characterising a *hierarchical* approach regarding the *relationship between humans*. This perspective is, moreover, commonly portrayed as a moderate, non-ideological view based on rhetorical devices that emphasise *pragmatism, sustainable development* and the possibility of effective *control* in the way nature is approached.

This discourse is also deeply ingrained in Brazilian history. Even though it has never been a dominant social discourse, it dominated executive government mentality at least between 2010 and 2016, during the mandate of President Dilma Rousseff. This perspective has its roots in the context of the re-democratization in the late 1980s, which was also characterised by a severe economic crisis and the ascension of liberal ideas. During this time of hyperinflation and economic turmoil, recipes for protecting the environment without harming markets resonated with IMF's 'conditionalities' and prescriptions of 'best practices' and were thus largely promoted (interview 18). Additionally, as remarked by Hochstetler and Keck (2007, 47% Chapter 3, section 15, e-book), although that period was characterised by "much more space for environmental concerns in government, government officials wanted solutions, not protests". More recently, the changing ideological context resulting from President Rousseff's ascension to the presidency resulted in a turn towards solutions that would increase market efficiency and modernise environmental policy-making but still maintain a centralised government in control of this process (interviews 7, 18, 28, 42).

This discourse is, as a consequence, a mix and adaptation of two perspectives described by Dryzek (2013) separately as administrative rationalism and economic rationalism. The former perspective is mainly focused on the centralised authority of governments in establishing thresholds of environmental exploitation. The latter represents a commitment to using market mechanisms to achieve environmental public goals and relies mainly on self-interest and competition between

market actors. This perspective is hostile to direct environmental management by governments after the basic mechanisms of market functioning have been established by government.³⁹ This thesis argues that the Brazilian government has never fully manifested either perspective in environmental management and debates, but rather a mix of both. Because of a tradition of big, paternalistic government and weak market institutions, attempts to rely on market mechanisms have ultimately always resulted in the state acting as the leading economic actor. This type of system has been described by Bremmer (2009) as 'state capitalism' or as 'hierarchical capitalism' by Schneider meaning that "hierarchy often replaces or attenuates the coordinated or market relations found elsewhere" (2013, p. 8). Through this discourse the state works along with companies to promote a favourable environment for markets to thrive in, but dependence on the direct management and control of governments is not abandoned and the use of market mechanisms, although praised and aimed for, remains limited in practice.

3.4. Conclusion

This chapter has provided the theoretical and empirical basis for the discursive framework used in the analysis of debates and the categorisation of actors in the empirical part of this thesis. It has combined the theoretical contributions provided by Dryzek (2013) for the analysis of environmental discourses with insights from Cultural Theory and the Narrative Policy Framework, which helped to make Dryzek's categories more empirically operationalisable and increased its potential for comparability across cases. The resulting theoretical guidance was applied to secondary literature about Brazilian environmental debates and to primary data (obtained during interviews and an analysis of National Congress and media debates), which resulted in a framework of four exhaustive and mutually exclusive Brazilian environmental discourses. This analysis constitutes a potentially useful contribution to other analyses of Brazilian environmental politics as these categories can be easily applied to any area of Brazilian environmental debate. They constitute, therefore, an

³⁹ Which would be very similar to the idea of 'regulatory state' developed, among others, by Majone, G. (1997) From the Positive to the Regulatory State: Causes and Consequences of Changes in the Mode of Governance. *Journal of Public Policy*, 17, pp 139-167.

original contribution to the analysis of Brazilian environmental debate, which systematises data from secondary literature according to a theoretical framework, which, although inspired by previous theoretical debates, was developed specifically for this purpose.

These four discourses are not considered to be equivalent to ‘policy core beliefs’ in ACF terminology because of the importance of language and interpretation in their definition. They do not necessarily represent, therefore, the “basic normative commitments and causal perceptions” (Sabatier and Jenkins-Smith, 1999, p. 121) of actors but simply their expressed interpretive schemes (which might or might not overlap with their basic normative commitments). It is therefore not assumed, following the ACF, that actors have to display the same interpretive schemes in order to form a coalition⁴⁰ — a qualification considered necessary for the analysis of coalitions that are formed based on actor’s similar interests, but not on similar normative beliefs.

⁴⁰ According to Sabatier and Jenkins-Smith (1999, p. 124) “actors within an advocacy coalition will show substantial consensus on issues pertaining to the policy core”

PART 2: EMPIRICAL CASES

CHAPTER 4 – CASE STUDY I: FORESTS

Forests have always been one of the most critical elements in the management of natural resources in Brazil. The country currently has about 61% of its territory covered with forests, a total of 5,151,332 km² of which over 4 million km² are constituted by the Amazon rainforest (World Bank, 2015). The forested area in Brazil is mostly constituted by native forests. The economic use of these areas has long generated debates and divided Brazilian society. In 2012, the Brazilian law regulating native vegetation, the “Forest Code” – a regulation firstly established in 1934 and altered in 1965 and 2001 – was (once again) reformulated. This chapter investigates the role of internal and external events, learning and negotiated agreement in this remarkable policy change. It argues that a historical clash between advocates of the extensive preservation of forests and those emphasising the economic benefits of converting forested lands to agriculture was reignited in 2009 due to two factors. First, by a trend towards more severe punishment of unlawful deforestation (internal event), and second, by a political and economic environment largely favourable to the demands of farmers (resulting from external events such as a commodity prices boom and changes in governing coalitions). Therefore, the hypotheses drawn from the ACF, namely, that negotiated agreements and policy-oriented learning were relevant motivators of policy change, are not confirmed by this case.

This chapter will be organised into three different parts. Part 4.1 describes the history of forest regulation in Brazil, its main internal and external events, and provides an analysis of saliency, which underscores the importance of the analysis of the new Forest Code. Part 4.2 highlights the main coalitions, actors and narratives in the 2012 reformulation of the Forest Code. Part 4.3 tests the hypotheses drawn from the ACF about the importance of internal and external events, negotiated agreement and policy-oriented learning in policy change. The conclusion re-states the importance of internal and external events and the reduced role of policy-oriented learning and negotiated agreement in the process of change of the Forest Code.

4.1. The History of Forest Policies in Brazil

4.1.1. Introduction

This section will briefly describe the history of forest policy standards and their implementation in Brazil. The aim is to trace the origins of the argumentative clashes that marked the debates surrounding the reformulation of the Forest Code in 2012. The goal is also to evidence the salience and historical relevance of the recent Forest Code reform and justify the subsequent analysis of the debates related to it. As this part will demonstrate, although enforcement has often been flawed and not always reflected the predominant discourses in Brazilian forestry policy, discourses have varied considerably over the history of forestry regulation in Brazil and more recent changes represent a return to historical discourses. This part proceeds as follows: section 4.1.2 analyses secondary literature in order to identify the predominant discourses in forest policies and standards between 1530 and 2005. Section 4.1.3 uses data from the National Congress to trace all the forest related standards approved between 2005 and 2015 and offers an analysis of their salience. Section 4.2.4 concludes, emphasising the importance of this part for the whole chapter.

4.1.2. The Alternation of Discourses in Forest Policies from 1530 to 2005

Figure 4, below, summarises the historical predominance of different discourses in Brazilian forestry regulations and policies, which are now described in detail. These are different but have some overlaps with the overall dominance of environmental discourses described in the previous chapter.

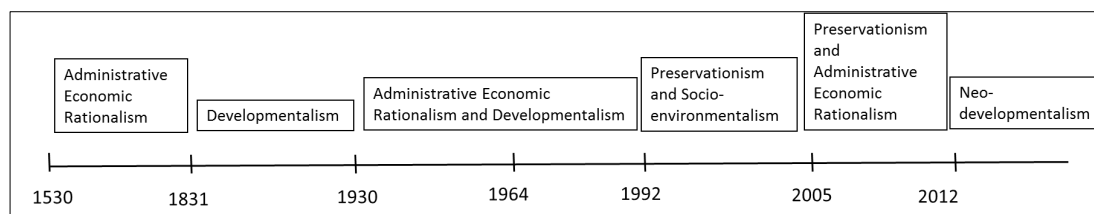


Figure 4 - Dominant Discourses in Brazilian Forestry Regulations and Policies

Source: Produced by the author

Since colonial times (1530–1822), there have been attempts to regulate forest use in Brazil. In 1681 a policy of the Portuguese Crown determined that sugar cane plantations could not be established less than 3.3 km from each other in order to guarantee sufficient forestry reserves to attend to owner's fuel demands (Castro, 2013). During the 16th and 17th centuries, the extraction of *Pau-Brasil* – a wood widely used in Europe for fabric tinting – and other economically valuable woods, were closely monitored by the Portuguese Crown which restricted their removal to authorised agents (Bacha, 2004; Castro, 2013). The motivations that characterised the formulation of forest standards in the colonial period were mostly economic, aiming either at guaranteeing a constant supply of fuel to land owners or assuring Portuguese monopoly over valuable woods. Environmental concerns, although already emerging among illuminist philosophers in Portugal, were considered subversive by the aristocracy and the Church and totally dismissed at that time (Castro, 2013; Miller, 2000). From this strong emphasis on government control and the governmental and/or private benefit accruing from this control, it can be concluded that an administrative economic rationalist mentality predominated in forest standards during colonial times.

This reality began to slightly change after Brazilian independence from Portugal in 1822. Although the administrative economic rationalist perspective prospered in the aftermath of independence with the publication of new interventionist regulations – such as a law requiring the conservation of at least one sixth of the natural vegetation in all private properties, the prohibition of removing *Pau-Brasil* and other valuable wood types, and the country's first criminal code in 1930, which stipulated severe penalties for illegal deforestation, strong opposition from land owners led to the revoke of restrictions on the types of woods that could be removed in 1931. After that year, forestry policies were characterised by providing strong stimulus for fast colonisation – understood as occupying the territory with agriculture or cattle ranching – which contributed to the failure of any attempt at government control over forest use and removal (Kengen, 2001). This period, portrayed, therefore, the predominance of a developmentalist perspective according to which nature was viewed as a hindrance to economic development.

During the first Brazilian Republic (1889–1929) or *República Velha* (Old Republic) Brazilian forest policies were no different than during the previous period. This era was marked by the dominance of the agricultural aristocracies of the states of São Paulo and Minas Gerais. Apart from the creation of a fruitless Brazilian Forestry Service in 1921, no other novelties emerged in terms of forestry regulations and policies. As observed by Kengen (2001), the Constitution of 1891, the first republican constitution in the country, made absolutely no allusions to forestry conservation and espoused a prominently liberal view, according to which land owners were given complete freedom over the use of their lands. This marked, therefore, the continuation a neo-developmental mentalité. In the state of São Paulo alone, 6.4 million hectares are estimated to have been deforested between 1886 and 1920, a rate of 0.76% of the total surface of the state per year (SOS Mata Atlântica, 1998).

In 1930, a new political phase was inaugurated in Brazil. After the Great Depression in 1929, Brazilian exports of coffee fell abruptly. This decrease, associated with internal dissidence within the old agricultural oligarchies from São Paulo and Minas Gerais, led to the formation and empowerment of a new group. Led by Getúlio Vargas – who would become the Brazilian president for the following 15 years – this new group included a nascent scientific, civil society and industrial community. They advanced a more progressive agenda, which included an attempt to regulate and control natural resources (Nunes, 1997). During Vargas' administration, the first Forest Code (Decreto-lei nº 23.793 – 23/01/34) was published. The code stipulated that 25% of every rural property should remain natural vegetation and established that riparian buffer zones should be conserved. The code was, moreover, extremely centralising. It determined that the burden of identification, classification and indemnity related to forest preservation should be placed on the state administration (Article 11, Decreto-lei nº 23.793) and no preservation requirements could be implemented before land owners had been indemnified by the government. As a consequence of placing such a large administrative and financial burden on an embryonic state apparatus, the code was not successful in achieving its objectives (Leitão, 2014; Castro 2013). From 1934 until 1965 (when the code was reformulated) there was only one registered case of prosecution based on the code (interview with Alceo Magnanini, cited by Leitão, 2014). Stacking the deck by permeating an environmentally progressive regulation

with unrealistic application procedures might represent Vargas' political strategy of satisfying his main political base of scientists and civil society activists (part of a group known as the 'liberal alliance') without directly opposing the still-powerful agricultural aristocracy. In this way, Vargas was able to shift the blame for the code's failure onto the judicial power, which, according to historical reports by the director of Brazilian Forestry Service in 1950,⁴¹ did not make any efforts to press charges of illegal deforestation (Castro, 2013). This period exemplifies, therefore, a return to administrative economic rationalist standards in which the state assumed a central role, even though the developmentalist mentality that previously predominated was maintained through the flawed enforcement of new standards.

The ineffectiveness of the previous regulations motivated the Minister of Agriculture, Armando Monteiro Filho, to propose its reformulation in the 1960s. Filho promoted a consultation period, which took three years and involved a team of specialised lawyers, agronomists, botanists and public servants. In 1965, a new Forest Code was published determining that 50% of the vegetation of rural properties located in the Amazon forest and 20% of the vegetation of properties located in other regions of the country should be maintained intact or used according to specific management criteria and under the authorisation of the forestry service (an innovation in relation to the previous code). Additionally, if these areas had already been destroyed, the code determined that owners had to bear the burden of restoration. Apart from this obligatory conservation stipulation (known as the *legal reserve*), the new legislation also stipulated two other types of areas: the first known as *permanent preservation areas*, including riparian zones, steep slopes and the top of hills and mountains, which could not be deforested. The second were *areas of free use*, consisting in the rest of the property where forests could be removed for agricultural production or any other activities to take place. The second version of the code also regulated the use of fire but, in order to be accepted by the military regime (1964–1986), it guaranteed almost

⁴¹ "The borough's judge, the prosecutor, the police chief and the commissioner are always ready to repress regular misdemeanours [...]. However, attacks on nature – which constitutes the backbone of this country: the jungle, the forests, the climate, the waters, all of which constitutes the environment where people live and work – *are unknown, not considered misdemeanours* and, therefore, this other part of our nation is sacrificed [...]" (Sobrinho, 1950 quoted by Castro, 2013 – translation and emphasis by the author).

full liberty for the government to deforest (see table 9 for a structured comparison of all the forest codes throughout Brazilian history).

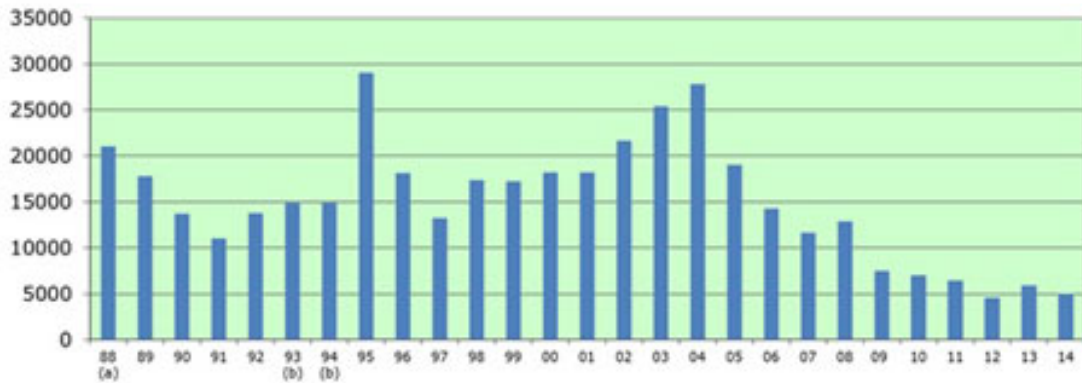
Therefore, although the 1965 Forest Code established stronger preservation requirements (bringing some elements of the preservationist discourse to the debate), the predominant objective of this period's forest policies was the development of the Brazilian forestry industry under the ultra-centralising and interventionist military government (1964–1986) (interviews 50, 51). In 1966, a law was passed (Law nº 5106) establishing fiscal incentives for reforestation. The Brazilian Institute of Forestry Development (IBDF) was created in 1967 and a new decree was approved in 1970 increasing the fiscal incentives for reforestation. From 1966 to 1988, the Brazilian government offered direct subsidies for the establishment of an industry of planted forests in Brazil. Thus, although the 1965 code did not directly incentivise the removal of native trees for the plantation of commercial species and did not have an overly administrative rationalist mentality, the policies that accompanied it did (interviews 50, 51). In addition to the incentives for the plantation of exotic species, there were agricultural incentives for the occupation of the Amazon and of the Northeast regions during the military regime (1964–1986), pushing the deforestation frontier a bit further and going against the enforcement of preservationist standards (Kengen, 2001). Conflicts among forestry and land regulation, moreover, were remarkable at that time. One of the pre-requisites for securing ownership of land in situations of missing land titles, was to deforest and then cultivate that land, in direct contradiction of the requirements of the second Forest Code (Bacha, 2004). Finally, large infrastructure projects – such as the Transamazônica road in the middle of the Amazon forest – were promoted by the government during this period, further stimulating deforestation. These latter two strategies (colonisation and large infrastructure programs) were typical of a developmentalist mentality, aimed at civilising wild areas with no concern for the environmental impact. The economic administrative rationalism of an interventionist and economically-oriented government therefore shared space with developmentalist policies during the 60s, 70s and early 80s.

Several events unfolded from the late 1980s onwards, however, that year marked a clear change in the way environmental and forestry policies were thought of

in the country. As remarked by Hall (1997), the suspension of World Bank loans⁴² to the colonisation and road-building programmes in the Amazon marked the beginning of a period in which traditionally marginalised local people (particularly from the Amazon region) were “brought onto the centre stage” and perceived as fundamentally important for the success of environmental policies (Hall 1997, p. 9). Also motivated by the international visibility, connections and resources brought to Brazil by UN Rio 1992 Conference and by the successes of the PPG7 Programme (Pilot Programme for the Protection of Brazilian Tropical Forests) launched by the eight members of the G7 (Germany, US, France, Italy, UK, Japan, Canada and Russia, which was included in 1997) the 1990s demonstrated the strength of socio-environmentalist ideas.

This trend continued in the 2000s but shared the discursive space with a more preservationist mentality, less concerned with local people and more concerned with centralised, command-and-control strategies of preservation. In 1994, for instance, the Sistema de Vigilância da Amazonia (SIVAM) was created, involving a sophisticated network of radars and satellite intended for the surveillance of the Amazon region with regard to military defence, drug trafficking and deforestation. The administration of the system, however, has been found to treat small farmers “as the major culprits of destruction” (Hall, 1997, p. 20) in a more preservationist fashion. In 2004, moreover, the government launched the PPCDam (the Plan of Prevention and Control of Deforestation in the Legal Amazon), which was accompanied by a striking reduction in deforestation levels in the Amazon forest (see graph 1 below). PPCDam was marked by strict command-and-control strategies of monitoring and punishment of illegal deforestation and it is often described as one of the main policies underlying the marked reduction in deforestation levels in the Amazon forest after 2004 (IPEA-Giz-CEPAL, 2011).

⁴² Which had been related to the setting up of the National Rubber Tapper Council and international repercussion of the assassination of the rubber tapper activist Chico Mendes in 1988.



Graph 1 - Historical series of deforestation levels in the Legal Amazon (km2/year)
Source: INPE, available at: http://www.inpe.br/noticias/noticia.php?Cod_Noticia=3944

4.1.3. The 2005–2015 Decade: Standards and Saliency Analysis

When we focus on the period between 2005 and 2015 and move from the analysis of secondary literature to an empirical analysis of the main regulations passed by the Lower Chamber⁴³ the evidence points to the predominance of preservationist and administrative economic rationalist (economic use stimulated by the state) measures (see table 8) up until 2012. After 2012, however, this trend was reversed with the approval of the new Forest Code, representing a return to more developmentalist perspectives, which emphasise the importance of economic development despite environmental degradation. For instance, the bill for the management of public forests (PL 4776/2005) passed in 2005, allowed the economic exploration of public forests by authorised companies, in a clear attempt to promote the private sector through the rigorous control and surveillance of the government (typical of the administrative economic rationalist mentality) (see first line of table 8).

⁴³ A more detailed analysis of the internal events during this time period was pursued based on the debates of the Lower Chamber. In this period, 147 regulatory propositions were presented in the Lower Chamber containing the word ‘forest’ in its index. Six were eliminated from the analysis because they referred to a city called ‘Alta Floresta’ rather than to forests. The search for ‘native vegetation’ was also pursued, but no different items were found in comparison to the search for the word ‘forest’. Despite the high number of propositions only nine actually resulted in new regulations, eight of which were authored by the executive power and one by the Senate. The one proposed by the Senate was an amendment to one of the other regulations described, so it was not considered. The content of each of the eight remaining new regulations was analysed and one was excluded from this description because it was not directly relevant to forest policies (it was related to the determination of conservation areas, which is covered in another chapter). The content of the seven remaining new, forest-related regulations approved between 2005 and 2015 is summarised in table 1.

Another example is that the forest regulations passed during this time period concern the authorisation of the government to enforce anti-deforestation measures during the period between the announcement and actual creation of preservation areas (see line 2 of the table 8). This was perceived to be necessary due to the rising trend in deforestation in the aftermath of the announcement of new preservation areas and characterises a preservationist mentality. In addition to these two examples, all standards approved by the Lower Chamber that were related to forest policies were scrutinised over the period of 2005 to 2015, and a mix of preservationist and administrative economic rationalist measures were identified up until the approval of the new Forest Code in 2012.

To support the analysis of the content of new forest standards between 2005 and 2015 and of their predominant orientation, a saliency analysis was performed in order to select the most-debated case of forest regulatory change to be the focus of the narrative analysis and of the assessment of the drivers of policy change advanced by the ACF. The saliency analysis of the debates of the Lower Chamber demonstrates that the 2012 new Forest Code was the most controversial and widely-debated measure in the period (see the last column of table 8). When counting the number of times that each regulatory proposition was mentioned by the Lower Chamber News Agency between 2005 and 2015, those related to the new Forest Code were most frequently mentioned (119 times). When the search term is changed to a specific law number (e.g. 12.651), the number of times it is mentioned by the News Agency rises to 246. Finally, when the words 'forest code', which is how it was usually referred to, are searched for, the number of mentions skyrockets to 4,201, far above the second-most-debated forest-related bill (whose regulatory proposal number was mentioned 65 times, and whose most-commonly used name ['project of law of public forest management'] was mentioned 776 times). It is concluded, therefore, that the most salient policy problem in the Brazilian forest subsystem between 2005 and 2015 was the reform of the Forest Code. For this reason sections 3 and 4 will be entirely focused on it.

Table 8 - Main forest standards approved between 2005 and 2015 and their salience

Presentation date	Regulation	Author	Content	Main consequence	Times mentioned by the Chamber's News Agency (2005–2015)
21/02/2005	PL 4776/2005	Executive power	Regulates the sustainable management of public forests, institutes the Brazilian Forest Service and creates the National Fund for Forest Development	Promotes/regulates the economic use of forests (administrative economic rationalist)	95 (for 'PL 4776') 776 (for 'project of law of public forest management')
21/02/2005 31/05/2005	MP 239/2005 PLV 13/2005 => MPV 239/2005	Executive power MP Nicias Ribeiro (PSDB)	Authorises government to limit the use of resources or deforestation in areas where protected areas are in the process of being created.	Promotes/regulates the conservation of forests (preservationist)	53
28/05/2008	MPV 432/2008	Executive power	Establishes measures to stimulate the payment of rural credit debts, making the system more flexible for loans designed to reforest degraded areas	Promotes/regulates the economic use of forests (administrative economic rationalist)	80
30/05/2008	PLP 374/2008	Executive power	Improves rural security system for agricultural, cattle ranching, fisheries and forest production	Promotes/regulates the economic use of forests (administrative economic rationalist)	13
04/08/2008	MPV 438/2008	Executive power	Relates to the tax system for cash donations received by public financial institutions for the conservation and sustainable use of Brazilian forests	Promotes/regulates the conservation of forests (preservationist)	9
10/12/2009	Decree 7.029/09	Executive Power	Established that farmers should comply with legal reserve requirements until 11/06/2011, otherwise they would be punished	Promotes/regulates the conservation of forests (preservationist)	14
28/05/2012	MPV 571/2012	Executive power	Established the final version of the third Forest Code (Law 12.651, of 25th May, 2012) with the vetoes and alterations of the executive power.	Favours agricultural production at the expense of forest conservation (administrative economic rationalist)	119 (for 'MPV 571') 246 (for '12.651') 4,201 (for 'forest code')

Source: Produced by the author

4.1.4. Conclusion

This first part has provided an overview of the long history of forest regulations in Brazil since the colonial period, assessed the different views of the world that predominated in this subsystem over history, and provided a detailed analysis of changes in standards that occurred between 2005 and 2015. It has identified, moreover, that among all the changes identified between 2005 and 2015, the alterations to the previous Forest Code were undeniably the most salient in debates taking place in the National Congress. This analysis justifies the subsequent focus adopted in part 4.2 on debates about the new Forest Code and provides the historical basis for the claim that a strong developmentalist perspective has resurged after a long period during which it was not dominant.

4.2. The 2012 Forest Code

4.2.1. Introduction

This part focuses on the debates specifically related to the 2012 Forest Code and provides an analysis of the different positions, narratives and coalitions involved. It argues that three main coalitions were formed during the debates about the new code. The first coalition advocated significant changes to the previous Forest Code and followed a neo-developmental view of the world, according to which economic development (in this case represented by the use of land for agriculture purposes) should be prioritised over environmental protection. This group was constituted mainly of law-makers who self-identify as part of the 'rural caucus' of the National Congress, agribusiness, and some members of the executive government. The second coalition identified was directly opposed to any changes to the previous forest regulations and held a preservationist perspective. It argued that previous standards were sufficient and that their enforcement should be made even stricter. This coalition was formed of politicians of the 'environmentalist caucus' of the National Congress, members of the scientific community who were active in the debate, NGOs and parts of associations of rural workers and the executive government. Finally, the third

coalition defined its position after the dissensus between the previous two was settled. It displayed a middle-ground position, according to which some changes to the previous regulation were necessary to improve the capacity of state enforcement (due to inconsistencies between the previous regulation and other sectors' regulations) and also to favour small land owners. This group displayed a mix of administrative economic rationalism, according to which the state should favour economic activities while maintaining strong and centralised controls, and socio-environmentalism, according to which minorities should be protected and allowed the liberty to use nature as they see fit. This third coalition was composed mainly of law makers of the Workers' Party (PT), the majority of the executive government, the industry of planted forests and a few representatives of other smaller parties.

4.2.2. The Different Positions

The third version of the Brazilian Forest Code was published on 25th May, 2012 (Law nº 12.651). Its main differences in relation to the previous code are that required areas of permanent preservation were reduced and the restoration of areas – either of permanent preservation or legal reserves – that had been degraded before the 22nd July, 2008, were no longer required.⁴⁴ Thus, if illegal deforestation occurred before this date and land owners were already using the areas for other activities they became, according to the changes promoted by the new code, exempt from restoration requirements. Another change brought about by the 2012 code was the dimensions of permanent preservation areas. These became associated with the size of the properties and no longer with ecological characteristics (such as the width of the river) as had previously been the case. Finally, a ceiling was fixed for the maximum total area of permanent preservation to be maintained on small and medium properties (see table 9 for a comparison of the main differences between the three Brazilian forest codes).

⁴⁴ Just to recapitulate, here are the categories of the Forest Code: *legal reserve* are shares (percentages) of the property that must be entirely conserved; *permanent preservation areas* include riparian zones, steep slopes and the top of hills and mountains; and *areas of free use* consist in the rest of the property where forests can be removed for agricultural production or any other activity.

Table 9 - Comparison between forest codes

	1934 Forest Code	1965 Forest Code	2012 Forest Code
Areas distinguished within properties	<ul style="list-style-type: none"> Protective Forests (corresponds to Permanent Preservation Areas) Remaining Forests Model Forests Yield Forests 	<ul style="list-style-type: none"> Permanent Preservation Areas Legal Reserve Free use areas 	<ul style="list-style-type: none"> Permanent Preservation Areas Legal Reserve Free use areas
Dimension of Legal Reserve	At least 25% of the property independently from location	<ul style="list-style-type: none"> 80% in the Forested area of the Legal Amazon; 35% of the savannah areas of the Legal Amazon; 20% of forested areas in any other regions; 20% of fields in any other region; (changed in 2001) <p>In 1965 it was:</p> <ul style="list-style-type: none"> At least 20% in the Southeast, South and in the South of the Central-West. At least 50% in the North and northern central-west). 	<ul style="list-style-type: none"> 80% in the Forested area of the Legal Amazon; 35% of the savannah areas of the Legal Amazon; 20% of general fields of the Legal amazon 20 % in any other region <p>In the case of the Legal Amazon, the calculus of 80% of the property includes Permanent Preservation Areas, as opposed to the previous code – that calculated areas separately.</p>
Dimension of Permanent Preservation Areas	Not specified	<ul style="list-style-type: none"> From 30 to 500 meters depending on the width of the river; (changed in 1989) 50 meters around water sources; 100 meters before plateaus. Dimension not specified for lakes hills, mountains, sandbanks, dunes and others. 	<ul style="list-style-type: none"> From 8 to 100 meters depending on the size of the property and NOT on the width of the river. 15 meters around water sources; From 5 to 30 meters around lakes, depending on the size of the property The total area of permanent preservation areas cannot exceed 10% of the land in small properties and 20% in medium properties.
Management of the Legal Reserve	Not allowed without previous authorization.	Allowed but the owner has to sign a term guaranteeing the replacement of removed trees.	Sustainable management is allowed but requires previous authorisation.
Restoration requirement	The burden of restoration is placed on the government except in cases of industrial exploitation.	The owner has the burden of immediate restoration of areas illegally deforested. Restoration has to be pursued with native species. (Articles included in 2001)	The owner has the burden of restoration only if the illegal deforestation occurred after 22/07/2008. For areas deforested before that, the activities for which the land has been used can continue. Restoration will have to occur only after the Environmental-Rural registration of the property in a national system (which is not operational yet) and the elaboration of a regularisation plan by the states. Restoration can be pursued with up to 50% of exotic species.

Source: Produced by the author based on the laws.

As demonstrated in section 4.2.2, alterations to the Forest Code were the most salient issue in the Brazilian forest subsystem in the period between 2005 and 2015. For the analysis of the main actors in this debate, 1,495 articles from the Lower Chamber's News Agency were analysed corresponding to all the articles containing the expression 'forest code' published between 2005 and 2015 on the Chamber's website. With the aid of the Lower Chamber's website search engine, a total of 74 different actors were identified in these 1,495 articles, 68 of them with identifiable positions in relation to the new Forest Code. Their names, professional affiliation and the number

of times they were mentioned is described in appendix I. From these 1,495 articles, 207 articles were selected according to their relevance (based on their titles and summaries) for a more in-depth analysis. This analysis revealed that actors can be divided into three groups according to their main positions. Those supporting extensive changes to the previous Forest Code, those supporting some changes (mainly intended to favour small land holders), and those opposing any changes to the previous regulation. The categorisation of actors took into consideration the three most conflict-heavy topics: 1) the size and definition of the riparian buffer zone, 2) the requirements for the restoration of areas illegally degraded in the past and, 3) the requirements of legal reserve. Actors tended to be coherent over time in opposing all changes in these three areas, supporting marked changes or partial changes.

The arguments of those defending no changes to the requirements of previous regulations maintained that riparian buffer zones (areas of permanent preservation) should be determined according to the width of the river and should correspond to:

- 30 metres for rivers up 10 metres wide,
- 50 metres for rivers between 10 and 50 metres,
- 100 metres for rivers between 50 and 200 metres wide,
- 200 metres for rivers between 200 and 600 metres wide,
- 500 metres for rivers wider than 600 metres.

For this group, the tops and sides of mountains, areas higher than 1,800 metres, sandbanks, and river springs should continue to be considered areas of permanent preservation as stated in the previous code. Additionally, any previously degraded permanent preservation or legal reserve areas should be completely restored, regenerated or compensated for, independently of when degradation took place. Finally, they maintained that the percentage of the properties to be conserved as legal reserve should be at 80% for properties located in the Amazon region, 30% for properties located in the *cerrado*, and 20% in other regions of the country, and should be measured separately from permanent preservation areas. Among the 68 actors with identifiable positions in the debates about the new code, 22 supported this position. Because of the undisputed priority placed on environmental protection,

despite economic costs, by this group, their arguments were categorised as 'preservationist'.

Directly opposing this group's views were the proposals of the group advocating extensive changes to the previous regulation. This group organised around the main argument that riparian buffer zones (areas of permanent preservation) for rivers up to five metres should not be larger than 15 metres, but that these should be allowed to be reduced to 7.5 metres by state-level (regional) regulations. This group did not advocate changes to the required buffer area for larger rivers and river springs, but proposed changes to the measurement methods. Measures should be taken, according to this group, from the lower margin of the river (dry season) instead of from the highest margin, as previously advanced by the regulation. Additionally, the proposal was that the protection applied to mountains, areas higher than 1,800 metres, and sandbanks should be removed. In terms of legal reserves, although the proportion of legal reserve areas per region was maintained, it was suggested that having legal reserves should no longer be required for small properties (up to four 'fiscal modules' – a variable measure fixed by municipalities and varying from five to 110 hectares depending on the region of the country). Larger properties, on the other hand, would have their area of legal reserve calculated only in relation to the area that exceeded four fiscal modules and it was proposed that permanent preservation areas should be considered in the calculation of total legal reserves areas. Finally, according to this proposal, farmers who had degraded more than allowed would be no longer punished if the degradation occurred before July 2008 – the date when the Brazilian Law of Environmental Crimes was published (a report produced by the Special Commission on the Forest Code, Deputy Aldo Rebelo, June 2010). In practice this proposal meant that the punishment for degradation, which had been considered a crime by the previous code, should be waived. 21 of the 68 actors tended towards this position, which was categorised as 'neo-developmental' because of the predominance of economic concerns around increasing the available land for agriculture, despite environmental costs.

The middle-ground position accepted that changes were required but suggested more moderate alternatives. Although different conciliatory propositions were advanced, the one most frequently referred to was that supported by members of the executive government, federal deputies, and senators from the Workers' Party.

This group often based its arguments on the need to alter the regulation in order to protect family/small farmers but defended strict requirements for large land holders (even though some of their proposals also benefited large farmers). For this group, riparian buffer zones (permanent preservation areas) should have the following measures:

- 8 metres for properties between 1 and 2 fiscal modules,
- 15 metres for properties between 2 and 4 fiscal modules,
- 20 metres for properties between 4 and 10 fiscal modules, given that the river is not wider than 10 metres and between 30 and 100 metres of buffer zones for wider rivers,
- Between 30 and 100 metres for properties larger than 10 fiscal modules.

They therefore reduced the preservation requirements for very small landholders by even more than was initially suggested by the advocates of extensive changes, and maintained what was proposed by them in relation to properties between two and four modules. They also supported the group promoting extensive changes by establishing a ceiling for the amount of riparian areas that should be preserved based on the size of the property (see table 10 below). The reason they were categorised as more moderate by this analysis is that they also opposed proposals from the extensive change group. For instance, their proposals did not allow small farmers to keep legal reserves unrestored (or no longer have them) and also supported the maintenance of the requirement for the preservation of mountains, areas higher than 1,800 metres, and sandbanks. They have, therefore, advanced a middle-ground proposal on the main areas of disagreement between the two other groups while at the same time furthering flexibilisation for very small farmers (up to two fiscal modules). 25 out of 68 actors were found to position themselves in this group, which mixed elements of socio-environmentalist discourse (regarding the protection of small farmers) and administrative economic rationalist discourse (in relation to the flexibilisation of rules to favour the economic use of land, while still maintaining strict governmental standards).

Table 10 - Main positions and number of actors in each coalition

	POSITION 1: No regulatory changes (preservationist)	POSITION 2: Extensive regulatory changes (neo-developmental)	POSITION 3: Partial regulatory changes (administrative economic rationalist/socio-environmentalist)
Area of permanent protection (riparian and other buffer zones)	<ul style="list-style-type: none"> - 30 metres for rivers up to 10 metres wide - 50 metres for rivers between 10 and 50 metres - 100 metres for rivers between 50 and 200 metres wide - 200 metres for rivers between 200 and 600 metres wide - 500 metres for rivers wider than 600 metres <p>Top and side of mountains, areas higher than 1,800 metres, sandbanks, and river springs should continue to be considered areas of permanent preservation</p>	<ul style="list-style-type: none"> - For rivers up to 5 metres, not larger than 15 metres, but these should be allowed to be reduced down to 7.5 metres by state-level (regional) regulations - Measurement methods should be changed: measures should be taken from the lower margin of the river (dry season) instead of from the highest (rainy season) <p>There should be no required protection to mountains, areas higher than 1,800 metres, and sandbanks.</p>	<ul style="list-style-type: none"> - 8 metres for properties between 1 and 2 fiscal modules - 15 metres for properties between 2 and 4 fiscal modules - 20 metres for properties between 4 and 10 fiscal modules, given that the river is not wider than 10 metres - Between 30 and 100 metres for wider rivers. <p>Between 30 and 100 metres for properties larger than 10 fiscal modules</p> <p>A ceiling should be established in terms of the percentage of the property occupied by areas of permanent protection</p> <p>Top and side of mountains, areas higher than 1,800 metres, sandbanks, and river springs should continue to be considered areas of permanent preservation.</p>
Restoration Requirements	Any previously degraded permanent preservation or legal reserve area should be completely restored, regenerated or compensated for, independently of when degradation took place.	Farmers should restore degraded areas, but only areas degraded before July 2008.	Farmers should restore degraded areas, but only areas degraded before July 2008.
Legal Reserve	Legal reserve should consist of 80% for properties located in the Amazon region, 30% for properties located in the Cerrado, and 20% in other regions of the country and be equally applied to large and small properties	No legal reserves should be required for small properties (up to 4 'fiscal modules'). Larger properties, should have their areas of legal reserve calculated only in relation to the area that exceeds 4 fiscal modules and permanent preservation areas should be considered in the calculation of total legal reserve areas.	Legal reserve should consist of 80% for properties located in the Amazon region, 30% for properties located in the Cerrado, and 20% in other regions of the country and be equally applied to large and small properties
Number of actors	22	21	25

Source: produced by the author

4.2.3. The Narratives

4.2.3.1 Thematic coding and argumentative map

During the content analysis of the texts, the arguments of the group supporting extensive changes to the previous regulation was inductively divided into four large codes, which were the most frequently mentioned in the texts analysed: 1) *agribusiness's contribution to the country's economy* (mainly increased exports and job openings), 2) the need to guarantee *food security* by permitting more areas to be cultivated, 3) the *nationalist argument*, which highlights the fact that Brazil protects the most forest areas of anywhere in the world and, 4) *legal security*, suggesting that regulatory changes are necessary in order for those who, in the past, complied with other regulations (such as the Land Statute, which ensured land ownership based on the use of lands) to avoid being punished by contemporary environmental requirements.

In opposition to these arguments, those opposing any regulatory change repeatedly emphasised that 1) the government was captured by the private interests of agribusiness and, therefore, was not acting in a way that considered the public good of society (*capture*). From this broader criticism, two narratives emerged: 2) criticism of establishing a deadline before which restoration would not be necessary - the *amnesty* argument, 3) criticism of the *ecological losses* associated with the reduction of permanent preservation areas and the flexibilisation of how legal reserves should be calculated. Finally, two topics were formulated by this group in direct opposition to the *food security* and *economic contribution of agribusiness* arguments. The first argues that 4) *agribusiness is not responsible for feeding Brazilians*, as they export most of their production while Brazilians are fed by small farmers, and the second that it is possible 5) to reconcile increased agricultural economic contribution to the country with environmental protection by applying *more technology to increase the productivity of land*.

The coalition supporting partial regulatory changes based their positioning on four different arguments, all of them related to the need to protect small farmers,

who (in this view) should not be subject to the same demands of environmental protection as large farmers due to their economic vulnerability. First, they also relied on the argument about 1) *food security*, however the focus was placed on small land holders and followed the criticism from the no-changes coalition that small farmers are those that actually produce the food that is consumed in Brazil. It is stated that by scaling the protection requirements according to the size of farms (the famous 'ladder'), as well as by setting limits on the total size of protected areas, family farmers would be benefited. Second, the partial alterations to the code are defended against the argument of those who want the status quo to be maintained by the use of more technology through the argument that (2) *small farmers cannot afford to use more technology* due to their economic vulnerability, so required protection should actually be made more flexible for them. This group counters the nationalist argument through the idea that (3) associating the level of protection with the size of properties is fair and, finally, agrees with those proposing radical reforms by also maintaining that the government has to guarantee (4) *legal security* to all farmers (so legislation has to be altered).

The main arguments used by each coalition are arranged in the following argumentative map, a presentation strategy proposed by Dunn (2012). All codes used and described herein are further clarified through some of their respective quotes included in appendix III, IV and V of this chapter for verification.

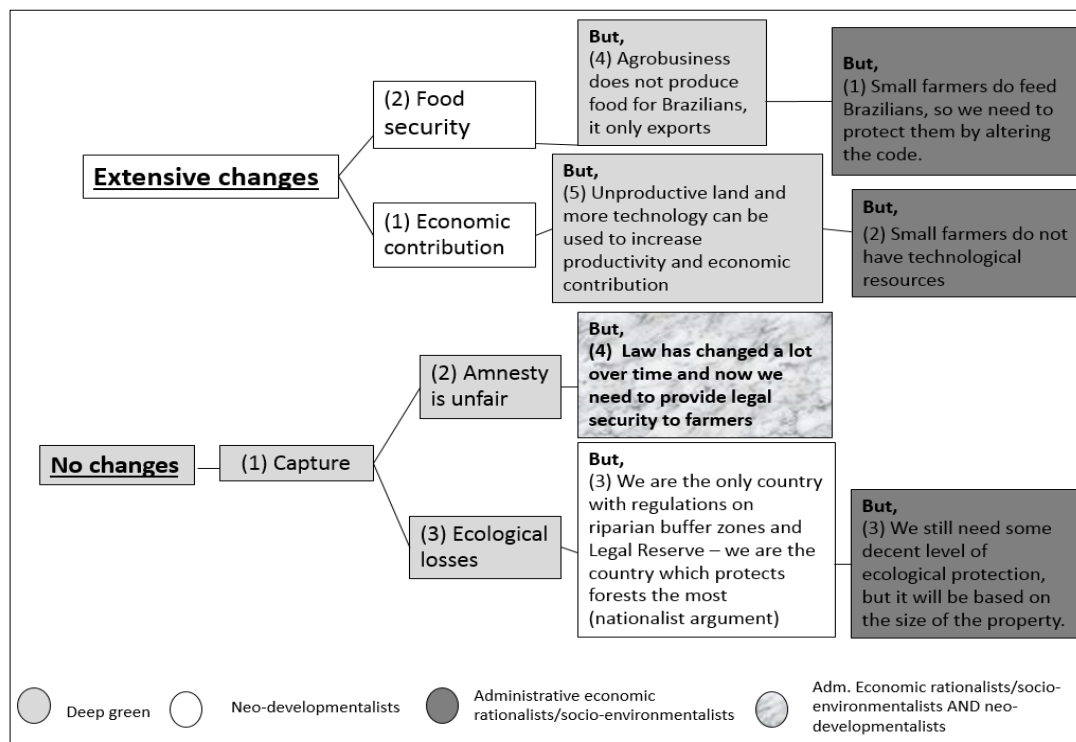


Figure 5 - Argumentative map of the debate about the new forest code
 Source: Produced by the author.

4.2.3.2 Narrative Analysis

In the narrative analysis⁴⁵ of the data, four discourses (or settings) were identified, which characterised the three coalitions described above. First, those supporting extensive changes to the regulation focused on the importance it has for the economic development and portrayed environmental impacts as a necessary cost to be paid. This is typical of a *developmentalist discourse*. Second, those opposing changes to the previous regulation based their position on the need to preserve the environment, even though economic losses will be incurred. This closely reflects the *preservationist* discourse. The third, more moderate narrative, supported the change of a few parts of the code to accommodate the economic demand for more land for agriculture with the maintenance of the majority, but not all, environmental protection requirements. Due to the idea that environmental protection can be balanced with the ideal of economic development through specific rules (thresholds) and also due to the focus on protecting more vulnerable populations (small farmers) elements from both

⁴⁵ Drawn from the 'Narrative Analysis Framework' by Jones and McBeth (2010).

the *administrative economic rationalist* and from the *socio-environmentalist* discourses were identified in the narratives advanced by this third group.

The main 'victims', 'villains' and 'heroes' of these three groups were considerably coherent among actors and are summarised in table 11 below. The victims of those proposing extensive regulatory changes were, for example, the farmers, who were portrayed as constantly under attack by unrealistic regulatory requirements. The villains of that narrative were environmentalists, who were seen to be driven by international interests and not interested in what's best for the country. The heroes were once again farmers who, even though they had to face this disproportionate regulatory burden, were still the main actors responsible for the economic success of the country. For the administrative economic rationalist/socio-environmentalist discourse the victims were small farmers and society, who were vulnerable to old and incoherent regulations. The main villain in their story was bad past regulation (and so, indirectly, the past governments that formulated them) and the heroes were small farmers (i.e. those who actually feed Brazilians) and the current government (i.e. the sensible government proposing proportionate and coherent regulations). Finally, for those advancing the maintenance of previous regulations, the villains were certainly the members of agribusiness who had captured the government and convinced it to make regulations that would be favourable to their interests. The victims would be society as a whole, future generations and whoever incurred the costs of complying with previous regulations (which were now being altered to favour those who did not comply), and the heroes would be environmentalists and scientists who were opposing this unacceptable proposal and protecting the public good. The main 'plots' (which were already described in the process of argument mapping) are also described in table 11.

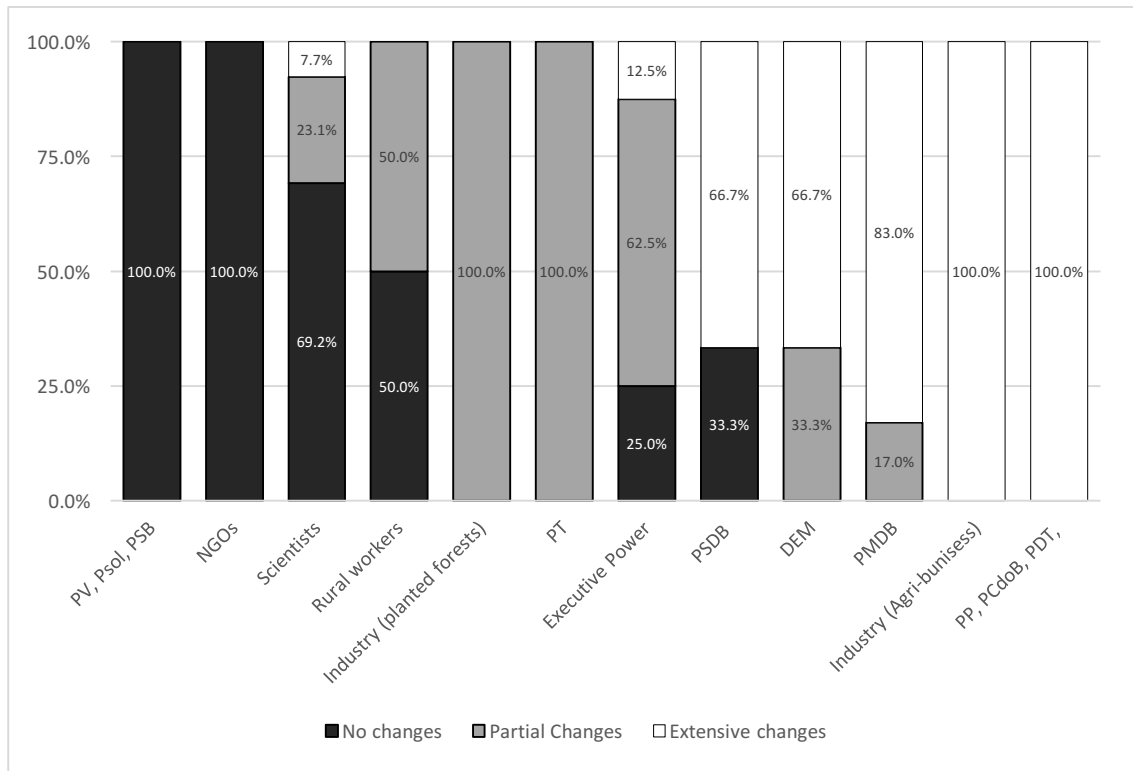
Table 11 - Narrative analysis

Policy Problem	SETTING	VICTIMS	VILLAINS	HEROES	MAIN PLOTS
CHANGES TO THE FOREST CODE	Neo-developmental (extensive changes)	Farmers	Environmentalists	Farmers	Farmers provide the country with food security Farmers help in the economic development of the country No other country has forest protection regulations as strict as ours, which put us at a disadvantage
	Administrative economic rationalist / socio-environmentalist (partial changes)	Farmers Society	Bad past regulation	Small farmers Current government	Small farmers assure the country's food security Small farmers are poor and cannot afford technological solutions Government should provide legal security to farmers
	Preservationists (no changes)	Society Future generations Whoever has complied with previous regulations	Large farmers	Environmentalists Scientists	Government has been captured by agri-business Amnesty of past wrongdoings (deforestation) is unfair Environmental losses will be huge with new rules

Source: Produced by the author based on media publications

4.2.4. The Coalitions

The description of the number of actors analysed per party or social group is presented in appendix II for this chapter. These were coded according to the positions they expressed during debates. In Graph 2 below are the descriptive statistics of the percentage of actors within each group favouring none, some or extensive regulatory changes, respectively.



Graph 2 - Percentage of Actors in each Group Supporting None, Partial or Extensive Changes to the Previous Forest Regulation

PV: Green Party. **Psol:** Socialism and Freedom Party. **PSB:** Socialist Brazilian Party. **NGOs:** SOS Mata Atlântica, Greenpeace, Instituto SocioAmbiental (ISA) Instituto de Pesquisa Ambiental da Amazônia (IPAM). **Scientists:** EMBRAPA, ABC, SBPC, USP, UFSC, Inpa, Centro Universitário do Oeste Paulista. **Rural Workers:** CONTAG, Fetraf-Sul, Via Campesina, Sindicato Nacional dos Trabalhadores de Pesquisa e Desenvolvimento Agropecuário. **Industry (planted forests):** Abracelpa, ABRAF, Fibria. **PT:** Workers Party. **Executive Power:** President Dilma, 3 ministers of environment, 3 ministers of agriculture. **PSDB:** Party of Brazilian Social Democracy. **DEM:** Democrats (Party). **PMDB:** Brazilian Democratic Movement Party. **Industry (agribusiness):** National Confederation of Agriculture (CNA). **PP:** Progressive Party. **PCdoB:** Communist Party from Brazil. **PDT:** Democratic Work Party.

Source: Produced by the author

The actors most active in the no-changes (preservationist) coalition were:

- Political parties: PV (Green Party), Psol (Socialism and Freedom Party), PSB (Socialist Brazilian Party);
- NGOs: SOS Mata Atlântica, Greenpeace, Instituto SocioAmbiental (ISA) Instituto de Pesquisa Ambiental da Amazônia (IPAM)
- Several scientists: mainly from ABC, SBPC, USP, Unicamp and Inpa in the case of the first 'no-changes' coalition

The actors most active in the 'extensive changes' (neo-developmental) coalition were:

- Deputies from: the PSDB (Party of Brazilian Social Democracy), DEM (Democratic Party), PMDB (Brazilian Democratic Movement Party); PP: Progressive Party; PCdoB - Communist Party from Brazil and PDT - Democratic Work Party;
- Agribusiness - National Confederation of Agriculture (CNA).

Finally, the moderate coalition (administrative economic rationalist/socio-environmentalist) was largely formed of:

- Members of the executive power (ministers and the president),
- Representatives of the Workers' Party in the Congress,
- Representatives of the planted forest industry (Abracelpa, ABRAF, Fibria) who were, however, slightly closer to the position of the preservationist coalition than the other members of the moderate coalition (but still accepted many changes to the previous code).

None of the coalitions had all its proposals adopted. The final results were a reflection of the demands of the neo-developmentalists and of the administrative economic rationalist/socio-environmentalist coalitions. The neo-developmentalists were considered to be the 'winning' coalition because they demanded regulatory reforms in the first place. Therefore they succeeded in putting the issue on the agenda and in getting several of their demands approved. The other coalitions responded to the demands of the latter, either by opposing any changes (preservationists) or by trying to impede that the changes be as drastic as the neo-developmentalists group initially intended (administrative economic rationalist/socio-environmentalist coalition).

4.2.5. Conclusion

The analysis of the coalitions that were formed during this highly adversarial standard-setting process revealed three main positions. First, the position of those advancing extensive changes to the previous regulation in order to reduce the burden

of environmental conservation for farmers. This coalition was found to promote neo-developmental arguments stressing the importance of agriculture and of the availability of more agricultural land for the country's economic development. Second, the position of actors strongly opposing any regulatory reform, which was found to be associated with preservationist narratives according to which the environment should be protected against all odds. Finally, a third, more moderate, coalition supported the idea that the code should be changed, but a few environmental conservation measures should be maintained and the main focus of the changes should be the protection of family farmers. The arguments put forward by this third coalition depicted narratives that are associated with a socio-environmentalist perspective, according to which more vulnerable populations should be allowed liberty in the use of environmental resources, but they exhibited elements of the administrative economic rationalist perspective, according to which environmental conservation and economic development can be reconciled through the implementation of centralised and detailed rules.

The argument mapping and narrative analysis pursued in this part provided a dynamic analysis of the debate and was useful to demonstrate that the more moderate arguments of the 'partial-changes' coalition emerged only after the dissensus among the two first groups has already been established, and featured a more conciliatory nature, incorporating arguments and counter-arguments from both initial coalitions. Finally, it was demonstrated that, although none of the coalitions were successful in having their positions fully represented by the 2012 Forest Code, the most successful coalition was the neo-developmental one. This is due to the fact that this was the coalition initially proposing the regulatory changes (while the other two only reacted) and also because many of their original proposals regarding the reduction of the requirements of forested areas were actually approved.

4.3. ACF Sources of Policy Change

4.3.1. Introduction

This part will draw on the first two in order to assess the reasons for the approval of the 2012 Forest Code. Following the ACF, this part analyses the importance

of external and internal events, negotiated agreement and policy-oriented learning in the changes represented by the approval of the new code. It complements the previous parts by providing a more dynamic analysis of the debates and contributions. It also provides an analysis of external events that is also applicable to the other two case studies and will, therefore, only be provided once.

4.3.2. External Events

The ACF emphasises that events external to the subsystem – namely changes in socioeconomic conditions, in public opinion, in the systemic governing coalition and changes in other policy subsystems – might promote changes in policy core beliefs and, as a consequence, in policies. Having considered the relevant external events in Brazil between 2005 and 2015, I maintain that changes in socioeconomic conditions and in the governing coalition were the most impactful to the changes occurring in environmental policies, particularly the boom in the export of commodities and the ascendance of the economic and political power of the agribusiness sector.

Agribusiness is one of the most competitive businesses in Brazil and is one of the main sectors responsible for the continuous growth of the Brazilian economy during the 1990s and 2000s. In 2015, this sector accounted for approximately 23% of Brazilian GDP and for 44% of its total exports, making Brazil the fourth-largest exporter of commodities in the world only behind China, India and the US (Bajpai, 2015). Even though it is a highly mechanised and technology-intensive sector, statistics from 2013 reveal that in that year, at least a third of the active labour force of the country was employed by this sector (PwC, 2013). Brazilian agribusiness has noticeable participation in several major food value chains, namely: oilseeds and grain (soybean, corn, cotton, coffee), animal protein (bovine, poultry and pork), orange juice, and sugar and ethanol. Estimates point, in addition, to the high availability of resources such as land and water that offer the sector significant potential for expansion. The sector is said to have the capacity to provide for up to 40% of global additional demand for food until 2050 (PwC, 2013).

Between 2005 and 2015, there were marked changes in the economic and political power of the agribusiness sector. These were underpinned by two crucial external events: 1) the *boom in the exports of commodities between 2009 and 2011*, which provided the agribusiness sector with a considerable increase in economic power and 2) the *composition of the National Congress*, which shifted towards a more conservative and agribusiness-oriented configuration in the 2011 election.⁴⁶ These two external events favoured the changes in the three cases investigated in this thesis through the redistribution of resources (political and economic power) among coalitions, mainly to the benefit of the neo-developmental coalition, which, as already observed, started to predominate after the mid-2000s.

The *boom in the exports of commodities* favoured agribusiness economically, both because of increases in prices and in the quantity of exports. As can be seen in figure 6, after the economic crisis of 2008 until at least the end of 2011, there was a sharp increase in the prices of Brazilian exported commodities. This is often attributed to the fact that the rising demand of the Chinese market, mainly for soy, pushed commodity prices up, directly benefiting countries such as Brazil, who was already a competitive player in the commodity market. Other central products in Brazil-China trade relations, such as iron ore and oil, also saw marked price increases between 2008 and 2012 (see figure 7).

In addition to the price increases, the quantities of products exported also increased slightly. The amount of commodity exports as a percentage of total exports has risen from 63% in 2009/10 to 65% in 2012/13 in Brazil, with food items making up 52% of the total commodity exports in 2012/13 (UNCTAD, 2014). As figure 8 indicates, moreover, agrifood exports have been on the rise in Brazil, with a particularly steep increment between 2009 and 2011. Therefore, both prices and quantities of commodities exported attest the increase in the economic power of agribusiness sector between 2008 and 2013.

⁴⁶ Assessing whether the increase in the political power of the agribusiness sector can be attributed to the increase in its economic power is beyond the scope of this thesis, but the temporal sequence of increasing economic power preceding the increase in political power indicates that this is likely to be the case.

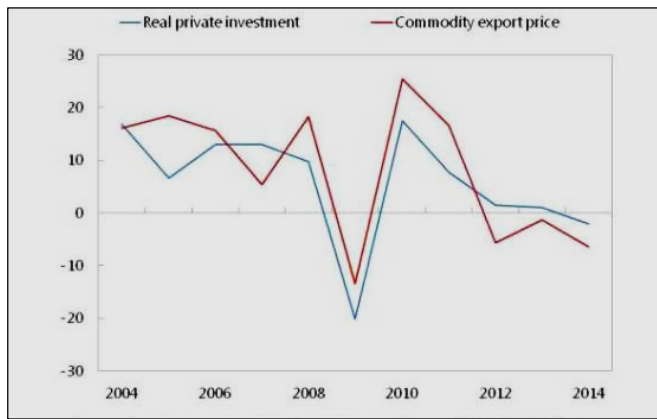


Figure 6 - Latin America and the Caribbean: real private investment and commodity export price growth, 2004–14.

Source: Magud (2015). Available at: <http://blog-imfdirect.imf.org/2015/05/12/commodity-blues-corporate-investment-in-latin-america/> Accessed on: 29/05/2015

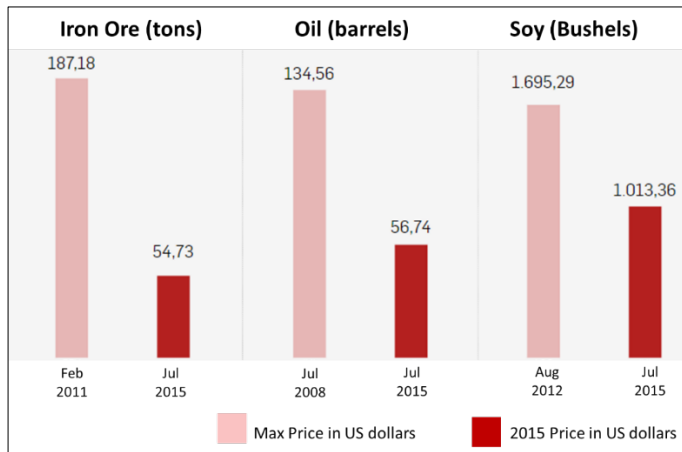


Figure 7 - Commodity Prices

Source: CRB Index/Tendências Consultoria/ O Estado de SP (2015)

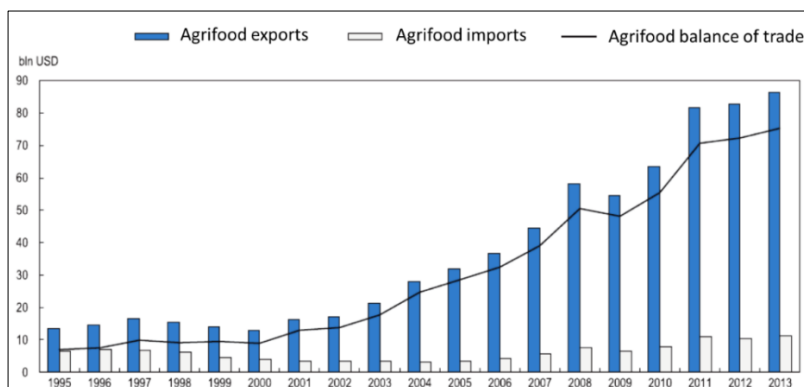


Figure 8 - Brazilian agrifood trade between 1995 and 2013

Source: UN CoTrade database (2013)

The second external event identified as relevant for the resource redistribution among coalitions relevant in all three cases was the change in the composition of the National Congress, which shifted towards a considerably more

conservative and agribusiness-oriented composition in the 2011 elections. Data from DIAP (*Departamento Intersindical de Assessoria Parlamentar*) – a research institute that analyses the ideological affiliation of members of the National Congress – reveals that the number of federal deputies and senators who publicly admitted being supportive of agribusiness demands (and who self-identify as part of the ‘rural caucus’) went from 111 during the 2003–2007 mandate to 160 during the 2011–2015 mandate, the latter being the period in which the three regulatory changes analysed by this thesis occurred (DIAP, 2014). The political power of members of the neo-developmental coalition (mainly composed by members of the rural caucus) in the National Congress, has, therefore, increased in this time period.

Further evidence of the increase in the political power of the agribusiness sector relates to campaign donations. The analysis of the five largest campaign donors to the winning presidents between 2002 and 2014 reveals that the amount donated by agribusinesses increased considerably. In 2002, the main donors to Lula’s campaign were either from consumer goods or banking industries (see table 12). In 2006, two agricultural producers were ranked among the top five donors, with one leading the group. In 2010, during Dilma Rousseff’s first election, the meat producer JBS was the third-largest donor. In 2014, the meat producer became the lead donor and the amount donated by these five top contributors was nearly ten times greater than in 2002. This fact demonstrates not only the increased influence of the agribusiness sector over this time, but also the greater overall importance that campaign donations acquired in Brazilian politics.

Table 12 - Top 5 donors to Lula’s campaign - 2002

Company Name	Sector	Industry	Sub-Industry	Donation in Reals
Cia de Tecidos Norte de Minas	Consumer Discretionary	Apparel and textile products	Textile products	R\$ 2,060,625
Banespa S/A	Financials	Banking	Banks	R\$ 1,400,000
Recofarma Industria do Amazonas LTDA (The Coca Cola Company)	Consumer staples	Consumer products	Beverages	R\$ 1,000,000
Js Administracao de Recursos S/A	Finance	Banking	Banks	R\$ 1,000,000
Banco Abn Amro Real S/A	Finance	Banking	Banks	R\$ 650,000

Source: Transparencia Brasil <http://www.asclaras.org.br>

Table 13 - Top 5 donors to Lula's campaign - 2006

Company Name	Sector	Industry	Sub-industry	Donations in Reals
Sucocitrico Cutrale LTDA	Consumer staples	Consumer products	Agricultural producers	R\$ 4,000,000
Itau Unibanco S.A.	Finance	Banking	Diversified banks	R\$ 3,500,000
Gerdau Acos Longos S.A.	Materials	Iron and steel	Steel producers	R\$ 3,100,000
Jbs S/A	Consumer staples	Consumer products	Agricultural producers	R\$ 2,502,000
Banco Alvorada S.A.	Finance	Banking	Banks	R\$ 2,500,000

Source: Transparencia Brasil <http://www.asclaras.org.br>

Table 14 - Top 5 donors to Dilma's campaign - 2010

Company Name	Sector	Industry	Sub-industry	Donation in Reals
Andrade Gutierrez S/A	Industrials	Engineering and construction	Infrastructure construction	R\$ 15,700,000
Construcoes e Comercio Camargo Correa S/A	Industrials	Engineering and construction	Infrastructure construction	R\$ 13,000,000
Jbs S/A	Consumer staples	Consumer products	Agricultural producers	R\$ 12,000,000
Construtora Queiroz Galvao S/A	Industrials	Engineering and construction	Infrastructure construction	R\$ 7,880,000
OAS S/A	Industrials	Engineering and construction	Engineering Services	R\$ 7,400,000

Source: Transparencia Brasil <http://www.asclaras.org.br>

Table 15 - Top 5 donors to Dilma's campaign - 2014

Company Name	Sector	Industry	Sub-industry	Donation in Reals
JBS S/A	Consumer staples	Consumer products	Agricultural producers	R\$ 20,000,000
OAS S/A	Industrials	Engineering and construction	Engineering Services	R\$ 20,000,000
Andrade Gutierrez S/A	Industrials	Engineering and construction	Infrastructure construction	R\$ 11,000,000
Odebrecht	Industrials	Engineering and construction	Infrastructure construction	R\$ 8,100,000
Banco BTG Pactual S/A	Finance	Institutional financial services	Institutional brokerage	R\$ 6,500,000

Source: Folha de Sao Paulo. <http://www1.folha.uol.com.br/poder/2014/09/1519452-maior-doador-de-campanhas-concentra-repasses-a-governistas.shtml>

There were, therefore, one socioeconomic and two political external events influencing the distribution of resources among the coalitions active in debates about environmental regulations in Brazil. The socioeconomic changes arising from the increase in the prices and quantities of commodities exported between 2008 and 2013 and the marked increase in participation of the rural caucus in the National Congress as well as in the amount of presidency campaign donations made by the agribusiness sector.

4.3.3. Internal Events

The analysis of the forest case revealed at least three important internal events to be fundamental triggers of the reform of the forest code. The first two were the *assassination of the rubber tapper Chico Mendes* by cattle ranchers in 1988 and the *1992 UN Rio Conference*. These two events were crucial to the overall trend towards stricter forest regulatory enforcement in the 1990s and 2000s, as described in part 4.1 of this chapter. The high international visibility brought to the issue of deforestation in Brazil by the 1992 UN Rio Conference, and by the Chico Mendes assassination in 1988, saw an increase in the resources dedicated to environmental policies in Brazil, both from national and international sources. These two events improved forest preservation in the country, both because of an increase in the attention paid to the 'people of the forest' and their important role in preservation, and also because more resources (technological and human) were made available to tackle deforestation.

The third crucial internal event was the Executive Decree 7.029/09, published in December 2009. The decree fixed a deadline for farmers to comply with legal reserves regulation. It stated that by 2011 all farmers should be compliant with legal reserves regulations, otherwise they would be punished. This was identified as a crucial internal event underlying the subsequent alteration of the Forest Code due to at least three factors. First, several actors explicitly referred to this decree while debating the reform of the code (it was mentioned 14 times in the News of the Lower Chamber in 2011). Some actors, such as scientists (represented by SBPC and ABC), even suggested that instead of altering the entire code, the date of punishments predicted by the decree should simply be postponed (Lower Chamber News Agency, 25/04/2011). The President of the Lower Chamber asked the environment minister to negotiate this date and she accepted the postponement of punishment. That this was even considered as an alternative already points to the importance of the decree. Second, the temporal coincidence of the publication of this decree and the re-ignition of debates about altering the Forest Code is remarkable. Old legislative proposals for reforming the code were revived and new ones (such as the Project of Law 6227/09 launched in October 2009) were made at almost the same time as the publication of the decree. A commission for the debate of all these reform proposals was formed by the Lower Chamber on September 2009, signalling the beginning of the efforts that

would culminate in 2012 with the approval of the new code. This was four months before the publication of the decree, but not necessarily before the decree had started to be considered by the executive power and came to the awareness of the law makers. Third, the Minister of the Environment, Izabella Teixeira, when interviewed about the Forest Code explicitly mentioned that “the spark that ignited the new Forest Code mayhem was the regulation of the Law of Environmental Crimes” in a clear reference to Decree 7.029/09 (interview 42, 30/10/15).

4.3.4. Negotiated Agreement

As mentioned in chapter 2, ‘negotiated agreement’ refers to “situations in which coalitions that have been fighting for decades come to a negotiated agreement representing a substantial change from the *status quo*” or, in other words, to “agreements involving policy core changes [that] are crafted among previously warring coalitions” (Sabatier and Weible, 2007 p. 205). This sub-section assesses the level of negotiated agreement achieved between coalitions before the approval of the new forest code. It argues that coalitions achieved a very low level of negotiated agreement and maintains that it is because of a ‘hurting stalemate’, i.e. the most crucial motivator of negotiated agreement, according to the ACF, was not present (Weible and Nohrstedt, 2013, p. 132; Weible and Jenkins-Smith, 2016, p. 24).

As observed in chapter 2 (section 2.3.4) the ACF does not provide any standardised way to assess the level of negotiated agreement in policy subsystems. As a consequence, three observable implications were proposed and will be used in this empirical analysis:

1. *How often coalitions seek to influence decisions through instruments that are not based on personal interaction and negotiation* (such as vetoes, amendments and judicial actions). The analysis of this observable implication was based on the assumption that the higher the frequency of recourse to these non-agreement based mechanisms, the lower the level of negotiated agreement in the case.

2. *The number of venues used by actors during the negotiation process.* The assumption here is that the higher the number of venues used for

negotiation, the lower the level of negotiated agreement. The logic underlying this assumption is that, if coalitions maintain negotiations restricted to specific institutional venues (for example, within the National Congress or within specific commissions within the National Congress) and do not seek to include other venues such as courts, other agencies or the media, then that means that actors are satisfied with the level of collaboration that is taking place in that environment, so actors consider it legitimate to continue using it as the sole forum for debates (Weible, Pattinson and Sabatier, 2010). On the other hand, if the debate is taken to courts, media, independent agencies or any other venue, it indicates less negotiation and more disagreement.

3. *The occurrence of 'devil shift', measured through the identification of personal attacks and the use of pejorative terms to refer to the other coalitions during debates.* The phenomenon of 'devil shift' refers to situations in which "actors tend to view opponents as being more powerful than they actually are" (Leach and Sabatier 2005, p. 494) and exaggerate their maliciousness (Jenkins Smith *et al.*, 2014, 45%; Sabatier, Hunter, and McLaughlin, 1987).

First, in almost all stages of the negotiation process of the new Forest Code there were several clear attempts *to influence decisions through instruments not based on personal interaction and negotiation*, which can also be called *institutional manifestations of disagreement*. For example, when the report of the Special Commission for the analysis of the new Forest Code bills was voted on in this Commission, five alternatives to the main report were presented, three representing the perspectives of the preservationist coalition (PT, PV and PSol) and two representing the views of the developmentalist group (PMDB and PT). It is important to observe, therefore, that even deputies from the same party (PT) supported opposing reports, both of which were different from the one approved by the majority of the Commission.⁴⁷ Even after the bill had been voted on by the entire Lower Chamber in May 2011, an amendment (amendment 164) was proposed and approved,

⁴⁷ During the voting, Sarney Filho from the Green Party tried to delay the process through requests for nominal votes and other institutional manoeuvres. The deputy was personally attacked by Luiz Carlos Heinze (PP-RS), generating confusion.

which in large part reverted the results of the previous negotiations with the executive government. After this amendment, the text was altered twice again. The final version was voted on in 2012.

The absence of consensus around this final version is verified not only by the continuous critical statements from members of the preservationist coalition but also by the 12 vetoes and 32 alterations to the bill proposed by President Dilma Rouseff through a Provisional Measure, which attempted to bring the proposal closer to the administrative economic rationalist/socio-environmentalist position supported by the executive government. After the presidential vetoes were analysed in the Lower Chamber, they were subject to more than 600 amendments, once again pointing to a low level of negotiated agreement reached between members of the executive government and the Lower Chamber. After the resulting bill went back for the presidential approval, nine additional points were vetoed.

In addition to the sheer number of vetoes and amendments that characterised the elaboration of the new Forest Code, three 'Actions of Unconstitutionality' were filed by members of the Attorney General's Office (involving the judicial power in the debate) and one by the party Psol (supporting preservationist claims).⁴⁸ Finally, in the period after the approval of the law in 2012 until 2016, two bills have been published by deputies from the developmentalist coalition proposing to alter it,⁴⁹ which also points to the persistence of dissent. In sum, evidence from the regulatory process reveals that none of the identified coalitions could rely exclusively on inter-personal negotiations of the bill and all of them had to use institutional checks and balances to make their positions heard. The review of this long negotiation process exposed, therefore, a rather adversarial picture in which the judiciary power was involved twice, one legislative amendment reversed previous negotiations with the executive power, and the total of presidential vetoes numbered 21.

Second, the *number of alternative venues* was considerably high, as already evidenced by the above analysis of institutional manifestations of disagreement. As observed, the judicial power was involved twice and the executive power vetoed 21

⁴⁸ These had not yet been approved by the Supreme Court of Justice as of April 2016.

⁴⁹ PL 6330/13 by Deputy Afonso Hamm (PP-RS) proposes that fruit trees be used in the restoration of buffer zones. The second PL6830/13 by Deputy Valdir Colatto (PMDB-SC) proposes that the size of protected areas located within cities be defined by mayors and no longer by the federal law.

decisions taken in the National Congress. In the National Congress, the debate was initiated in the Commission of Agriculture, but was also intensely debated by the Commission of Environment and Sustainable Development, and by a third Special Commission created specifically for the debate about the reform of the Forest Code. The very need for a special commission points to the low level of agreement among members of the agricultural and environmental commissions and to a dispute over the most legitimate venue.

Finally, personal public attacks during negotiations were frequently found in the analysis of the data, indicating the occurrence of *devil shift*. It is assumed that in a situation of high negotiated agreement, personal public attacks would not occur. There were, however, two incidents of personal attacks during the negotiations of the new Forest Code that were reported in the material analysed (in this case by the National Congress News Agency). One was against the Green Party's Deputy, Sarney Filho, in the negotiation of the initial report produced in 2009 by the Lower Chamber's Special Commission: Sarney Filho was accused by a member of the developmentalist coalition, Luiz Carlos Heinze (PP-RS), of following his father's example in "delivering Brazil to foreign interests" (Lower Chamber News Agency, 2010, 06 July). The second occurred in May 2011 when Senator Marina Silva (from the preservationist coalition) accused the Lower Chamber's rapporteur Aldo Rebelo of fraud in the Forest Code report, and he retaliated by accusing her ex-husband of illegal deforestation (Lower Chamber News Agency, 2011, 12 May).

Additionally, as the following quotations demonstrate, coalition publicly refers to the others pejoratively, denoting cases of exaggeration of the maliciousness of opponents (or 'devil shift'). In the first example, those supporting changes in the Forest Code (neo-developmentalists), refer to those that oppose them (preservationists) of "environmental fundamentalism". On the other hand, a member of the preservationist coalition refers to her opposition as "those who want to increase their land sizes instead of adding technology" and as "the representatives of the most anachronistic economic interests". The negative definitions used by each coalition to refer to their opposition contributed to the identification of *devil shift*, which in turn contributed to the absence of negotiated agreement.

“FAO has affirmed, repeatedly, that the world needs to increase food production by 40% and that Brazil is one of the qualified countries to make this contribution. If it depends on the *environmental fundamentalism settled around the new Forest Code* –which remains the most stringent code in the world—one can not do it” (Abreu, 2012, 10 October, ‘*Código sem fundamentalismo*’, *Folha de São Paulo*, translation and emphasis by the author).

“Freedom of thought is one of the greatest achievements of our precious democracy. The code is no longer about forests and becomes a concession system for the predatory occupation of *those who want to increase their land sizes instead of adding technology* [to production]. It goes in opposite direction to the 21st century and it is a setback”⁵⁰ (Silva, 2012, 26 October, ‘*Fato e Opinião*’, *Folha de São Paulo* translation and emphasis by the author).

“The plan for combatting deforestation was supported by the Forest Code, which is currently being disfigured to ‘regularise’ past and future deforestation. This is the year in which *the representatives of the most anachronistic economic interests* have abandoned their pretense and imposed their agenda”⁵¹ (Silva, 2012, 07 September, ‘*Legado Devastado*’ *Folha de São Paulo*, translation and emphasis by the author).

Regarding the reasons for this outcome, it is argued that a negotiated agreement was not achieved because of the absence of a ‘hurting stalemate’, which has been defined as a situation in which there is *uncertainty, interdependence among coalitions, and incentives for negotiation to take place* (chapter 2, section 2.3.5). Confirming theoretical expectations, it was noticed that incentives for negotiation were very low between the main coalitions. The only coalition truly interested in regulatory change was the neo-developmental one. The administrative economic rationalists had considered the approval of the new Forest Code a political victory for the National Congress (particularly from the so called ‘ruralists’ of the Lower Chamber) against the executive government, as revealed by the interview with the former Minister of Environment, Izabella Teixeira⁵² (interview 42). The preservationists, on the other hand, completely opposed the negotiation of changes as these were perceived

⁵⁰ *A liberdade de pensamento 'e uma das maiores conquistas de nossa preciosa democracia. O código deixa de ser florestal, torna-se um sistema de concessões para a ocupação predatória de quem quer aumentar terras em vez de agregar tecnologia. Vai na contramão do século 21 e é um retrocesso* (Silva, 2012, 26 October, ‘*Fato e Opinião*’, *Folha de São Paulo*).

⁵¹ *O Plano de Combate ao Desmatamento tinha sustentação no Código Florestal, agora desfigurado para "regularizar" o desmatamento passado e futuro. Este é o ano em que os representantes dos interesses econômicos mais atrasados deixaram de lado o fingimento e impuseram sua agenda* (Silva, 2012, 07 September, ‘*Legado Devastado*’ *Folha de São Paulo*).

⁵² Anonymity was not required by the minister.

to make the previous law less strict in environmental terms. Incentives for negotiation were, thus, very unequally distributed and only the neo-developmental coalition had actual incentives to push the negotiation forward.

Interdependence between actors was also low. The strength of the rural caucus in the National Congress provided them with a comfortable position because other groups had limited capacity to block their decisions. Although vetoes were used by the president, the dependency of the president on the political support of the congress and the limitations of this tactic (which does not allow new proposals to be made subsequently), was not perceived to contribute to the interdependence of actors in achieving their interests.

Finally, *uncertainty* was low in the sense that the consequences of approving the law or remaining with the previous regulation were relatively clear to all coalitions involved. The degree of certainty was increased by the Presidential Decree 7.029/09, which determined that all farmers who were not compliant with the requirements of the previous code would be punished from 2011. This, alongside the tendency towards stricter regulatory enforcement (which had been promoted by the executive government since at least the late 1990s), provided the neo-developmental group with sufficient certainty that they should push for an alteration of the previous regulation, and left preservationists with no doubt that they should peremptorily oppose it. There was, therefore, no hurting stalemate and, consequently, negotiated agreement was not found to occur in the negotiation of the 2012 Forest Code.

4.3.5. Policy-oriented Learning

Policy-oriented learning refers to “relatively enduring alternations of thought or behavioural intentions that result from experience and/or new information and that are concerned with the attainment or revision of policy objectives” (Sabatier and Jenkins-Smith 1999, p. 123). The three observable implications of the relevance of learning for policy change that will be observed in this section are: 1) *heightened public and political attention to technical information*, 2) *the mobilisation by coalitions to exploit or exchange technical information*, in other words, *the occurrence of ‘analytical*

debate, and 3) *change in the content of policy or regulations* (for justifications about the choice of these three observable implications see chapter 2, section 2.3.3). All three observable implications are considered necessary to evidence the relevance of learning in processes of policy change.

In order to assess the *heightened public and political attention paid to technical information*, this section will trace all the occasions in which scientists participated in debates in the Lower Chamber about the new Forest Code (all the instances are summarised in table 16).

Researchers from Embrapa – the government agency for agronomic research – had frequent participation in Lower Chamber debates in November 2009 and March 2010. They have always emphasised the need for legislation to protect ecologically vulnerable areas such as river declivities and other areas of ‘fragile soil’. Later, in June 2012, a technician from ‘Embrapa Vegetables’ participated in the debates, defending the idea that rules should be more flexible only for small farmers, because the majority of vegetable producers in Brazil are small farmers (see lines 1, 2 and 19 of table 16 for a summary of their positions). Both positions demonstrate, therefore, an alignment with the partial-changes coalition.

Further scientist participation in debates about the new Forest Code in the Lower Chamber occurred in May 2010. The environmental caucus promoted a debate and invited two professors from University of São Paulo to participate. Professor Jean Paul Metzger, a specialist in landscape ecology, presented a scientific study about the proposed reforms, defending the idea that, contrary to the proposals to reduce riparian buffer zones, these should not be diminished but increased from the proposed 30 metres to at least 100 metres in order to fulfil its ecological role. He also opposed the proposal to combine the legal reserve and riparian areas in the calculation of total protected areas of a property, because these two types of areas have “biologically distinct functions”. Similarly, Professor Gerd Spavorek, a specialist in soil preservation and land use planning, defended the maintenance of previous legislation by arguing that it could be applied without harm to agribusiness interests⁵³ (lines 3 and 4, table 6).

⁵³ This position was echoed by the Minister of Environment Izabella Teixeira in June 2010, when she mentions studies by the University of São Paulo to support the idea that riparian zones and legal reserves have a large role in the conservation of biodiversity and their protection does not imply less agriculture production for the country.

These researchers were therefore aligned with the positions of the preservationist (no-changes) coalition.

In November 2010, the independent scientific societies the SBPC (Brazilian Society for the Progress of Science) and the ABC (Brazilian Association of Sciences) participated for the first time in the debate. These scientific societies established a working group in order to pursue an in-depth technical analysis of the bill and advanced, in a public hearing, the idea that the vote on the new Forest Code should be postponed until more scientific evidence had been produced (see line 5, table 6). In the same public hearing, Professor Luis Carlos Moraes from the Centro Universitário do Oeste Paulista, defended extensive changes to the forest regulation and referenced evidence (first produced by Embrapa) that Brazilian environmental legislation, if rigorously enforced, would leave only one third of the territory available for agricultural production. This was held by the professor to not be “economically sustainable in the medium and long term” (see line 6, table 16). Moraes’s position, which was close to the neo-developmentalists’ coalition position, was not supported by the SBPC or the ABC.

On February 2011, a seminar was organised by the environmentalist caucus in which Professor Gerd Sparoveck from the University of São Paulo, Professor Ricardo Rodrigues from the University of Campinas (Unicamp), and a representative from the SBPC revealed the conclusions of the scientific working group established four months before. The SBPC representative maintained that the proposed changes to the previous Forest Code would be “a disaster for environmental conservation in Brazil and that changes would not necessarily mean an increase in agriculture productivity” (line 7, table 16). Professor Sparoveck argued that, even if there was absolute compliance with the previous regulation there would still be 103 million hectares of free use areas ready to be used for agriculture. According to him “it is possible to double agricultural production in the country in the next 20 years without more deforestation” (line 8, table 6). Professor Ricardo Rodrigues reiterated that “land owners will still have 70% of their properties to exploit if the previous code is kept unchanged” and argued that small river buffer zones should not be reduced because “these are the rivers most susceptible to silting” (line 9, table 6). Finally, Professor

Carlos Alfredo Joly (from Unicamp), a botanist, argued that the reduction of vegetation coverage around rivers as well as on mountains and slopes could lead to the extinction of several species. The biologist affirmed that if rules about riparian buffer zones for small rivers were changed as proposed by the bill “half the amphibian species would disappear” (line 10, table 16) (Lower Chamber News Agency, 2011, 22 February). The conclusions of the scientific report were therefore closer to the position of preservationists.

Finally, on April 2011, the president of the SBPC, Helena Nader, came to the Lower Chamber to present the results of the report of the scientific working group formed six months before. She requested that voting be postponed for at least two years so that scientific contributions could be incorporated into the new bill (line 12, table 16). The SBPC report included more than 300 scientific studies and focused specifically on the proposed changes to the code. Among the SBPC’s main findings were the risks involved in reducing riparian buffer zones. The report further argues that riparian protected areas in Brazil do not represent more than 6.9% of total private properties, so maintaining the requirement for their preservation would not harm agricultural productivity (line 13, table 16). Other important findings of the report were:

- The need to consider the surrounding areas of wetlands.
- The importance of the higher river border (that of the rainy season) and not of the lower one for calculating the riparian buffer zone.
- The maintenance of mountain tops and slopes as areas of permanent preservation.

The SBPC report, therefore, opposed changes to the previous code and was aligned with the claims of the preservationist coalition. Voting was, however, not postponed as the scientists requested, and none of their main findings were incorporated into the bill. In relation to the proposal of subtracting permanent preservation areas from the calculation of total legal reserve required, scientists recognised the need to consider the proposal for areas such as the Amazon (where legal reserve is 80% of private property) but observed that more scientific studies were needed.

On March 2011, a specialist in environmental law, Luís Carlos Moraes from the Centro Universitário do Oeste Paulista, raised awareness of the economic burden that the restoration of all degraded areas would represent for municipalities, thereby aligning himself with the neo-developmental position. According to data from 2007, he argued that Brazil would lose R\$ 22 million in income tax and that the country's GDP would be reduced by R\$ 74.3 million (line 11, table 16). He did not present original research to support these claims and was found to be the only scientist clearly supporting the arguments of the neo-developmental coalition.

On February 2012, another event was held in the Lower Chamber on the perspective of scientists on the new code. The event was held by the environmental caucus and the perspectives advanced opposed the bill. Maria Tereza Piedade, for example, a researcher from the Amazon Research Institute, remarked that there were high risks associated with the use of the lower border (the drier season border) of the river for the calculation of buffer zones areas, especially in the case of wetlands. Finally, in March 2012, the SBPC published an open letter reinforcing the points previously made in their report and calling attention to the fact that their positions regarding riparian buffer zones and the amnesty for the restoration of areas degraded before 2008, had not been considered by the Congress.⁵⁴ At least five other opinions from scientists against the reforms proposed by the bill were identified in the analysis of Lower Chamber's debates. They are not described here, but are summarised in table 16 (lines 15 to 20).

Table 16 - Scientists participation in Lower Chamber debates

	Date	Scientist - organisation	Summary of the main claim	Predominant coalition alignment
1	November 2009	Gustavo Ribas Cursio – Embrapa Forests	Riparian declivities should be protected	Preservationist
2	March 2010	Walfrido Tomás – Embrapa Pantanal	Soil fragility should be considered when designing protection rules	Preservationist
3	May 2010	Prof. Jean Paul Metzger – University of Sao Paulo (landscape ecology)	“Riparian buffer zones cannot be reduced in relation to previous regulations, they should be increased from the previous 30 metres to at least 100 metres”. “Legal reserves and riparian buffer zones have different biological functions and cannot be added up	Preservationist

⁵⁴ <http://www.agroecologia.org.br/2012/03/15/carta-aberta-da-sociedade-brasileira-para-o-progresso-da-ciencia-sbpc-e-da-academia-brasileira-de-ciencias-abc/>

			in the calculus of preservation areas”	
4	May 2010	Prof. Gerd Spavorek – University of Sao Paulo (soil preservation and land use planning)	“Previous legislation should be maintained and even its rigorous implementation will not harm agribusiness interests”	Preservationist
5	Nov 2010	SBPC and ABC	“Voting of the bill by the Lower Chamber should be postponed until more scientific input is added to it”	Preservationist
6	Nov 2010	Luis Carlos Moraes – Centro Universitário do Oeste Paulista	“Brazilian environmental legislation, if rigorously applied leaves only one third of the territory available for agricultural production, which is not economically sustainable in the medium and long term”	Neo-developmental
7	Feb 2011	José Antonio Aleixo da Silva – SBPC	“Proposed regulatory changes will be a disaster for environmental preservation in Brazil and changes are not necessary to increase agriculture productivity”	Preservationist
8	Feb 2011	Prof. Gerd Spavorek – University of Sao Paulo (soil preservation and land use planning)	“It is currently possible to double agricultural production in the next 20 years without more deforestation”	Preservationist
9	Feb 2011	Ricardo Rodrigues – University of Sao Paulo	“Land owners will still have 70% of their properties to explore if the previous code is maintained” “Small river buffer zones should not be reduced because these rivers are the most susceptible to silting”	Preservationist
10	Feb 2011	Carlos Alfredo Joly – University of Campinas (biologist)	“The reduction of vegetation coverage around rivers as well as on mountains and slopes could lead to the extinction of several species” “If rules about riparian buffer zones for small rivers are changed (as proposed) ‘half the amphibian species will disappear”	Preservationist
11	March 2011	Luis Carlos de Moraes – Centro Universitário do Oeste Paulista	“Brazil would lose R\$ 22 million in income tax and the country’s GDP would be reduced by R\$ 74.3 million if restoration of all degraded areas is required”	Neo-developmental
	Date	Scientist - organisation	Summary of the main claim	Predominant coalition alignment
12	April 2011	Maria Helena Nader – SBPC	“Voting of the new law should be postponed in at least two years for scientific studies to be properly incorporated by the new bill”	Preservationist
13	April 2011	SBPC report	“There is no scientific base for reducing riparian protected areas. These areas do not represent more than 6.9% of total private properties in Brazil, so maintaining their area would not harm	Preservationist

			<p>agricultural productivity. Riparian buffer zones requirements should not be altered”</p> <p>Wetland surrounding areas should be protected</p> <p>The higher border of the river (that of the raining season) should be considered for the calculation of the riparian buffer zone</p> <p>Mountain tops and slopes should be considered areas of permanent preservation</p> <p>Considering permanent preservation areas and Legal Reserves as part of the percentage required for Legal Reserves is a decision that requires more scientific studies</p>	
14	Feb 2012	Maria Tereza Piedade – Amazon Research Institute (Inpa)	“Especially in the case of wetlands, there are high risks associated with the use of the lower border of the river for the measurement of buffer zones. The higher border should be used”	Preservationist
15	Feb 2012	Yara Schaeffer-Novelli – University of Sao Paulo (Oceanographic Institute)	“The bill approved by the Senate will compromise the stability of mangroves”	Preservationist
16	April 2012	Márcio Ackerman – Institute of Technological Research (IPT)	<p>“The new Forest Code should be completely vetoed”</p> <p>“Not requiring the restoration of riparian buffer zones is irresponsible and people can die in landslides”</p>	Preservationist
17	May 2012	Marcos Fava Neves – University of São Paulo (Economy and business department)	“Brazil has enough space to expand agribusiness without more deforestation”	Preservationist
18	March 2012	SBPC open letter	Reinforced points previously made and calls attention to the fact that their positions regarding riparian buffer zones and the amnesty for the restoration of areas degraded before 2008 had not been considered by the Congress	Preservationist
	Date	Scientist - organisation	Summary of the main claim	Predominant coalition alignment
19	April 2012	Sérgio Sauer (University of Brasilia –UnB)	The idea that the environment cannot be reconciled with agricultural production was a deceitful argument generated for the approval of this bill. However, the lack of environmental protection will generate poor food security.	Preservationist
20	June 2012	Celso Moretti – Embrapa Vegetables	Rules about riparian protected areas should be made more flexible for small farmers	Administrative economic rationalist/socio-

				environmentalist
21	June 2012	João de Deus Medeiros – Professor in the Botanic Department at Federal University of Santa Catarina	“Technically, a riparian zone 5 metres long is not effective as a riparian zone, but considering that small farms constitute a small portion of the Brazilian territory the impacts are manageable”	Administrative economic rationalist/socio-environmentalist

Source: Produced by the author

There is, therefore, ample evidence that scientists actively contributed to the debates about the new Forest Code. Technical information was mentioned by policy makers on much rarer occasions though. On only four occasions could the use of scientific information by policy makers be identified in the material analysed (see table 17). For instance, Reinhold Stephanes, the Minister of Agriculture at the time, mentioned the study from Embrapa in June 2009 to support the idea that the burdens of the forest regulation on the agriculture sector would be significant (line 1, table 17). The study was used by him to argue that, if environmental legislation was effectively enforced then only one third of the Brazilian territory would be left for agriculture. The neo-developmental deputy Moreira Mendes also cited Embrapa’s study to argue that Brazil had the lowest levels of deforestation in the world (implying that forest regulations were overly strict) (line 2, table 17).

In March 2010, deputy Moacir Micheletto (PMDB-PR) (line 3, table 17), a member of the neo-developmental coalition, when criticised by preservationist deputies for the proposed Forest Code reforms retorted with Embrapa’s arguments relating to soil fragility (line 2, table 16). However, instead of using these arguments to advance more moderate changes to the code (as the researchers from Embrapa implied), the deputy used them to emphasise the technical limitations of the previous code and the need for extensive changes to the regulation. The other politicians using scientific arguments were the Minister of Environment Izabella Teixeira, (member of the partial-changes/administrative economic rationalist/socio-environmentalist coalition) who used the University of Sao Paulo study to support the idea that regulations should not be made less environmentally strict.

Table 17 - Use of scientific information by politicians in Lower Chamber debates

	Date	Actor using the information	Source of information	Claim	Alignment of the policy maker
1.	June 2009	Minister of Agriculture, Reinhold Stephanes	Embrapa	"If environmental legislation is fully complied with in Brazil there will be only one third of the territory left for agriculture"	Neo-developmentalists
2.	November 2011	Deputy Moreira Mendes (PPS-RO)	Embrapa	"Brazil has the lowest levels of deforestation in the world"	Neo-developmentalists
3.	March 2010	Deputy Moacir Micheletto (PMDB-PR)	'technical studies'	"Technical studies say that the type of soil and depth of rivers should be considered in the determination of levels of environmental protection, so the current law (which only considers the width of the river) is harming small farmers"	Neo-developmentalists
4.	June 2010	Minister of Environment – Izabella Teixeira	University of Sao Paulo (Esalq - Agriculture Dept)	"It is possible to keep Legal Reserves and still produce more without any deforestation. Studies from Esalq (University of Sao Paulo) show that riparian buffer zones and Legal Reserves play an even larger role than protected areas and indigenous lands in the conservation of biodiversity"	Administrative economic rationalist/socio-environmentalist

Source: Produced by the author

This analysis reveals, moreover, that although scientists were predominantly opposed to regulatory changes (and therefore more closely aligned to the preservationist coalition), politicians from this coalition have not directly used scientific arguments in their argumentation. This is a puzzling finding that might be related to concerns from scientists or politicians that scientific findings would be considered less legitimate if they were used in a more political manner. Evidence of this concern was found in the SBPC and ABC report, which frequently emphasised its independent character.

In terms of the influence of scientific evidence on actor's positions over time, no change could be identified. The analysis focused on the position of a three key

actors (one from each coalition) before and after the SBPC/ABC report: Moreira Mendes, leader of the rural caucus in the Lower Chamber and part of the neo-developmental group; Sarney Filho, leader of the environmentalist caucus in the Lower Chamber and one of the most vocal actors of the preservationist coalition; and Izabella Teixeira, Minister of Environment and part of the administrative economic rationalist/socio-environmentalist coalition. Although the investigation is admittedly partial, these three actors are considered to be the most representative and the most vocal actors of each coalition, justifying the choice to focus on their arguments alone⁵⁵.

The comparative table of crucial statements by each of these actors before and after the report is summarised in table 18. Although Moreira Mendes mentions the need for more scientific evidence in one of his first declarations on the issue, he never refers to the SPBC/ABC report after its publication. He does refer, however, to data from Embrapa and to other statistics from non-identified sources after April 25th, 2011 (henceforth 't²') but the citations are used to support the preservationist position he had always supported. Similarly, Sarney Filho, from the preservationist coalition, does not change position. At t² he mentions that the requirements of the new Forest Code are much below "what the most optimistic technicians and researchers would recommend", but he alludes to no specific source. Finally, although the Minister of Environment, Izabella Teixeira, gave her first declaration in the Lower Chamber before April 25th, 2011 (henceforth 't¹'), citing scientific arguments about the importance of legal reserves and permanent preservation areas, she was not found to refer to scientific arguments after the publication of the report and her position did not demonstrate marked changes. The only point that seems to have become more flexible in her narrative at t² is the allowance of 2008 as the date before which deforestation would not be considered illegal. When interviewed for this research she implied that this change might have been a result of the awareness she acquired that the 2008 concession was a previous political agreement made by President Lula with the rural caucus, which had to be maintained (interview 42, 30/10/15).⁵⁶ It was, therefore, motivated by political rather than technical reasons.

Finally, when interviewed for this research in 2014, a leading researcher who was part of the SBPC group that produced the report confirmed that "scientists

⁵⁵ And the overview of the entire debate does not seem to contradict these findings.

⁵⁶ The minister did not require anonymity.

tried to provide support for the elaboration of the new code but their study was not considered by the National Congress or by the executive government” (interview 30). The analysis of debates and interviews revealed, therefore, that scientific evidence, although provided and systematised in a report, played a reduced role in altering original positions about the new forest code. Policy makers have not, moreover, used the findings of the SBPC/ABC report in their arguments, which is something directly confirmed by one of the scientists participating in the elaboration of the report.

Table 18 - Comparative table of positions of members of each coalition before and after the SBPC/ABC report

Actor and coalition	Statements at t ¹ (before April 25 th , 2011)	Statements at t ² (after April 25 th , 2011)
<p>Moreira Mendes (coordinator of the rural caucus) neo-developmental</p>	<p>27/05/2009 The definition of the areas to be preserved is a scientific issue, not a political one</p> <p>27/09/2010 90% of farmers would be illegal if current legislation was actually enforced. According to the current forest code it is illegal to plant on hills, but in Rio Grande do Sul grapes have been produced on hills for more than 100 years</p> <p>10/02/2011 Mendes is against the requirement of legal reserve, and opposes criticisms by arguing that the bill does not incentivise deforestation: “we are fighting to keep what is currently working in agribusiness. No one wants further deforestation, but we cannot imagine that what has been occupied for so long has to be converted back to forests, this is a crime”</p> <p>15/03/2011 “There is no amnesty. Fines will be only suspended for five years until regularisation of areas take place”</p>	<p>25/04/2012 “Many lies are being told about the agriculture stimulated deforestation levels. Embrapa’s research shows that Brazil is the country which has the lowest level of deforestation in the entire world. The bill does not promote deforestation it only makes legal the situation of areas that are already being used”</p> <p>“It is a nonsense to reduce food production when one billion people in the world are facing hunger”</p> <p>If current [bill] report is approved there will be a reduction of 33 million hectares of productive land in our country. Even though this is not enough for “chicken head” environmentalists (ambientalóides) who support the idea that areas that have been used for more than a 100 years should now be restored.</p>
<p>Sarney Filho (coordinator of the environmentalist caucus) – preservationist</p>	<p>24/02/2010 The report will make rules about legal reserve and permanent protection more flexible, which is a rollback</p> <p>13/04/2010 Planting on the top of mountains is illegal. Merging legal reserves and areas of permanent protection in the same calculation will be a green light for more deforestation</p> <p>15/06/2010 The bill goes against Brazil’s interests. It amnesties fresh deforestation</p>	<p>24/05/2011 The approved bill is a disaster, it is not a forest code but an agricultural code and it could compromise international agreements signed by Brazil</p> <p>25/04/2012 “The rule of at least 15 metres of protected areas around rivers of up to 10 metres was reintroduced due to the request of Deputy Sarney Filho”</p> <p>03/11/2014</p>

	<p>15/06/2010</p> <p>There is no need to deforest more in order to keep agricultural productivity. The bill could generate more deforestation. It is possible to permit the continued use of areas that have been used for 50 or 100 years, but not of areas deforested two years ago, against current law</p> <p>20/04/2011</p> <p>The permanent protected area should be 15 metres for all farmers, and not only for large ones. Whoever is currently in accordance with the law should be rewarded with fiscal measures</p>	<p>What the law requires today is much less than what the most optimistic technicians and researchers would recommend. Areas of Permanent Preservation are crucial for the conservation of soil, water, flora and fauna, all essential for the sustainability, the sustainability of agriculture included</p> <p>04/03/2015</p> <p>Areas of permanent preservation should be returned to the limits of the previous forest codes.</p>
<p>Izabella Teixeira (Minister of the Environment) – administrative economic rationalist/socio-environmentalist</p>	<p>09/06/2010</p> <p>“The changes being discussed in terms of legal reserves may go against international agreements Brazil has signed. These should be considered by legislators. Farmers can maintain legal reserves and produce more, without deforestation. We need to understand where Brazilian productive areas are, the role of Legal Reserves and of Permanent Preservation Areas in the protection of Biodiversity. Studies from Esalq show that riparian buffer zones and legal reserves play an even larger role than protected areas and indigenous lands in the conservation of biodiversity”</p> <p>01/04/2011</p> <p>We have to protect biodiversity using more modern ecological tools that allow us to improve the income of those who have forests on their lands</p> <p>We have been listening to the positions of family farmers, conservationists and large producers so we can evaluate whether we are on the right path for the elaboration of a modern Forest Code. The main idea is that it can solve unfair situations from the past and allow for sustainable agricultural production, the development of a forest economy and biodiversity conservation to take place in Brazil</p>	<p>25/10/2011</p> <p>I hope the issue of amnesty for foresters is revised by the Senate</p> <p>We are in a constructive negotiation with the Congress. The debate should result in more environmental security. But environmental regularisation cannot be confused with amnesty for those who deforested</p> <p>25/05/2012</p> <p>“We changed [the requirements of permanent preservation areas] considering the size of the property, the width of the river and the impact of regularisation according to the size of the property. Considering social and environmental factors”</p> <p>“The 2008 date for regularisation to start was a political agreement made by Lula, we couldn’t reverse it”</p>

Source: Produced by the author

4.3.6. Conclusion

This third section has assessed the four sources of policy change suggested by the ACF in relation to the changes represented by the new 2012 Forest Code. Its main finding is that, although important external and internal events can be confirmed as

causes of this regulatory change, negotiated agreement and policy-oriented learning cannot.

In relation to external events it maintains that changes in socioeconomic conditions and in the governing coalition were the most impactful, particularly the boom in the export of commodities and the ascendance of the economic and political power of the agribusiness sector. The internal events identified as important triggers of the debates that resulted in the new Forest Code were the *assassination of the rubber tapper Chico Mendes* by cattle ranchers in 1988, the *1992 UN Rio Conference* and the Presidential Decree 7.029/2009 determining that all farmers who were not compliant with the requirements of the previous code would be punished from 2011. The first two internal events were perceived to be crucial to the overall trend towards the stricter forest regulatory enforcement that emerged in the 1990s and 2000s, as described in section 4.1 of this chapter. They, therefore, indirectly contributed to the accumulation of resentments towards previous regulations by agribusiness, which, once in a position of greater political and economic power, pushed for changes. The third event was more directly related to the proposal of regulatory reform.

Negotiated agreement was not identified as a relevant source of regulatory change due to three factors. First, there was a high reliance on institutional mechanisms not based on negotiation and agreement during the process leading to the approval of the new code. As the analysis revealed, the president issued 21 vetoes against Congress bills, the judiciary power was involved twice with allegations of unconstitutionality, and previously negotiated agreements were reversed by amendments. Second, regarding the venues of negotiation, a special commission for the discussion of the Forest Code had to be created in the Lower Chamber, revealing that the issue was sufficiently contentious to discount it being discussed in any of the permanent commissions. Finally, the occurrence of 'devil shift' – or the exaggeration of opponents' maliciousness – a phenomenon associated with high levels of adversity and low levels of negotiated agreement, was also identified through cases of personal insults and pejorative references to opponents in the media.

Policy-oriented learning, similarly, could not be identified. Although scientists contributed extensively to the political debate and even produced a systematic scientific report with a summary of more than 300 scientific studies specifically

regarding the proposed changes to the code, this contribution was not used by policy-makers during debates and changes in the positions of key actors remained the same after the report was published. Actual analytical debate, in which scientific or technical arguments are used to counter opponent's positions was practically non-existent. It is concluded, as a consequence, that both negotiated agreement and policy-oriented learning played a reduced role in the standard-setting process of the new Brazilian Forest Code, while internal and external events were found to be relevant.

CHAPTER 5 – CASE STUDY II: PESTICIDES

5.1. Introduction

This chapter focuses on the case of pesticide regulatory changes in Brazil. It describes the history of this policy subsystem, its main changes between 2005 and 2015, the most salient policy problems, coalitions and narratives formed during this time and investigates the causes of the regulatory changes observed. Although it identifies several regulatory changes in the area, it focuses the analysis on the two most salient actual or proposed changes, namely Law 12.873/2013, which allowed unregistered pesticides to be produced and imported in cases of phytosanitary or zoonosanitary emergencies, and Bill 209/2013, which intended to establish a new unified pesticide registration agency under the central command of the Ministry of Agriculture, substituting the current tripartite system, which involves the Ministry of Agriculture, the Ministry of Environment and the Ministry of Health (this one had not yet been approved at the moment of writing). This chapter maintains that regulatory changes can be most clearly attributed to two events. The first is external to the subsystem and is related to the orientation of the majority of the National Congress and the strength of the rural caucus within it. The second, internal to the subsystem, relates to the marked increase in the use of pesticides in the country during the time period analysed, which overburdened the administrative structure, delaying the registration process of new pesticides. The chapter also investigates the role of policy-oriented learning and negotiated agreement between stakeholders as sources of policy change and concludes that these two latter factors did not play a discernible role in the identified regulatory changes.

Accordingly, this chapter contributes to the overall argument of the thesis in two ways. First, by investigating the relevance of the four sources of policy change identified by the ACF and, second, by analysing the causal mechanisms through which they operated. The results of the empirical analysis provide support to the claim that external and internal events are sufficient sources of regulatory change and that

learning and negotiated agreement are not necessary for policy changes to occur. This is particularly surprising given the high potential relevance of technical/scientific information in an area such as pesticide regulation. In addition to involving a lot of scientific uncertainty and having scope for the application of scientific knowledge, there has been a lot of participation of scientists in debates. Their contributions, however, were dismissed by the political actors of the debate as exaggerated or biased. In terms of causal mechanisms, the chapter provides support to the idea that interest calculations should be included as explanations of policy change.

The chapter proceeds as follows: Section 5.2 describes the history of pesticide regulation in Brazil. It demonstrates that Brazilian regulations on pesticides are consistently changing towards less strict environmental, health and tax controls and highlights important internal events affecting the history of this policy subsystem. Additionally, this section highlights the most salient policy problems in the sector, and justifies the subsequent focus on Law 12.873/2013 and Bill 209/2013. Section 5.3 pursues an analysis of the coalitions and narratives relevant in the debates about these regulations. It demonstrates that three main coalitions have been active in these debates – neo-developmentalists, administrative economic rationalists and preservationists/socio-environmentalists – and that the direction of regulatory changes predominantly favoured the demands of the neo-developmentalists group. Section 5.4 assesses the influence of internal events, the incidence of negotiated agreement and learning in the debates about these two regulatory changes and investigates the reasons behind the non-occurrence of the latter two. Section 5.5 concludes.

5.2. A brief history of Pesticide Regulation in Brazil

This section provides a brief history of the regulation of pesticides in Brazil since 1934 and sheds light on the main changes in standards in this policy subsystem, emphasising, in particular, the period between 2005 and 2015 and setting the scene for the analysis of the coalitions and narratives that have been active in this process.

As will be seen, a trend emerged towards standards that establish less control and more incentives for the use of pesticides. Additionally, the cases of regulatory change identified in this section go against the history of strengthening controls that had previously characterised the evolution of pesticide regulation in the country. The weakening of controls is associated with the dominance of the neo-developmental coalition, which has promoted an agenda of facilitation in the import and registration of pesticides.

The first law on pesticides in Brazil was established by presidential decree in 1934. Known as the Regulation of Vegetable Sanitary Defence (*Regulamento de Defesa Sanitária Vegetal* - Decree Nº 24.114, 12th of April 1934), it determined that new products had to be registered by the Service of Vegetable Sanitary Defence of the Ministry of Agriculture but it did not establish any requirement that toxicological or environmental evaluations were carried out before approval.⁵⁷ It was only in 1989, with the sanctioning of Pesticide Law 7.802, that the sector began to be regulated more strictly in terms of environmental and health requirements (Pelaez *et al.*, 2015; Pelaez, Terra and Silva, 2010). The 1989 law, which was still the operative pesticide regulation in the country at the time of writing,- established new and relatively strict control in terms of health and environmental risks.⁵⁸

These stricter controls were consistently attacked in the period between 2005 and 2015, and remarkable standard changes have resulted in order to facilitate and promote the use of pesticides in Brazil. As indicated by column 6 ('Does the final decision favour the use of synthetic pesticides?') of table 19, which presents an exhaustive analysis of all regulatory changes that culminated in a final decision during

⁵⁷ Decree 55.871 established some limits for pesticide residues in food in March 1965, mainly due to requirements from importing countries, and a few infra-legal rulings were published after 1970 setting some minimal health criteria for the use of pesticides.

⁵⁸ Among its innovations were: the prohibition of the registration of pesticides considered to be more toxic than pre-registered suitable equivalents (art. 3 § 5º), the possibility of the suspension or cancellation of registrations by request of civil society (art. 5), a requirement to register all the workers involved in the handling and application of pesticides (art. 4), the possibility of attributing environmental or health damage caused to the use of pesticides (art. 14) and the need for toxicological, environmental and agronomic efficiency analysis to be undertaken before the registration of a new pesticide (art. 5) (Law 7.802/89). Additionally, a provision considered to be particularly audacious in terms of its precautionary character was the possibility of banning pesticides based on their potential mutagenic, carcinogenic, reproductive and endocrinal impacts, or of including the consideration of non-chemical criteria in the assessment, such as the level of instruction of the rural workers applying the product, or the level of monitoring and control available on the ground (Art 3 § 6º, c, e).

the period analysed,⁵⁹ attempts to further restrict or regulate the use of pesticides were consistently rejected in this time period, while regulations favouring its use tended to thrive.⁶⁰ The analysis of whether these regulatory decisions have favoured the wider use of pesticides was based on the identification of economic incentives or on the removal of previously established controls.⁶¹

In 2004, for example, a presidential decree⁶² reduced to zero the incidence of some taxes (PIS/Pasep and COFINS) on the import and trade of fertilizers and pesticides. Law Nº 12.545, of 14th of December of 2011, in addition, included pesticides as beneficiaries of the Fund for Financing Exports (FFEX), subsidising their sales abroad. Decree 6461 of the senate is another example of the facilitation of pesticide use. It reduced taxes for fuel used in aviation and promoted aerial spraying of pesticides, which is a common technique. Finally, attempts to establish further checks on the use of pesticides (such as PL 7490/10 or PL 3615/12), requirements for more transparency around its use (such as PL 6448/09), more severe punishments for the illegal use of pesticides (such as PL 1811/11), restrictions around specific substances (such as the attempt of the *Ministério Público*) or ways of applying pesticides (PLS 681/11) were consistently rejected by the National Congress.

⁵⁹ This table was produced by searching for the word 'pesticides' in the publications of the Deputies Chamber and of the Senate agency news between 01/01/2005 and 31/12/2015 and selecting all references to bills or public acts that culminated in a final decision.

⁶⁰ The only proposal approved that might negatively affect the use of pesticides during the period analysed, even if in an indirect manner, was the tax exemption conceded to agents of natural control of plant diseases (on 31/08/2011). This measure, nonetheless, was taken several years after pesticides themselves gained important tax exemptions and does not directly oppose the use of pesticides but simply promotes the use of alternative methods.

⁶¹ These proposals were all originally launched with the aims presented in column 2 ('proposal') of table 1. There were, in general, no alterations to the original proposals.

⁶² Decree 5.195, in 2005 substituted by the Decree 5.630.

Table 19 - National Congress recent decisions on pesticide-related regulatory changes

Date of the final decision	Proposal	Origin	Bill	Decision	Does the final decision favour the use of synthetic pesticides?	Times mentioned by the Chamber's news agency (2005–2015) – saliency
21/05/2008	Reduces taxes ('CIDE') for aviation fuel	Executive Power	DEC 6461 (of the Senate) PL 5569/13	Approved by the Senate	Yes	4
17/08/2011	Makes a technical report by official institutions mandatory in order for any pesticide to be allowed to be registered in the country	MP Beto Faro (PT-PA)	PL 7490/10	Rejected by the Commission of Agriculture, Livestock, Supply and Rural Development of the Deputies Chamber	Yes	2
31/08/2011	Reduces taxes (eliminates the payment of PIS/Pasep and Cofins) on the import and trade of agents of biological control of plant diseases	Deputy Mendes Thame (PSDB-SP)	PL 1024/11	Approved by the Commission of Agriculture, Livestock, Supply and Rural Development of the Deputies Chamber	No	2
19/10/2011	Requires the food industry to include information about all pesticides and similar substances used in the production process of vegetable based food on the label	MP Sarney Filho (PV-MA)	PL 6448/09	Rejected by the Commission of Economic Development Industry and Commerce of the Deputies Chamber	Yes	1
19/10/2011	Increases the stringency of punishment for illegal use of pesticides	MP Amauri Teixeira (PT-BA)	PL 1811/11	Rejected by the Commission of Agriculture, Livestock, Supply and Rural Development of the Deputies Chamber	Yes	3
22/11/2011	Includes pesticides as beneficiaries of the Financing Fund for Exports (FFEX)	MP Ratinho Júnior (PSC-PR)	Amendment to PLV 28/2011 (Resulting in the Law Nº 12.545, of 14 th Dec. 2011)	Approved	Yes	1
25/09/2013	Requirement of agricultural aviation companies to send, to the bodies responsible for agriculture and environmental protection, copies of agronomical prescriptions for the application of pesticides and annual reports on operations conducted	Deputy Padre João (PT)	PL 3615/12	Rejected by the Commission of Agriculture, Livestock, Supply and Rural Development of the Deputies Chamber	Yes	7
28/10/2013	Allows unregistered pesticides to be used in cases of phytosanitary or zoo-sanitary emergencies	Executive Power	Decree 8.133 converted to Law 12.873/12	Approved by both chambers and converted in Law	Yes	22
09/04/2014	Suspension of the authorisation of pesticides containing the herbicide 2,4-D while the toxicology re-evaluation is not pursued by ANVISA	Ministério Público (Public Attorney's Office)	-	Rejected by Federal Court of Justice	Yes	0
12/03/2015	Prohibition of aerial spraying of pesticides	Senator Ana Rita Esgario (PT – ES)	PLS 681/11	Rejected/ filed by the Senate	Yes	0

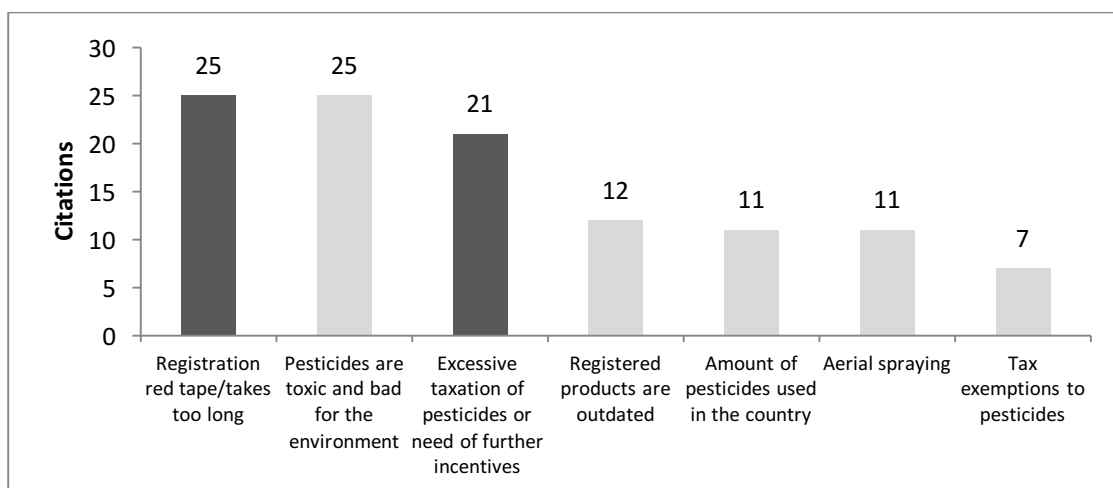
Source: produced by the author based on the news published by the Deputies Chamber and Senate websites.

Additionally, although not yet a regulatory change on which a final decision has been made (and, thus, not represented in table 19), an alteration of the pesticide's registration structure and processes began to be debated in 2013 with the issuance of Bill 209/2013 and received considerable attention from policy makers. The registration process at the time of writing involves toxicological evaluations by the health agency (ANVISA), an environmental risk assessment by the environmental agency (IBAMA) and an evaluation of agronomic efficacy undertaken by the Ministry of Agriculture. Based on criticisms about the excessive bureaucracy involved in this tripartite evaluation process, the bill intends to establish a new unified registration agency under the central command of the Ministry of Agriculture.

Although this bill had not yet been approved in May 2016 (when this chapter was written), a saliency analysis of the main policy problems on the agenda of pesticides from 2005 until 2015⁶³ indicated that the main policy problem discussed in this subsector was the excessive bureaucracy in the registration of new products, which puts both this Bill and Law 12.873/2013 in the spotlight of the most salient regulatory changes. As demonstrated by graph 3 and table 20 below, although other policy problems were also frequently discussed in the debates analysed, the problem of registration red tape (bureaucracy and inefficiency) was the most debated issue. The temporal analysis provided in table 20 reveals, moreover, that excessive bureaucracy in registration has been debated more often (and has involved more actors) during the most recent periods, while other policy problems, such as demands for less taxation on pesticides, were concentrated in the period before 2010. The problem of the amount of pesticides used in the country and concerns about toxicity and environmental damages of their use have also increased in recent years (which is consistent with the increased use of pesticides in the country) but have not resulted in as much debate as the problem of registration red tape⁶⁴.

⁶³ Identified through the codification of every policy problem mentioned in the 65 documents analysed and by counting of times they were cited

⁶⁴ Because the bill had not been approved yet at the time of writing, I had to develop this alternative way to justify its saliency.



Graph 3 - Main policy problems on the agenda about pesticides (2005–2015)⁶⁵

Source: Produced by the author using Atlas.ti

Table 20 - Policy problem citations per year (excluding same author citations)

POLICY PROBLEM / YEAR	2008	2009	2010	2011	2012	2013	2014
Registration red tape/takes too long	0	1	4	1	1	1	10
Pesticides are toxic and bad for the environment	0	0	1	6	5	1	2
Excessive taxation of pesticides or need of further incentives for unbranded products	5	3	5	1	1	0	0
Amount of pesticides used in the country	0	0	0	4	1	1	6
Aerial spraying	0	0	0	1	2	6	1
Registered products are outdated	0	0	0	3	2	1	2
Tax exemptions to pesticides	0	0	0	0	2	0	2

Source: Produced by the author using Atlas.ti

The investigation of the reasons for this temporal increase in the salience of the policy problem of excessive bureaucracy in the registration of new pesticides and the demonstrated increase in the debate about this specific policy problem was, during the analysis of debates, directly related to the increase in the use of pesticides in the country and the consequent overload of the administrative structures in charge of organising the registrations. These two important internal events are discussed in more detail in section 5.4 of this chapter, after the narratives and coalitions formed during the debates of these two most salient regulations are analysed in the next section.

⁶⁵ Light grey columns refer to policy problems associated with the view that pesticides should be more heavily controlled, and dark grey columns are policy problems emerging from the assumption that use should be facilitated or promoted.

5.3. Narrative and Coalition Analysis

This section analyses the narratives and coalitions formed during the debates of both Law 12.873 - authorising the trade and use of unregistered pesticides in case of 'phytosanitary or zoo-sanitary emergencies', and Bill 209/2013, which proposes an alteration to the registration institutional structure substituting the tripartite system (involving the Ministry of Environment, the Ministry of Health and the Ministry of Agriculture) for a monolithic system managed solely by the Ministry of Agriculture. These regulations were selected for this analysis because they are both aimed at solving the excessive bureaucracy involved in the process of the registration of new pesticides – the policy problem identified as the most salient in this subsystem between 2005 and 2015. Narrative analysis is used in this section as a tool for the identification of coalitions and is complemented by thematic coding, pursued through the coding of mentions of specific policy problems by different groups of actors. A total of 65 texts (mainly from the National Congress Agency News) were used in this analysis (please refer to chapter 1, section 1.4 for a detailed description of the texts used).

5.3.1. Narrative Analysis

Three main narratives were identified and analysed according to the narrative analysis criteria proposed by Jones and McBeth (2010), who advance that a policy narrative contains four fundamental elements: 1) a setting – or the basic assumptions, 2) characters – who can be specified as victims, heroes and villains, 3) a plot – advancing causal mechanisms and the relationship between the setting and the characters and, 4) a moral of the story – corresponding to the specific policy solution, goal or policy change proposal being advanced by the narrative. Each of these four criteria was identified in the texts analysed and coded through the use of the software Atlas.ti. (detailed outputs are provided in Appendix I for this chapter).

In the first narrative identified – here referred to as neo-developmentalists according to the elements of discourse analysis identified in chapter 3 – the *setting or basic assumption* is that pesticides are good for the country, either because they favour economic gains (international trade was the most frequently mentioned gain)

or because they guarantee food security. This basic assumption clearly relates to the central message of the neo-developmental discourse, according to which caring about the environment is a luxury and economic development should be prioritised. In relation to the *characters* (victims, villains and heroes) of this narrative, the most frequently mentioned *victim* was the agribusiness sector, which is depicted as suffering from excessive bureaucracy in the registration process of new pesticides and of being vulnerable to great economic losses because of exaggerated governmental control over pesticide use. Excessive bureaucracy itself is frequently portrayed as a *villain* by the actors using this narrative. ANVISA and IBAMA are also implied, as they are highlighted as the main perpetrators of these bureaucratic hurdles. The *heroes* are regulatory reforms that facilitate registration (such as Law 12.873 or Bill 209/2013) and the proposed unified registration agency to be coordinated by the Ministry of Agriculture. The *plot* of this first narrative is that excessive bureaucracy is hindering economic development, food security and putting the entire Brazilian economy and society at risk. The *moral of the story* or *policy solution* advanced is that registration should be made easier and faster, the triple registration structure should be replaced with a faster, possibly unified system, and that the flexibilisation of the system (such as in case of exceptions to non-registered pesticides during phytosanitary and zoonosanitary emergencies) should continue or be intensified.

Among the actors advancing the neo-developmental narrative were several MPs, particularly those associated with the ruralist caucus, such as Luis Carlos Heinze (PP-RS) (President of the *Frente Parlamentar Agropecuaria*), Deputy Valdir Colatto (PMDB-SC), and those participating either in the Commission of Agriculture and Land Settlement of the Senate, or in the Agriculture, Cattle Ranching and Supply Commission of the Deputies Chamber (such as Senator Waldemir Moka [PMDB-MS] and Senator Blairo Maggi [PR-MT]). This narrative also found resonance in declarations of members of ABIFINA (Brazilian Association of Chemical Industries and Biotechnology), representatives of the National Union of the industries of Vegetable Defence Products (SINDIVEG), of the National Confederation of Agriculture (CNA), and of the Ministry of Agriculture (MAPA). A summary of the characters and plots associated with this and the other two narratives surrounding the policy problem of excessive bureaucracy in the registration of pesticides is presented in table 21. The

actors organising around this narrative are detailed in figure 9 below (between '80%' and '100%', representing the high frequency of their declarations against greater control on the use of pesticides).

The second narrative identified was located within the larger discursive category of administrative economic rationalism and was more moderate in the regulatory changes it advanced. This position was most clearly represented by ANVISA, and sometimes by the Ministry of Environment (which tended more towards the preservationist/socio-environmentalist position most of the time). It favoured the acceleration of the registration process and the reduction of bureaucracy through more investments in the agencies in charge of registration rather than through their removal (interviews 57, 58).

The *setting* or *basic assumption* of this narrative is that the acceleration in the approval of new pesticides (and the consequent favouring of economic activities that rely on their use) is positive insofar as it is properly controlled and regulated by the government, which is a typical administrative economic rationalist story. The *victims* are seen as both the exporting agriculture sector, which is suffering from excessive bureaucracy and control over the use of pesticides, but also (and in contrast to the first narrative) regulatory agencies who suffer from a lack of staff and pressure from the productive sector to authorise pesticides quicker. The *villains*, as portrayed by this group, are the limited resources invested in the administrative capacity of the state (staff, labs etc.) and also the pesticide industry, which is blamed for asking for unnecessary registrations (of products not intended to be commercialised) just to guarantee a place in the queue and protect their market share (this view is mainly expressed by ANVISA). The *heroes* are the regulatory agencies themselves, which are seen as capable of solving the problem if more investment and perhaps a careful restructuring of the regulatory apparatus is granted. The *plot* is that, if the amount of control is not reduced and environment and health analyses continue to be pursued, reform of the institutional structure of registration to promote more efficiency is desirable because it would favour the industry without reducing government control. The actor located between 20% and 80% on figure 9 are the actors who were found to most closely represent this discourse, although those between 10% and 20% and between 80% and 90% have also adopted this position in some of their declarations.

At the other end of the ideological spectrum are those actors categorised as adopting a preservationist or socio-environmentalist discourse, who formed part of the same coalition regarding the issue of registration bureaucracy. Following the premises of these two discourses, actors in this coalition strongly oppose the use of pesticides and the need for reform in the registration regulations of new pesticides, but diverge in their reasons for this opposition. While preservationists hold that pesticides should be severely controlled because of their impacts on the environment, socio-environmentalists point to the risks pesticides represent to rural communities as the main reason for opposition. None of these groups, therefore, identify bureaucracy in pesticide registration as a policy problem and, therefore, they oppose any reform. A former member of ANVISA, Carlos Meirelles, for example, has declared the proposal to unify the institutional structure of registration to be a “huge rollback on the regulatory structure of pesticides”. In his words, the creation of a new regulatory agency means ‘regressing’ in terms of pesticide control. This narrative is echoed by several members of civil society, social movements, research institutions and politicians, many of which are part of the ‘Permanent Campaign against Pesticides and for Life’ (*Campanha Permanente contra os Agrotóxicos e pela Vida*). The *setting* or *basic assumption* of this coalition is the belief that pesticides are ‘poisons’ (a word frequently used in their narrative) that harm the delicate environmental and social equilibrium and should be, as much as possible, avoided or banned (for this group the costs of extensively using pesticides are, therefore, larger than benefits both in social and environmental terms). The *villains* of this narrative are large multinational agrochemical corporations who see Brazil as a ‘pesticide haven’ where products forbidden in other parts of the world can be dumped, as well as agribusinesses that uses such products indiscriminately. Registration bureaucracy, therefore, is not a relevant reason for regulatory change as it only affects the villains of this narrative, namely, industries and larger agricultural producers. The adherents of this narrative perceive the policy problem of red tape in registration as a justification for industrial lobbying (and not as an actual policy problem). In this differently-framed policy problem, the *victims* are the environment, the Brazilian population in general (who have to eat contaminated products) and rural workers and small land owners due to the negative health and social consequences of pesticide use. The potential *hero* is the government, which is depicted as the only actor capable of protecting its population from private pressure and promoting alternative

production methods such as agroecology. The central *plot*, therefore, is that the policy problem of excessive bureaucracy in registration does not exist and is simply an attempt by the private sector to capture the government, which should be resisted by the government.

In sum, the narrative analysis of the texts in relation to the policy problem of excessive bureaucracy revealed four broader discourses and the formation of three coalitions. First, the *neo-developmentalists* focused on the importance of the use of pesticides for the economic development of the country without considering environmental and health impacts to be large enough policy problems to motivate action or further political debate. This group strongly favoured the reform of regulations related to the registration or the import of pesticides in order to remove bureaucratic hurdles and were the proposers of these reforms (those who put the policy problem in the agenda). Second, a more moderate narrative supporting the use of pesticides for the promotion of economic activities but with strict control and regulation from the government (*administrative economic rationalist*) was also identified. The actors departing from this standpoint were supportive of changes in the regulation of registration insofar as they did not limit the regulatory power of the government. Finally, the *preservationist/socioenvironmentalist* coalition opposed the facilitation of the use of pesticides due to their ecological and health risks and opposed any regulatory reform intended to facilitate registration and import. Table 21 below provides a summary of the narrative analysis and examples of citations extracted from the texts that represent the claims.

Table 21 - Narrative Analysis main policy problem

Policy problem	Setting	Victims	Villains	Heroes	Main plots (taken from the texts)
Pesticides Registration - red-tape/time consumption	Neo-developmental	Agricultural producers, pesticides industry, Brazilian population	Red tape, regulatory agencies (ANVISA, IBAMA)	Regulatory and institutional reform	<ul style="list-style-type: none"> - 'Regulatory agencies are inefficient and not transparent' - 'ANVISA/red-tape is putting agricultural production at risk which will lead to economic, food security and national security issues'; - 'Agricultural Producers are constantly threatened by new plagues without the capacity to defend their production due to registration red tape' - 'Agricultural producers have to use pesticides irregularly and go against the law because of red-tape' - 'Red-tape hinders competitiveness, market efficiency of the pesticides sector'
	Administrative rationalist	Regulatory Agencies; Agricultural Producers	Lack of resources for regulatory agencies, pesticide industry	Regulatory agencies (after more investment in staff/structure)	<ul style="list-style-type: none"> 'A careful toxicological evaluation takes time' 'Regulatory Agencies are under pressure' 'There is not enough staff and resources to attend to the demand for new registrations' 'Pesticide industry is applying for registrations just to save a spot on the queue and not to effectively produce or sell the product' 'Reforms should be pursued but environmental and toxicological evaluations shall not be flexibilised'
	Preservationist/socio-environmentalist	Brazilian population, rural workers, small/family land owners	Pesticide industry	Government (which should promote stricter regulation and control of the use of pesticides)	<ul style="list-style-type: none"> 'Regulatory/institutional reform for more efficiency in registration will favour only agribusiness and harm society' 'This demand is only industrial lobby and should be opposed' 'Government should not be captured by lobby and should protect Brazilians with more incentives to agroecology and stricter regulations for pesticides use'

Source: Produced by the author

5.3.2. Thematic Coding⁶⁶

In order to test the validity of the above-described narrative analysis regarding the basic assumptions of actors (the main criteria used for the identification of coalitions), a broader analysis of arguments related to other policy problems in this

⁶⁶ This section pursues a different type of thematic coding than what was pursued in the other empirical chapters, because the data about the specific policy problems selected for the narrative analysis was limited. For this reason, and to provide for a stronger analysis, data related to debates about pesticides in general were considered for thematic coding.

same subsystem was pursued. Actors were divided into 17 groups according to their institutional affiliation and their arguments were coded according to the type of policy problems they were bringing to the debate. Policy problems were divided among those 1) promoting and facilitating the use of pesticides, or 2) restricting and controlling it -- and the number of times the actors from each institutional affiliation promoted each policy problem was counted. Table 4 provides a summary of this coding process, which was also pursued with the help of the software Atlas.ti. Policy problems considered to be pro-pesticide are indicated in dark grey and anti-pesticide ones in light grey. Members were categorised as for or against pesticides according to the nature of the majority of policy problems they raised during debates. For instance, in the first line of the table members of the Workers' Party were coded as promoting anti-pesticide policy problems 16 times and pro-pesticide issues only twice. For this reason they were considered an anti-pesticide's group (and marked in light grey).

Thus, this analysis went beyond the issue of registration bureaucracy, but regarding this specific policy problem (first column of table 22), 19 out of 25 citations were made by members of the neo-developmental coalition (as identified by the narrative analysis), confirming that they were the main promoters of this specific policy problem.

Table 22 - Number of citations of specific policy problems by actor groups

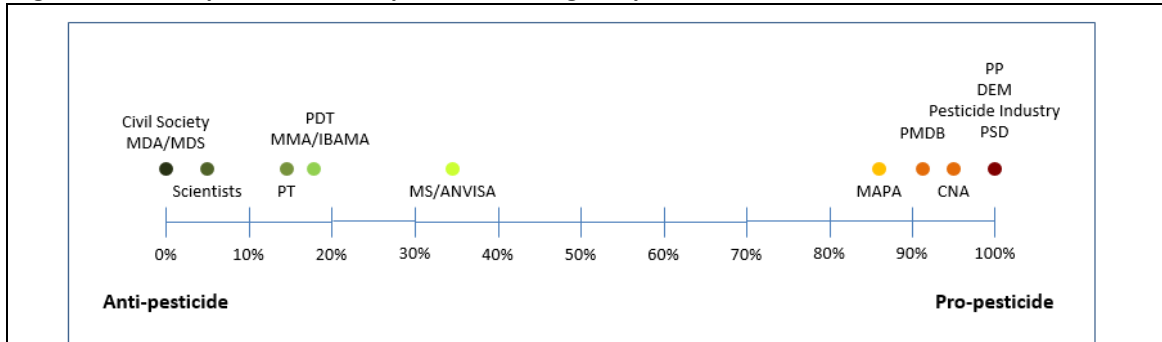
Policy Problem Actor	Registration red tape/takes too long	Pesticides are toxic and bad for the environment	Excessive taxation of pesticides or need of further incentives for unbranded products	Registered products are outdated	Amount of pesticides used in the country	Aerial spraying	Tax exemptions to pesticides	TOTAL
Workers Party (PT)	16	2	3	6	1	18		
Scientists	1	8	1	1	1	3	15	
National Confederation of Agriculture (CNA)	7	5	12				12	
Ministry of Health/ ANVISA	4	3	3	2	12		12	
Democrats (DEM) Party	2	7	9				9	
Civil Society (Permanent Campaign Against Pesticides and For Life, MST, Via Campesina, National Confederation of Agricultural Workers)	3	2	2	1	8		8	
Brazilian Democratic Movement Party (PMDB)	2	3	1	1	6		6	
Ministry of Agrarian Development (MDA) and Ministry of Social Development (MDS)	2	1	2	1	6		6	
Democratic Work Party (PDT)	2	1	1	1	5		5	
Progressive Party (PP)	1	3	4				4	
Ministry of Environment/ IBAMA	1	1	1	2	4		4	
Brazilian Socialist Party (PSB)	1	1	1	2	4		4	
EMBRAPA	2	2	2	2	2		2	
Ministry of Agriculture (MAPA)	2	2	2	2	2		2	
Pesticide Industry Associations	2	2	2	2	2		2	
Social Democratic Party (PSD)	2	2	2	2	2		2	
Brazilian Association of chemicals and biotechnology - ABIFINA	1	1	1	1	1		1	
TOTAL	25	25	21	12	11	11	7	112

Source: Produced by the author using Atlas.ti

The total number of citations in relation to each policy problem were transformed into percentages to allow for comparability.⁶⁷ For instance, between 2005 and 2015 actors from the Workers' Party brought issues to the agenda that favour the use of more pesticides two times, and issues that oppose it 16 times. Therefore, this group has favoured the use of pesticides in only about 11% of their citations, placing them between 10% and 20% in the anti-or pro-pesticides spectrum (figure 9). Groups' distributions along the spectrum sit, therefore, between two extremes: from 'always promoting policy problems that imply more control over pesticide use' to 'always promoting policy problems that imply less control over pesticide use'. This analysis overlaps with the narrative analysis pursued previously and attests the existence of three coalitions. At the extreme right of the continuum (the pro-pesticides group) are the actors recognised as neo-developmentalists in the narrative analysis. They include parties such as the Brazilian Democratic Movement Party (PMDB), the Progressive Party (PP), the Democratic Party (DEM) and the Social Democratic Party (PSD), representatives of the pesticide industry and of the National Confederation of Agriculture (CNA) and the Ministry of Agriculture (MAPA). Actors advancing an administrative economic rationalist discourse were located in the centre of the spectrum and include only ANVISA, which was perceived to have a more moderate discourse that accepted regulatory reforms, insofar as proper health controls were maintained (scored between 20% and 80%). Some declaration of the members of the Ministry of Environment, and of the Ministry of Agriculture, of the Workers' Party, and of the Democratic Work Party (PDT), however, also approximated the centre of the spectrum, even though they have more often mentioned policy problems characteristic of the other two extreme groups. Finally, the preservationist/socio-environmentalist coalition practically always opposed the use of more pesticides in the types of policy problems they advanced. This group was formed by civil society organisations, scientists and the Ministries of Agrarian Development and Social Development (MDA/MDS), the Ministry of Environment, PT and PDT – as also identified by the narrative analysis focusing specifically on the issue of excessive bureaucracy. (Figure 10 provides a visualisation of the coalitions).

⁶⁷ For example, if agents from ANVISA proffered arguments for actions that would ultimately favour the use of more pesticides 3 times, and arguments that ultimately promote more restriction 7 times during the period of time analysed, ANVISA would be located at the 30% point of the spectrum.

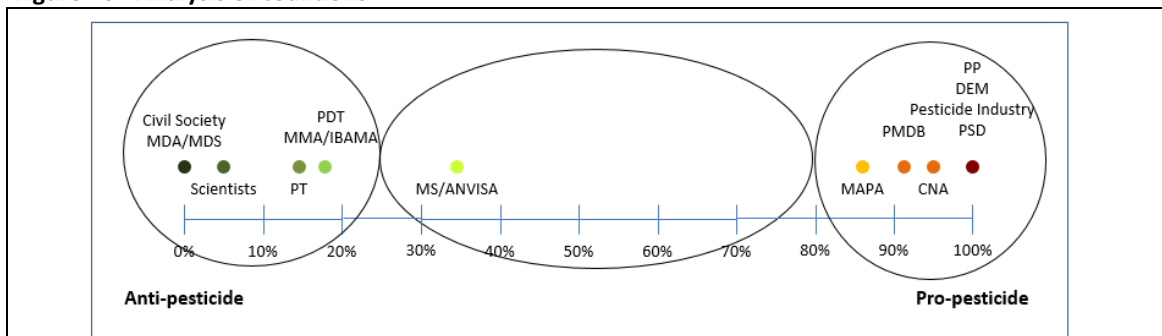
Figure 9 - Actors' positions on the pesticide ideological spectrum



Civil Society: Permanent Campaign Against Pesticides and For Life, Movement of Landless Workers ,Via Campesina, National Confederation of Agricultural Workers; **MDA/MDS:** Ministry of Agrarian Development/Ministry of Social Development ;**Scientists:** ABRASCO, UNESP, Unicamp, University of Mato Grosso, Brazilian Association of Agroecology ; **PT:** Workers' Party; **PDT:** Democratic Work Party; **MMA/IBAMA:** Ministry of Environment/IBAMA; **MS/ANVISA:** Ministry of Health/ANVISA; **MAPA:** Ministry of Agriculture; **PMDB:** Brazilian Democratic Movement Party; **CNA:** National Confederation of Agriculture; **PP:** Progressive Party; **DEM:** Democrats (Party); **Pesticide Industry:** National Association for the Diffusion of Fertilizers (ANDA); National Association of Vegetable Defense (ANDEF) , National Union of Agriculture Defense Products (SINDAG); National Association of Pesticides (AENDA); National Union of the Industry of Vegetable Defense Products (SINDIVEG), Brazilian Association of Chemicals and Biotechnology (ABIFINA); **PSD:** Social Democratic Party

Source: Produced by the author

Figure 10 - Analysis of coalitions



Civil Society: Permanent Campaign Against Pesticides and For Life, Movement of Landless Workers ,Via Campesina, National Confederation of Agricultural Workers; **MDA/MDS:** Ministry of Agrarian Development/Ministry of Social Development ;**Scientists:** ABRASCO, UNESP, Unicamp, University of Mato Grosso, Brazilian Association of Agroecology ; **PT:** Workers' Party; **PDT:** Democratic Work Party; **MMA/IBAMA:** Ministry of Environment/IBAMA; **MS/ANVISA:** Ministry of Health/ANVISA; **MAPA:** Ministry of Agriculture; **PMDB:** Brazilian Democratic Movement Party; **CNA:** National Confederation of Agriculture; **PP:** Progressive Party; **DEM:** Democrats (Party); **Pesticide Industry:** National Association for the Diffusion of Fertilizers (ANDA); National Association of Vegetable Defense (ANDEF) , National Union of Agriculture Defense Products (SINDAG); National Association of Pesticides (AENDA); National Union of the Industry of Vegetable Defense Products (SINDIVEG), Brazilian Association of Chemicals and Biotechnology (ABIFINA); **PSD:** Social Democratic Party

Source: Produced by the author

Finally, a temporal analysis of actors' positions was also pursued in order to allow for the identification of changes in actors' positions over time. The declarations of three key groups of actors were analysed over the ten years of debates and the results indicated that their positions remained stable. ANVISA, for instance, was found

to consistently defend itself against criticisms of inefficiency in registration or to point to the damaging effects of the unregulated use of pesticides on human health throughout. Their representatives always pointed to the necessity of hiring more staff and having more resources in order to be able to comply with the demands for quicker registration. Representatives of the agribusiness industry (CNA), on the other hand, coherently maintained their position of strong criticism and complaint in relation to bureaucratic hurdles related to the registration and import of unregistered pesticides, but increased the attention paid to the topic in the latter years of the analysis (see table 20). Lastly, the group of NGOs and scientists who formed the 'Permanent Campaign against Pesticides and for Life' in 2011, also remained extremely critical of pleas for less control over imports or registration of new pesticides throughout. The only variation noticed was that this group became more organised following the institutionalisation of the campaign, which might be a consequence of the stronger criticisms made by neo-developmentalists. The next section assesses the role of new information in the debates and provides further evidence of the stability of coalitions' position over time.

5.4. Sources of Policy Change

This section assesses the importance of internal events (or events proximate to the policy subsystem), negotiated agreement (meaning "agreements involving policy core changes [that] are crafted among previously warring coalitions", Sabatier & Weible, 2007, p. 205) and policy-oriented learning (or "relatively enduring alternations of thought or behavioural intentions that result from experience and/or new information and that are concerned with the attainment or revision of policy objectives", Sabatier and Jenkins-Smith, 1999, p. 123) as sources of regulatory change in the pesticide subsystem in Brazil. It advances that the latter two sources of policy change identified by the ACF as necessary for policy change to occur were not necessary in this case. Because the policy problem of excessive bureaucracy was identified as the most salient, Law 12.873 (on the import of unregistered pesticides in situations of zoo-sanitary and phytosanitary emergencies) and Bill 209/2013 (on the unification of registration agencies under the leadership of Ministry of Agriculture) will be the focus of the analysis. Although the latter has not yet resulted in effective

regulatory change the identification of the impact of internal events, negotiated agreement and learning in the processes leading to it can already be assessed. The results indicate that coalitions achieved very low levels of negotiated agreement and policy-oriented learning in this case. In order to explain this result, three fundamental drivers of negotiation and learning identified by the literature on collaborative governance are investigated, namely, *consequential incentives*, *uncertainty*, and *interdependency* among actors (the justification for the selection of these three criteria is provided in section 2.3.5 of chapter 2).

5.4.1. Internal Events

Two sorts of internal events were found to be relevant for the regulatory changes analysed (Law 12.873 and Bill 209/2013). The first is indirectly related to this roll-back in standards of pesticide control and refers to a *historic public scandal* that motivated the approval of a relatively strict pesticide regulation in 1989 (Pesticide Law 7.802), nurturing resentments among the neo-developmental coalition that would later be displayed in the regulatory changes proposed. The main historic scandal in the history of this subsystem was the contamination of River Guaíba (in the south of the country) by pesticides in May of 1982. This fact, aided by the work of environmentalists from the Rio Grande de Sul Association for the Protection of Natural Environment (AGAPAN), resulted in the mobilisation of public and political attention around the debate and initiated a series of events that led to the approval of Law 7.802 (Franco, 2014; Hochstetler and Keck, 2007). Two months after the contamination of the river, on 22nd of July 1982, a state level law – Decreto Lei 30.787 - was published regulating the use of organochlorine products (pesticides) in the region. After another two months, a State Decree – Decreto Estadual 30.811 – established the requirement for an agronomic report, containing an analysis of ecological and toxicological factors to allow for the commercialisation of pesticides in the state (Franco, 2014, pp. 38–39). Following these events, Pedro Simon – a politician from Rio Grande do Sul involved in the elaboration of these regulations – was named Minister of Agriculture. He brought the debate to the federal level by establishing a special commission for the revision of previous national pesticide regulation. This

special commission was composed of a plurality of actors from the government and civil society, which meant that the final proposal, had a rather balanced and technical character and resulted in a pesticide regulation considered to be progressive in terms of environmental standards (Franco, 2014, p.55).

The second important internal event is related to the increase in the use of pesticides in the country and the consequent overload of the administrative structures in charge of organising the registrations (exposing the limits of the administrative capacity of the state). The relevance of this event was evidenced both by members of the pesticide industry, who constantly pointed out the long waiting lists and demanding bureaucratic requirements they have to face to have new pesticides registered in the country, as well as by members of the Ministry of Health (ANVISA) who, as a response to the criticisms of the former group, emphasised the limited material and personnel resources they had to cope with the increasing demand for new registrations (public hearing in the Lower Chamber, 2015, 2nd July). The limited administrative capacity (in terms of material resources and staff) of the state to deal with the increasing demand for new product's registrations, was, therefore, the second internal event identified as important for the regulatory changes analysed.

In sum, there were two relevant internal events in this subsystem. First, the contamination of River Guaiba led to the mobilisation of an environmentalist group (AGAPAN) to exploit the scandal to promote an anti-pesticide agenda. This mobilisation associated to the ascension to power of leaders who were favourable to demands for more pesticide control, and the overall momentum given to regulatory reforms by the re-democratization of the country led to the approval of relatively strict regulations in terms of environmental protection, that generated resentment among neo-developmentalists that started to push for their alteration when they acquired more power. Second, the limits of the administrative capacity of the state to deal with the increasing demand of registration of new products, an event referred to both by members of the neo-developmental coalition and by members of the government (administrative economic rationalist coalition).

5.4.2. Negotiated Agreement

This sub-section assesses the importance of negotiated agreement for the changes in the import procedures of pesticides in cases of zoo-sanitary or phytosanitary emergencies (which resulted in Law 12.873) and for the proposed changes to registration procedures and the proposed unification of the assessment process. The level of negotiated agreement is assessed through three criteria: 1) *how often coalitions seek to influence decisions through instruments that are not based on personal interaction and negotiation (such as vetoes, amendments and judicial actions)*. It is assumed that the higher the frequency of recourse to these mechanisms, the lower the level of negotiated agreement in the case. 2) *The number of venues used by actors during the negotiation process*. The assumption is that the higher the number of venues used for negotiation, the lower the level of negotiated agreement. The logic underlying this assumption is that if coalitions maintain the negotiation within specific institutional venues (for example, within the National Congress or within specific commissions within the National Congress) and do not seek other venues such as courts, other agencies or the media, that is because actors feel their positions are being heard in the original venue, and therefore, collaboration is likely to be happening (Weible, Pattinson and Sabatier, 2010). 3) *The incidence of 'devil shift' or the exaggeration of the power and maliciousness of one's opponents during debates*, was also considered as evidence of reduced levels of negotiated agreement.⁶⁸

In relation to the use of mechanisms of negotiation not based on personal collaboration and agreement, two fundamental facts point to low levels of negotiated agreement. The first relates to the proposition of Law 12.873 by presidential provisional decree (Medida Provisoria 619/2013) – an essentially unilateral non-negotiated legislative tool. It is noteworthy, moreover, that this unilateral proposition was not backed by a consensus, not even of the executive's ministries. As revealed during an interview with a member of the Ministry of Environment (MMA), the MMA publicly opposed the law, which was perceived as a 'rollback in the evaluation of pesticides' (interview 58). Further evidence of reduced negotiated agreement in this case is that, in November 2013, the Brazilian Association of Collective Health

⁶⁸ For further justifications for the choice of these three parameters see chapter 2 section 2.d.

(ABRASCO), an association of public health researchers, asked for an evaluation of the *Ministério Público* (the Brazilian equivalent of the U.S. Office of the Attorney General) about the relevance of filing a Direct Act of Unconstitutionality against Law 12.873. Although the Act was not filed, ABRASCO publicly declared its opposition and refused to recognise the rule.⁶⁹ Finally, at the beginning of 2016, the *Ministério Público* published a memorandum⁷⁰ that spoke out against the proposed changes to the registration procedures for new products. This evidence not only points to the involvement of the judicial sector (another venue), but also to the use of mechanisms other than direct personal negotiations for the treatment of the topic.

Regarding the *number of venues of negotiation*, in addition to the involvement of the judicial power in the above-mentioned memorandum, there was a clear attempt by members of the Brazilian Health Research Agency (Fiocruz, which is linked to the Ministry of Health) to include other venues in the debate about the new registration procedures. This group attempted, for instance, to bring the topic to the National Commission of Chemical Safety (CONASQ) including it in the agenda of the meeting I attended on 26/11/2014. However, because members of the Ministry of Agriculture did not attend, the issue was not debated during that meeting.

In terms of the *incidence of 'devil shift'*, a representative indication is an episode involving a former manager of ANVISA, who accused the agency of falsifying his signature for the registration of unauthorised pesticides. The manager declared that he left the health agency due to “serious irregularities such as the approval of products without toxicological evaluation, the falsification of his signature and the intentional disappearance of irregular processes”. Additionally, Fiocruz (also part of the Ministry of Health) declared in a public letter that ‘the process of pesticide’ deregulation, especially regarding the environmental and health sectors, reflects constant institutional attacks from the agribusiness sector. Finally, Federal Deputy Dr. Rosinha, from the Workers’ Party, published an accusatory declaration on the day Law 12.873 was approved by the Lower Chamber. He proclaimed that “ruralists – are, in the dead of night – always at night – creatively, and in partnership with other sectors of the congress and of the executive government, promoting the use of chemical

⁶⁹ See <http://abrasco.org.br/dossieagrotoxicos/>

⁷⁰ <https://www.ecodebate.com.br/2016/03/09/mpf-e-contra-projeto-de-lei-que-transfere-analise-de-registro-de-agrotoxicos-para-o-ministerio-da-agricultura/>

poisons". These kind of accusatory declarations were considered sufficient indication of the limited trust between actors in this policy subsystem and the incidence of what has been referred by the ACF literature as 'devil shift' (45%, Jenkins-Smith *et al.*, 2014, 45%; Sabatier, Hunter and McLaughlin, 1987).

In order to explain the occurrence of limited negotiated agreement, this analysis also investigated the incidence of the three hypothesised drivers of negotiated agreement and learning (see chapter 2, section 2.3.5), namely consequential incentives, interdependence and uncertainty – the three of which are pointed as leading to a hurting stalemate.

First, no consequential incentives, meaning incentives that present the issue as salient and imply negative consequences for non-negotiation, were identified. Members of the neo-developmental coalition already had the support of the Ministry of Agriculture for the regulatory changes proposed and did not need to convince other sectors of the government in order for regulatory changes to be approved due to the sheer power of the rural caucus in the Congress.

Second, the interdependence between actors was particularly low. Because the coalition proposing the regulatory change was the dominant coalition (neo-developmentalists) and because it was self-sufficient (in the sense that they did not depend on the support of the other two coalitions to have new regulations approved), negotiation was not a requirement. Uncertainty about the new regulations, however, although present, only affected the minority coalitions of the administrative economic rationalists and socio-environmentalists/preservationists. These two groups tended to lose much of their control over the registration and authorisation process of new pesticides, which increased their uncertainty. It did not affect, however, the dominant neo-developmental coalition, which secured more certainty and control over the process of pesticide registration with the regulatory changes. The analysis of the three drivers of negotiated agreement provide, as a consequence, plausible justifications for the low levels of negotiated agreement identified.

5.4.3. Policy-oriented Learning

Sabatier and Jenkins-Smith (1988, p. 155) support the idea that the first condition for policy-oriented learning to occur is that “both sides have sufficient technical resources to be able to criticize the others’ causal model and data”. It is, therefore, the “analytical debate among different coalitions” that refines actors’ understandings about the seriousness, causal relationships and consequences of the policy problem on the agenda (Sabatier and Jenkins-Smith 1988, p. 155). For this reason, this sub-section investigates the occurrence of analytical debate, based on the use of technical information, by policy makers from different coalitions, in the debates about pesticide regulatory change. It assesses whether actors’ arguments changed when exposed to technical information. With this aim, the section starts by describing the different occasions when technical information was displayed in the debates, and proceeds by tracing policy-makers’ use of this information in their statements. The analysis went beyond the policy problem of excessive red tape in registration in order to increase the representativeness of the sample. Lastly, a comparative analysis of three key actor’s arguments before and after important technical evidence was added to the debate is pursued in order to identify its impacts, and, therefore, the degree of policy-oriented learning that took place.

The first important issue involving technical evidence in the debate about pesticide regulation was related to Bill 4762/05, intended to ban the use of organochlorine-based pesticides due to cases of poisoning of rural workers, and proposed by members of the preservationist/socio-environmentalist coalition. The researcher Eduardo Garcia Garcia from the Jorge Duprat Figueiredo Foundation for Work Safety and Medicine, was invited by the supporters of this bill to a debate in the Lower Chamber, and provided data estimating that there were around 150 to 200 thousand pesticide-related poisonings per year in Brazil (see line one of table 23). The reaction from the pesticide industry (the neo-developmental coalition) to these allegations came only six years later, when the Brazilian Association of Chemical Industry invited Professor Trapé, from the University of Campinas, who claimed that, despite the increase in the use of pesticides in the country, the number of intoxication

cases was sharply declining and many of the diagnoses of intoxication made by the health system were incorrect (see line 5 of table 23 for specific statements). None of the two opposing coalitions were found to have altered their positions in face of the contradictory evidence presented by the two scientists.

Another relevant case of analytical debate around pesticide regulation occurred when the Federal University of Mato Grosso (UFMT) published a study in 2011, revealing that two to six different types of pesticides were found in samples of breast milk of women from Rio Verde – Mato Grosso (a city located close to the largest soy production farms in the country). This study, which is the most frequently cited scientific study in Lower and Higher Chamber debates about pesticides, evidenced the existence of the pesticide DDE (derived from DDT) in 100% of the samples of breast milk of 62 women, Endosulfan in 76% of the samples, and Deltamethrin in 34%. DDE had been banned in Brazil since 2009 (one year before the milk samples were collected) and Endosulfan was banned in 2013. The analysis of the impact of the UFMT's study on the debates revealed that it was first mentioned by a policy maker on April 2010, when Deputy Celia Rocha (PTB-AL) (a member of the preservationist/socio-environmentalist coalition) used the study in support of bills restricting the use of pesticides (see line 3 of table 24 for specific statements). Examples of bills supported by Deputy Rocha through the use of the study include Bill 4762/05, forbidding the use of organochlorine-based pesticides (mentioned above), Bill 713/99, aimed at banning 2,4-D, Bill 3986/2000, which would make notifying the authorities of rural workers' intoxication by pesticides mandatory, and Bill 3615/12, which would increase regulation of agriculture aviation companies.⁷¹

In July 2012, the UFMT study was, once again, formally debated in public. Professor Pignati from UFMT was invited to present the study (see line 9, table 23, for the statements he made on the occasion). The National Association of Vegetable Defence (ANDEF) invited two other scientists, one from University of Campinas (Professor Felix Guillermo Reyes) and another from the University of São Paulo (Professor Eduardo Peixoto), to participate in the debate. During the debate the two latter scientists questioned the scientific and methodological validity of the UFMT study (lines 10 and 11, table 23) and Professor Pignati defended it (line 9, table 23). According to a third expert who followed the debates, the criticisms had been

⁷¹ As of the time of writing (May 2016) none of these bills have yet been approved.

requested (and paid for) by the industry and the experts advancing them had not even read the UFMT's research (interview 60). Additionally, because these experts had been explicitly invited by members of the pesticide industry (part of the neo-developmental coalition), the legitimacy of their positions was debatable and had little influence on the position of Professor Pignati (also a member of the preservationist/socio-environmentalist coalition).

Among other technical contributions identified (which, although presented in table 23, will not be described here in detail due to the fact that they did not generate analytical debate), representatives of the pesticide industry also directly contributed to the debates about pesticides regulations with technical information. Arguing that Brazilian pesticide regulation is amongst the strictest in the world, the Vice-President of the Brazilian Association of Fine Chemical Industries and Biotechnology (ABIFINA), Tarciso Bonachela, presented data in September 2011, maintaining that more than 168 tons of empty pesticide packages had been recycled since 2012 (see line 6, table 23).

The analysis of how all this technical information affected the position of key stakeholders in each of the three coalitions reveals that information that challenged core beliefs was generally received with suspicion and no actual change in actors' positions took place over the decade analysed. For example, in face of the evidence presented by Professor Trapé about the intoxication of rural workers, Deputy Padre João (PT-MG) (member of the preservationist/socio-environmentalist coalition) responded that things "were not as simple as they were being presented by Professor Trapé", and that he had other data showing the higher incidence of cancer in areas with higher use of pesticides (see line 5, table 8). Similarly, Deputy Amaury Teixeira (PT-BA), also from the preservationist/socio-environmentalist group, questioned Trapé by asking why Brazil was so much less restrictive than other countries in terms of pesticides (if pesticides were, indeed, so well-controlled in the country) (line 6, table 8). In relation to data about Brazilian successes in collecting and recycling pesticide packaging presented by Mr. Bonachela, Teixeira responded by stating that he did not believe the data was true due to several examples he had seen in the countryside of people using pesticide packaging to store milk or drink water (Lower Chamber News Agency, 2011, October 20).

Similarly, Deputies Paulo Cesar Quartiero (DEM-RR) and Valdir Colatto (PMDB-SC), both members of the neo-developmental coalition, accused the UFMT research of being 'exaggerated' (lines 8 and 9, table 8). During the same public hearing in which Professor Pignati presented the results of his research, these deputies repudiated Pignati's results, declaring themselves "certain that Brazilian farmers are fully dedicated to control their crops without harming human health" (Lower Chamber News Agency, 2012, July 03).

Finally, members of ANVISA (from the more moderate administrative economic rationalist coalition) did not produce any opinion on scientific controversies. Their scientific arguments were based on data produced either by ANVISA (about the amount of vegetables unsuitable for consumption) or by Fiocruz (also part of the Ministry of Health) about the incidence of pesticide intoxication (in 2011) and never involved other researchers' arguments (lines 2 and 7, table 24). Moreover, even after Professor Trapé denied the seriousness of the intoxication problem in Brazil, accusing ANVISA of producing misleading data (in October 2011), no response was given by members of ANVISA. A subsequent declaration from José Agenor Álvares da Silva (Director of ANVISA) on May 2012 (line 7, table 24) focused only on the increase in pesticide consumption in Brazil but made no reference to the debate about workers' intoxication levels. This might have been a deliberate attempt to avoid the further politicisation of scientific arguments.

In summary, while members of the preservationist/socio-environmentalist coalition and those of the neo-developmental group explicitly declared themselves to be suspicious and unconvinced of the scientific arguments supporting each other's views, ANVISA, from the administrative rationalist coalition, avoided engaging in scientific controversies. The occurrence of policy-oriented learning (here equated with an actor's engaging in analytical debates and altering their positions in light of new information) could not, therefore, be verified, even though technical information was extensively provided and used during debates. All technical contributions to the Lower and Higher Chamber debates about pesticides are summarised in table 23. Table 24, in turn, summarises the occasions in which policy-makers used technical arguments in their narratives.

It is, therefore, concluded that neither negotiated agreement nor policy-oriented learning could be identified in the analysis of debates about pesticide regulatory change. It is argued that the absence of the drivers of negotiated agreement discussed in the previous subsection (i.e. lack of consequential incentives, interdependence and uncertainty) can also be used as explanations of the non-occurrence of learning among coalitions (for a justification of the use of the same drivers for both criteria see chapter 2 section 2.3.5).

Table 23 - Technical arguments identified in Lower and Higher Chamber debates between 2005 and 2015

	Date	Scientist – organisation	Claim
1.	September 2005	Eduardo Garcia Garcia – Fundação Jorge Duprat Figueiredo de Segurança e Medicina do Trabalho (FUNDACENTRO) – Jorge Duprat Figueiredo Foundation for Work Safety and Medicine	<p>Pesticide intoxications has been treated in a simplistic way in Brazil. The inadequate use of products has been pointed as the cause of problems, and the solution that has been proposed is to educate workers. However, this makes the workers wrongly responsible. The right thing to do would be to substitute or restrict more dangerous products, based on their toxicity levels. Nowadays toxicity data is not used for restricting products.</p> <p>It is estimated that nowadays there are 15 million rural workers in Brazil exposed to pesticides and that there are around 150 to 200 thousand intoxications per year. Research conducted by Fundacentro with five thousand rural workers from nine different states showed that more than 28% of them had already been through at least one intoxication during their lives.</p>
2.	Nov 2010	Professor Geraldo Papa –State of Sao Paulo University (UNESP) (entomologist)	The use of pesticides is so important that there would be a shortage of food if its use was banned. Pesticides correspond to 99% of plagues control. Although ANVISA has to be careful in the registration of new products their authorisation takes too long. ANVISA should be better structured to undertake analysis faster.
3.	July 2011	Researcher Marcelo Augusto Boechat Morandi – EMBRAPA environment	Brazil needs a new productive model. There are already alternatives for producing food in a more ecological manner, but government has to incentivise them. In the short term improving the use of traditional practices with more monitoring and training, as well as the restriction of highly toxic products can already contribute to the reduced use of pesticides. But more sustainable practices need also to be developed such as direct plantation, biological fixation of nitrogen, and the integration of forests, agricultural production and cattle ranching. Professionals need also to be educated in ecology.
4.	July 2011	Researcher Vicente Eduardo Soares e Almeida – Embrapa vegetables	Brazil has enough technology to produce fruits and vegetables in an ecological manner. But public policies are required for this agro-ecological transition to happen.
5.	October 2011	Ângelo Trapé – University of Campinas (Unicamp) –Coordinator of environmental health department	<p>The use of pesticides is not too harmful to human health.</p> <p>There has not been, in the past four years, any case of farmers' intoxication in our university hospital, which is in charge of more than six million people in the region. In research conducted with 10.5 million people with an average exposure to pesticides of 18 years, only 2% had experienced some sort of health impact.</p> <p>Despite the increasing use of pesticides in the country, the number of intoxication cases is sharply declining. Many of the diagnoses of intoxication made by the health system are incorrect.</p> <p>We can't compare the use of pesticides in tropical countries with its use in European countries. We are using less than we should be.</p>

6.	Sept 2011	Tarciso Bonachela – Vice President of the Brazilian Association of Fine Chemical Industries and Biotechnology (ABIFINA)	More than 168.6 tons of empty pesticides packages have been recycled since 2012.
7.	May 2012	Professor Victor Manoel Pelaez – Federal University of Parana (Public Policy)	The international market for pesticides is an oligopoly. They sell seeds and pesticides together and farmers cannot choose. Moreover, pesticide companies invest more in marketing than in research and development. Pesticide regulatory policy needs to go beyond the simple concession of registrations, it has to control safety and possible harms to human health. Dissociating health and economy makes no sense. Agricultural, economic and health policies should be considered together.
8.	May 2012	Professor Anamaria Tambellini – Federal University of Rio de Janeiro	Pesticides are very toxic to rural workers and pesticide producers. The government has to protect these people. Monitoring is very flawed and pesticides should be used selectively and in a controlled and responsible manner. Many studies show that pesticides cause cancer. I don't condemn their use, but they should be used carefully.
9.	July 2012	Professor Wanderlei Pignati – Federal University of Mato Grosso (UFMT) (Public Health)	There is no legal limit for pesticides in breast milk. There should be none. However, DDE was present in 100% of samples, Endosulfan in 76%, and Deltametrina in 34%. Another study we have been doing with Fiocruz over the past four years, which measures the contamination of air, rain and wells shows that contamination happens in both large crops of soy and sugar cane and in small crops of peppers, tomatoes, lettuce. To reverse this situation alternatives methods of production should be adopted, such as organic and agro-ecological crops. Our research is not methodologically flawed, it was coordinated by Fiocruz and I can cite at least other 15 scientific papers written in Brazil with even more alarming results.
10.	July 2012	Professor Eduardo Peixoto – University of Sao Paulo (Chemistry)	The UFMT research lacks scientific rigour. The results are inconclusive and not trustworthy.
11.	July 2012	Professor Felix Guillermo Reyes – University of Campinas (Food toxicology)	The UFMT research should be praised, but there are indeed a few methodological issues.
12.	September 2013	Researcher Fernando Carneiro – Brazilian Association of Collective Health (Abrasco)	80% of properties larger than a hundred hectares use pesticides. The UFMT research has demonstrated the presence of pesticides in breast milk in Lucas do Rio Verde. Another study states that cancer mortality rates have increased by 38% in cities where there is a strong agribusiness presence. Finally, PhD research has shown that for each dollar spent on pesticides in Brazil, the Public Unified Health System (SUS) has to spend US\$ 1.28 in treatments, almost 30% more.
13.	September 2014	Professor Cesar Koppe Grisolia – University of Brasilia (Biologist)	The risks involved in pesticides go beyond ingested food. Pesticides contaminate soil and water reservoirs that supply cities. The greater risk today is not the food but the water the population is ingesting. Research shows a higher incidence of Alzheimer's and Parkinson's disease among people who have been directly exposed to pesticides during their lives.

Source: Produced by the author

Table 24 - Use of technical information by politicians in Lower and Higher Chamber debates between 2005 and 2015

	Date	Actor using the information	Source of information	Claim
1.	August 2007	Deputy Ribamar Alves (PSB – MA)	WHO	Every year there are 25 million intoxications by pesticides around the world and approximately 20 thousand involuntary deaths. In our country the situation is worrisome because we are the largest consumers of pesticides in the world.
2.	April 2011	José Agenor Álvares da Silva (Director of ANVISA – Ministry of Health)	Fiocruz and ANVISA researches	Pesticides can cause dizziness, headaches– consequences known as neurotoxicity. These are neurological and there are mutagenic consequences, which can alter people's genes. Data from Fundação Oswaldo Cruz (Fiocruz) shows that 115 people died from pesticide poisoning and almost four thousand were poisoned in 2009. ANVISA research also shows that contamination is above threshold levels in some vegetables such as pepper.
3.	April 2011	Deputy Celia Rocha (PTB-AL)	UFMT research	UFMT researchers detected two to six different types of pesticides in the breast milk of 62 women, including one which has been forbidden in Brazil since 1999.
4.	October 2011	José Roberto da Ros – Vice President of the National Syndicate of Agricultural Defence Products Industry (SINDIVEG)	Ângelo Trapé (University of Campinas – Unicamp)	Pesticides are necessary to develop crops and prevent plagues. Pesticides are in fourth place among the causes of poisoning, coming after medicines, cleaning products and poisonous animals.
5.	October 2011	Deputy Padre João (PT-MG)	Ângelo Trapé (University of Campinas – Unicamp)	I feel uneasy about this information [provided by Trapé]. Things are not as simple as they seem. There is scientific data proving that areas with high use of pesticides have higher incidence of cancer.
6.	October 2011	Deputy Amaury Teixeira	Ângelo Trapé (University of Campinas – Unicamp)	If Brazil is using pesticides correctly [as your evidence seems to suggest], why are there so many pesticides being used here that are banned in Europe and the US?
7.	May 2012	José Agenor Álvares da Silva (Director of ANVISA – Ministry of Health)	Non-specified research	Brazil uses 19% of all pesticides produced in the world. The increase in the use of these products had been of 93% in the world between 2000 and 2010 but in Brazil this increase has corresponded to 190%.
8.	July 2012	Deputy Valdir Colatto (PMDB-SC)	UFMT research	The UFMT research is exaggerated, Brazilian farmers are concerned about not harming human health
9.	July 2012	Deputy Paulo Cesar Quartiero (DEM-RR)	UFMT research	The UFMT research is exaggerated, Brazilian farmers are concerned about not harming human health
10.	May 2012 and July 2012	Vinicius Freitas – Representative of the Brazilian Association of Agroecology	UFMT research	There is no safe level for the consumption of pesticides. The UFMT research has shown that of the 12 potable water wells from schools which were analysed, 83% were contaminated with residues of several types of pesticides. Moreover, 56% of rain samples contained pesticides and 100% of breastfeeding women had at least one type of pesticide in their milk. There should be effective public policies for agro-ecological types of production. Small farmers, who feed 70% of national population sometimes can only have credit for loans if they use pesticides.
11.	July 2012	Deputy Stefano Aguiar (PSC-MG)	UFMT research	What the UFMT research found is extremely serious because breastfed babies are extremely susceptible to toxic substances due to their underdeveloped immunological systems.

Source: Produced by the author

5.5. Conclusion

This chapter investigated cases of changes in pesticide regulation in Brazil between 2005 and 2015. The chapter maintains that pesticide regulations in Brazil have tended towards becoming less restrictive in terms of environmental and health requirements during this decade and that these regulatory changes have occurred without negotiated agreement or policy-oriented learning. Section 5.2 provided a historical overview of regulation in the sector, the most important internal events identified in this policy subsystem, and delivered an analysis of the salience of different policy problems in 65 texts involving debates about pesticide regulation. This section concluded that the most important recent internal event affecting this sector was the increase in the use of pesticides in the country and the resulting overload of the administrative apparatus of the state in processing the registrations of new pesticide products. It identified, in addition, that the most salient policy problem among actors is the issue of excessive bureaucracy in the registration of new products, an issue brought to the agenda by members of the neo-developmental coalition and which motivated debates on two regulatory reforms: the authorisation of the import of non-registered pesticides in cases of zoo-sanitary or phytosanitary emergencies (by Law 12.973) and Bill 209/2013, which, although not yet approved at the time of writing, intends to establish a new unified pesticide registration agency under the central command of the Ministry of Agriculture (substituting the current tripartite system, which involves the Ministry of Agriculture, the Ministry of Environment and the Ministry of Health).

Section 5.3 presented a narrative analysis of the debates on the two above-mentioned regulatory changes in order to identify the different discourses and coalitions. Three coalitions were identified: 1) the *neo-developmentalists*, proposing that regulations should be altered in order to reduce the bureaucracy involved in importing and registering new pesticides in the country. This group was composed of associations representing the pesticide and agribusiness industries and of political parties such as the Brazilian Democratic Movement Party (PMDB), the Progressive Party (PP), the Democratic Party (DEM) and the Social Democratic Party (PSD) in addition to the Ministry of Agriculture (MAPA). 2) The *administrative economic rationalists*, who were a more moderate coalition based on arguments that it was

possible to reduce bureaucracy and improve control by strengthening the capacity of the current administrative structure (without re-structuring it) and that all ministries should continue to be directly involved in the process of registration. This coalition was mainly formed of members of the Ministry of Health (ANVISA), but also to a lesser extent by members of the Ministry of Environment, who were, however, less vocal on the topic. 3) Finally, the *preservationist/socio-environmentalist* coalition did not recognise the registration issue as an actual policy problem, as pesticides are not perceived by this group as a necessity. This coalition was found to be composed of the Ministry of Agrarian and Social Development (MDA/MDS), by diverse civil society organisations (including some family/rural workers' social movements), by scientists (those who had not been hired by specific stakeholders),⁷² members of the Ministry of Environment (also giving declarations to support this coalition), and members of the Workers' Party (PT) and the Workers' Democratic Party (PDT).

After the identification of narratives and coalitions, section 5.4 assessed the relevance of internal events, negotiated agreement and policy-oriented learning as sources of regulatory change in this policy subsystem. It demonstrated that negotiated agreement and policy-oriented learning cannot be considered relevant causal factors in the regulatory changes in this subsystem, qualifying therefore, ACF's hypothesis about the necessity of these two sources of policy change.

⁷² Scientists explicitly hired by members of the industry were coded as part of the industry.

CHAPTER 6 - CASE STUDY III: ACCESS TO GENETIC RESOURCES AND BENEFIT-SHARING (ABS) REGULATION

6.1. Introduction

The opportunity to make economic use of naturally-occurring genetic resources and of the traditional knowledge associated with it is often alluded to as a latent fortune of mega-diverse countries. The development of products based on biodiversity and traditional knowledge is a well-established but scantily regulated practice. This chapter delves into the process of the regulation of access to genetic resources and the sharing of benefits arising from their utilisation in Brazil and aims to explain the reasons underlying the regulatory changes this sector has been through in 2015. The issue was first regulated in the country in 2001, but on the 20th May, 2015, a new access and benefit-sharing (henceforth ABS) law was published. In order to investigate the reasons underlying this regulatory change, this chapter will provide an analysis of the history of this policy subsystem in Brazil (section 6.2), of the main coalitions and narratives in the debate preceding the 2015 regulation (section 6.3) and, based on the contributions of the Advocacy Coalition Framework (ACF) on the sources of policy change, section four will assess whether regulatory changes were heralded by internal events, negotiated agreement and policy-oriented learning among these coalitions⁷³.

The analysis identified three active coalitions in the process of negotiation that preceded the approval of the 2015 ABS law: an *administrative economic rationalist* coalition, mainly formed by the Ministry of the Environment (MMA), the Ministry of Industry and Foreign Trade (MDIC), the Ministry of Science, Technology and Innovation (MCTI) and representatives of the bio-industry; a *neo-developmental* coalition, constituted of the Ministry of Agriculture (MAPA) representatives of the agri-business sector and members of the Congress supportive of their interests; and a *socio-environmentalist* coalition, formed by representatives of traditional and

⁷³ External events related to the Brazilian context have been described in chapter 4.

indigenous communities, family farmers, parts of the scientific community and those supportive of their demands (such as NGOs and some members of the Congress).

The analysis of the interactions between these coalitions revealed that, although negotiated agreement took place between the first two coalitions named above, the third was less successful in having its voice heard and in participating in the negotiation process that led to the approval of the new law. This chapter will demonstrate, moreover, that although learning took place among two of the three coalitions, scientific evidence was of little importance during the debates in the Lower Chamber, which contests the ACF in that policy-oriented learning shall imply the use of scientific/technical evidence.

The results of the analysis point to the importance of four events internal to the policy subsystem and two external to it. The first internal event is what will be referred to as the ‘*Novartis Scandal*’ in 2000, which was caused by an agreement between the Swiss Pharmaceutical company Novartis and a Brazilian NGO to send genetic samples of plants to Switzerland. The second is related to the limits in the administrative capacity of the state to issue genetic access authorisations in a timely manner, which fostered opposition to the law by the bio-industry and researchers. The third is the imposition of fines on the bio-industry and researchers in 2010 for not complying with the previous ABS Law. In other words, the *strengthening of the enforcement of previous regulations* was also observed to play an important role in this process of regulatory change. Lastly, the *entry into force of the UN Nagoya Protocol in 2014* was also identified as a crucial occurrence igniting debate about the new 2015 regulation. A timeline locating these three events in the history of this policy subsystem is provided below and further discussed in the next section.

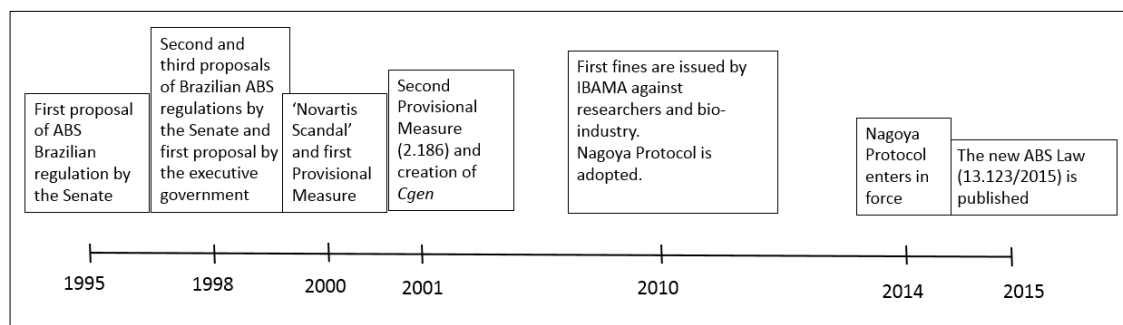


Figure 11 - Timeline of main regulations and events of the ABS policy subsystem

Source: Produced by the author

The two external events, in turn, are the increase in the political power of the rural caucus in the National Congress after the 2011 election and to the boom in the exports of commodities from Brazil between 2009 and 2010, which resulted in a huge increase in the economic power of the agri-business sector. Because these have already been debated in chapter 4, this discussion will not be included in this chapter.

6.2. The history of ABS regulation

The imbalance of power between users of biodiversity (often multinational companies or research centres) and its traditional providers (commonly local communities from the global south) makes biodiversity access and benefit sharing an extremely sensitive policy area in need of well-crafted regulations. In order to address this regulatory challenge and foster the conservation of biodiversity, parties to the United Nations Convention of Biological Diversity (CBD) have long been promoting the fair and equitable sharing of the benefits arising from the utilisation of genetic resources and some countries, such as Brazil, are already regulating the issue domestically. This section will provide an overview of the history of regulatory efforts undertaken both internationally and in Brazil to address this issue.⁷⁴

Until 1992, biological resources were treated as the ‘common heritage of mankind’, as established in the 1972 UNESCO World Heritage Convention. In 1992, however, after a long period of pressure by mega-diverse countries such as Brazil, the UN Convention of Biological Diversity recognised the rights of national governments over the genetic resources located in their territories. On 29th October, 2010, the ‘Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization’ was adopted by the Parties to the CBD. The protocol, which entered in force on 12th October, 2014, provided more legal certainty for providers and users of genetic resources and traditional knowledge, ensuring that the providers receive a share of the benefits accruing from the use of their resources. It also is intended to guarantee that traditional and indigenous communities are

⁷⁴ Because the issue began being regulated in Brazil only in 2001, a historical analysis of the predominant discourses throughout history will not be pursued. However, analysis of the short period from 2001 reveals that a socio-environmentalist perspective, which predominated in the 2001 regulation, was substituted by a mix of neo-developmental and administrative economic rationalist views in 2015.

empowered in the process of allowing access to genetic resources, requiring users to obtain their prior and informed consent for access as well as fairly rewarding them for the use of their traditional knowledge (UN, 2014).

Brazil has always been among the leaders in setting the agenda of international biodiversity regulation and has usually been among the most vocal of countries supporting the adoption of the Nagoya Protocol (Venkataraman, 2009, p. 25). According to a member of the Brazilian Ministry of Foreign Affairs, the fact that Brazil is the most biodiverse country in the world has meant that biodiversity issues are a priority and contribute to the country's leadership role in international negotiations (interview 40). Since 2002, Brazil has been part of the group of "Like-Minded Mega-Diverse Countries" (LMMC) and in 2005 it signed the "New Delhi Declaration on Access and Benefit Sharing", furthering this agenda (Venkataraman, 2009, p. 25). When the Nagoya Protocol was approved in 2010, Brazil was among the first countries to sign. After the Protocol entered in force, however, the urgency faded and, at the time of writing (mid-2016) ratification has not yet taken place.

In Brazil, ABS regulation was first proposed by then-Workers' Party Senator Marina Silva on the 9th November, 1995. She presented the Project of Law (PL) 306/95, which was debated in several public hearings with traditional communities, NGOs, scientists and members of the National Congress (Lima and Bensusan, 2003; Machado and Godinho, 2011). The bill was later altered, and a second bill was also proposed, bringing back the contents of the original, but none of them was approved.⁷⁵ However, in 1998, another Project of Law on the topic was discussed by an inter-ministerial group of the executive government and sent to the Lower Chamber (PL 4.751/98), which, at that point, had accumulated three Projects of Law on the same topic to be voted on. Finally, again in 1998, the executive government sent a Proposal of Constitutional Amendment (PEC n^o 618/98) to Congress proposing that genetic resources no longer be linked to the property or land in which they occur, but become national resources. Because of disagreements between the various parties in the debate, particularly concerning collective and private property rights and the entitlement of industry and indigenous communities regarding patented products that

⁷⁵ It was first substituted by a proposal from senator Osmar Dias (PSDB) in 1998 (PL 4.842/98) who disagreed with some of the requirements regarding indigenous rights, and then-senator Jacques Wagner (Workers' Party) proposed another Bill (PL 4.579/98) rescuing contents from the original Silva's proposal in terms of indigenous and traditional communities' rights (Bensusan, 2003).

originate from traditional knowledge (see Lima, Baptista and Bensusan, 2003, pp. 203–216), none of these four regulatory proposals was ever voted on by the Lower Chamber.

Further regulatory activity did not take place until the beginning of the 2000s, when a scandal involving the Swiss pharmaceutical company Novartis and the Brazilian research organisation Bioamazonia⁷⁶ (*Associação Brasileira para Uso Sustentável da Biodiversidade da Amazônia*) was exposed (henceforth the ‘Novartis scandal’). On 29th May, 2000, Novartis signed a contract with Bioamazonia for it to collect, identify, catalogue and send genetic material from the Amazon Forest to Novartis’s head office in Switzerland. According to the contract, Novartis would have unrestricted use and patent rights over the material collected and, in exchange, Bioamazonia would be paid 1% of the royalties of any new products resulting from this material over a period of ten years (Rocha, 2003).

The first reaction to this contract came from the Ministry of the Environment (MMA). The MMA Secretary of Coordination of the Legal Amazon, Mary Allegretti, publicly opposed the agreement, arguing that Bioamazonia should have consulted the MMA before signing it (Allegretti, 25/08/2000⁷⁷). Following the reaction of the MMA, the scientific sector also publicly opposed the contract. On 8th June, 2000, Isaias Raw, President of the *Instituto Butantan*, a governmental centre for biomedical research, published an article arguing that it represented a ‘spurious agreement transforming the Amazonia into the backyard of multinational companies’ (Raw, 08/06/2000⁷⁸).

Pressured by public opinion (and by its Ministry of the Environment) to take action, in 2000, the executive government published a Provisional Measure⁷⁹, a presidential legal act regulating access to genetic material that took immediate legal effect (MP2052/2000). This response generated further criticisms from civil society and

⁷⁶ Bioamazônia was created as a ‘social organisation’ – a non-profit institution (according to the terms of Federal Law no. 9637/98) that had a contract with the Ministry of the Environment for assistance with the implementation of PROBEM (The Brazilian Programme of Molecular Ecology for the Sustainable Use of Amazonian Biodiversity).

⁷⁷ Available at: <http://www.inpa.gov.br/cpca/charles/rtf/BioAmvsNovartis.rtf>. Accessed July, 2016.

⁷⁸ Available at: <http://www.s bq.org.br/publicacoes/beletronico/bienio2/boletim177.htm#4>. Accessed: July, 2016.

⁷⁹ There are two requirements for a provisional measure to be used: the *urgency* and *relevance* of the matter in need of regulation. Because of the urgency of the issue, this regulation involved no previous social consultation and even the National Congress was prevented from discussing the issue. This was, therefore, an example of an extremely hierarchical process of standard setting.

Congress. The latter, as previously observed, had been attempting to regulate ABS for more than five years at that point. One of the central criticisms was that this initial Provisional Measure failed to address the rights of indigenous and traditional communities by waiving the necessity of their prior informed consent in situations in which access to genetic resources was of 'relevant public interest' (Art. 14 MP 2052/2000). The use of a Provisional Measure to regulate the issue was, moreover, characterised as 'anti-democratic' in a joint declaration of 16 NGOs that publicly opposed the new regulation (Osava, 2000). Senator Marina Silva, who had first brought the theme to the debate in the National Congress, was one of the most vocal critics of this Provisional Measure. She remarked the fact that the bill she sponsored had already been discussed and approved by the Senate, and accused the government of an act of 'legislative piracy' by stealing the legislative functions of the Congress (Osava, 2000).

The provisional measure was judicially contested in the Supreme Court of Justice by the Communist Brazilian Party (PCdoB) and by the Workers' Party (PT) in partnership with the National Confederation of Agricultural Workers (CONTAG) who flagged two 'direct actions of unconstitutionality' (Machado and Godinho, 2011). Because of these judicial actions the text of the Provisional Measure went through extensive reforms and it was eventually substituted on 23rd August, 2001, by the Provisional Measure 2.186/2001, which was valid until May 2015. In the 2.186 Law, in an attempt to extend protection for indigenous and traditional communities, the critics succeeded in including a new clause requiring prior informed consent from the owner of the land in which genetic resources are located. However, despite being more considerate towards the rights of indigenous and traditional communities than the previous regulation, this second provisional measure was opposed by several social sectors (including indigenous and traditional communities themselves) for generating excessive red tape, costs and difficulties regarding access to genetic resources.

The dissatisfaction became more pronounced when monitoring began in 2010 and IBAMA (the environmental monitoring agency) issued the first fines to the private and research sectors. At that point, an organised movement of affected industries emerged to push for changes in the regulation (interview 6). This group, led by an association of pharmaceutical industries (*Grupo FarmaBrasil*), worked closely with the Ministry of the Environment to elaborate a new bill that would eventually

result in the 2015 law (interviews 6 and 8). The Ministries of Science and Technology, as well as the Ministry for the Development of Industry and Commerce were later included in this process and supported the final result (interview 54). When the bill was sent to the Congress, the Ministry of Agriculture (MAPA), which initially resisted the bill due to fears of taxation of agricultural products originating in foreign countries, was included in the discussion (interview 12). The reduced participation of minority groups such as traditional and indigenous communities and family farmers in the negotiations was, however, constantly emphasised by interviewees and in public hearings of the Lower Chamber (interviews 18, 43, 46).

The next section analyses the three coalitions and the narratives that emerged in the process of approval of this new law in 2015.

6.3. Positions, Arguments and Narratives

6.3.1. Positions

Three divergent coalitions were formed in the debates about the bill (PL 7735) that eventually resulted in Law 13.123/2015. The first coalition, referred to here as the *socio-environmentalist* coalition, was mainly formed by NGOs, indigenous and traditional communities, left-wing and environmentalist parties (such as Psol, PT, PV and PCdoB), and (at least initially) by the Brazilian Society for the Progress of Science (SBPC). These actors opposed the approval of the bill mainly due to the alleged illegitimacy of the process through which it was elaborated, namely, without the formal inclusion and consultation of members of traditional and indigenous communities. For this group, the most valued consequence of the new law would be the benefits that traditional and indigenous communities would accrue from facilitated and regulated access to genetic resources and traditional knowledge. This group was found to be based on, therefore, from a socio-environmentalist view of the world, according to which traditional and indigenous communities have a fundamental role to play in the protection of the environment.

The second coalition, the *neo-developmental* coalition, was also initially against the approval of the bill, but agreed to the final version after their requirements were incorporated. This coalition was formed mainly of representatives of the agri-

business sector, the Ministry of Agriculture and of deputies from conservative parties that are part of the rural caucus in the National Congress (such as the PMDB, PP, DEM). This group initially opposed the bill because they perceived the compensation requirements of traditional and indigenous communities to be a threat to the economic interests of agri-business. Once this threat had been completely neutralised through alterations to the bill, this coalition became supportive of it. This coalition was organised, therefore, around a neo-developmental discourse, according to which the economic benefits of the use of genetic resources take precedence over other goals such as protection of the environment or traditional communities' rights.

The third coalition identified is the *administrative economic rationalist* coalition. This coalition was found to be composed of parts of the executive government (mainly the MMA, the Ministry of Science and Technology [MCTI] and the Ministry of Industry [MDIC]), a group of bio-technology-based industries and by some representatives of the Workers' Party (PT) in the National Congress. This group not only proposed the bill, but strongly supported it throughout the negotiations in the Congress. This coalition emerged in 2010 after the first fines were issued against companies and researchers who had not followed the previous regulation (interview 6). This coalition emerged with the mobilisation of GrupoFarma Brasil, a group of representatives from the pharmaceutical industry, which contacted other nine industrial associations, companies and the Ministry of the Environment to produce the first draft of the bill (interview 6). This group had regular meetings for a period of at least two years and was directly involved in the negotiations in the National Congress.

The assumptions that unified this latter coalition were based on an administrative economic rationalist view, according to which rules about benefit sharing should be made clearer, more efficient, less burdensome for the industry and researchers, and centrally enforced by the government. According to this perspective to the extent that rules of access were clear, efficiently enforced by the government and easily applicable, conservation of biodiversity and benefit sharing would be effective and all sectors would benefit. A detailed description of the coalitional affiliation of each of the 28 actors identified as active in the debates of the Lower Chamber is provided in appendix II for this chapter.

6.3.2 Thematic Coding

The identification of these three coalitions and the categorisation of actors was pursued through an analysis of the main arguments of the debate, and by narrative analysis. The results of the thematic coding of the main arguments of the debate and the relationship between the arguments is summarised by the argumentative map in figure 12 and explained subsequently.

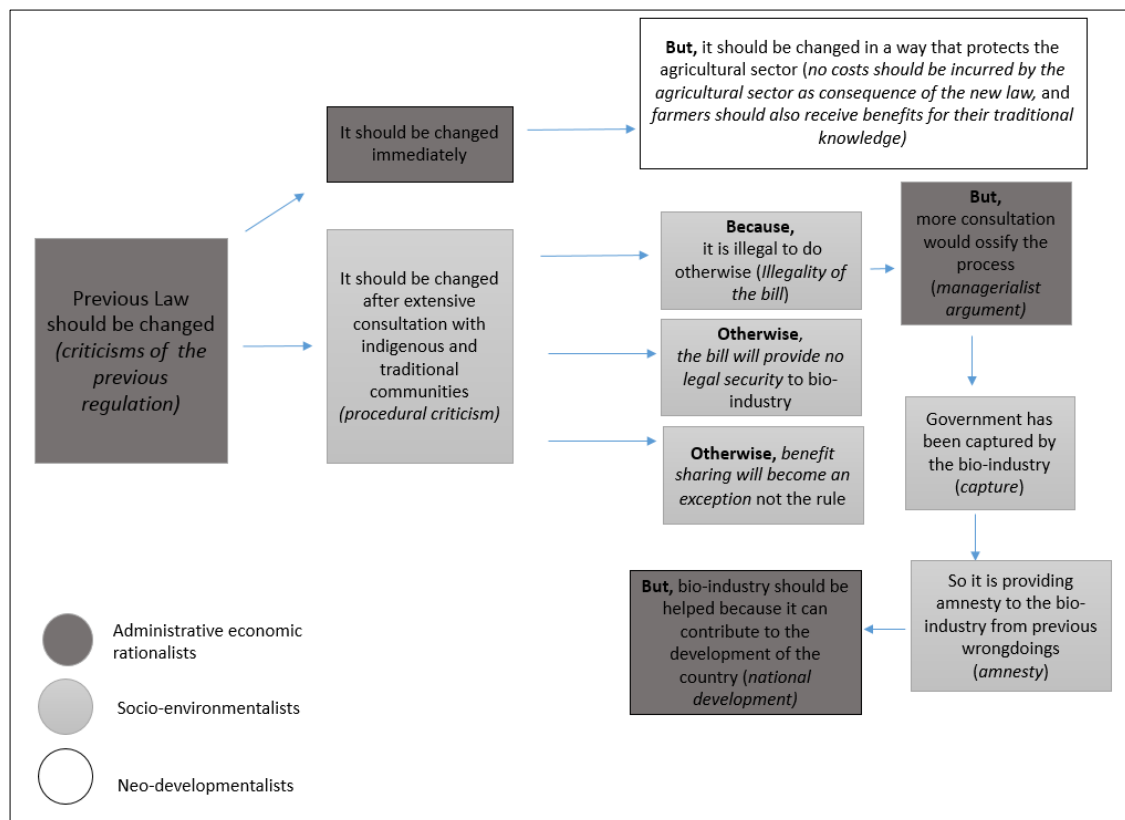


Figure 12 - Argumentative map of the debate about the new ABS Law

Source: Produced by the author

The arguments repeated most often in the debates about the new law advanced *criticisms of the previous regulation* (with 33 occurrences). These entailed arguments that pointed to the draconian character of the previous regulation, its complexity, highly bureaucratic stipulations, and the slow processing of genetic access requests that would result. These kinds of arguments gained particular traction in the narratives of the administrative economic rationalist group (which proposed the law in the first place). The previous regulation was referred to by members of this coalition as a serious “disincentive to the scientific and industrial use of Brazilian biodiversity” and

as “irrational” in economic and scientific terms, among other negative qualifications.⁸⁰ Members of the government have also pointed to its “excessive command and control” and members of the industry reported that they were being made to produce “biodiversity-free” certificates in order for products to be accepted and commercialised in the production chain, which was considered absurd (interview 6). The complexity and inefficiency of the previous regulation was, however, a point also widely agreed-upon by scientists and representatives of indigenous and traditional communities, who never disputed the need to revise this legislation, but rather the procedures by which it was revised. Members of the agri-business and from the rural caucus were also critical of the law, particularly in terms of the uncertainties around the export of agricultural products of foreign origin (such as soy), but were not vocal on the bureaucratic concerns.

Another frequently mentioned argument identified in the debates related to the absence of opportunities for traditional and indigenous communities to participate in the elaboration of the new regulation and to the nature of the ‘urgency’ with which the bill was sent to the Congress. This argument, which was adopted by members of the socio-environmentalist coalition, was coded as *procedural criticism* and was identified 20 times. The document ‘Rejection Motion from traditional and indigenous populations and familiar farmers to the businesses sectors involved in the elaboration and processing of the Project Law that sells and destroys national biodiversity’ published on 18th March, 2015, for example, affirms that the exclusion of traditional and indigenous communities in the process of drafting the bill was a “deliberate and conscious decision of the government together with the ‘Business Coalition for Biodiversity’” (Rejection Motion, 2015).

Another frequent argument used by members of the socio-environmentalist coalition was their emphasis on the ‘illegal’ character of the bill, due to its contradiction of international treaties and the Brazilian Constitution (coded as *illegality of the bill* – 22 occurrences). The fact that no formal consultation was held with these communities before the bill was sent to the Congress was frequently mentioned by representatives of indigenous and traditional communities in interviews, public letters addressed to the government and public speeches made at the Congress. According to this view, the manner in which the Project of Law was formulated was

⁸⁰ See the full list of quotations coded under each code in Appendix I

against Convention n° 169 of the International Organization of Labour – ratified by Brazil in 2003 – which establishes the rights of indigenous peoples to be consulted in relation to all administrative or legal procedures that affect their interests. In addition, this group also maintained that there was a disregard for the principle of ‘informed prior consent’ of traditional and indigenous peoples in regard to access to genetic resources (established by the CBD and the ILO 169 convention), referring to the bill’s provision that the proof of informed prior consent can be given by an official governmental body (Art 9, § 1, III) and also that it was non-compulsory for the government to consult its own specialist institutions for the protection of indigenous and traditional communities’ rights in drafting the benefit-sharing agreements (Art. 21 – unique paragraph).

Other less frequent, but still important, arguments from the socio-environmental coalition were that *the bill would provide no legal security* to the industry because it would only generate more conflict with indigenous communities (5 occurrences); that the bill was a way to *amnesty* those who were not following the previous law (5 occurrences); that it was *a result of governmental capture by private interests* (12 occurrences) and that *benefit sharing would become an exception* rather than the rule (4 occurrences). The argument that *the bill provides no legal security to the industry* is underscored by the allegation that the illegitimate procedures and lack of social consensus accompanying the bill enhanced the potential for conflict and improper implementation. The *amnesty* criticism, in turn, was related to Art 17 § 10 of the bill, which waived the obligation of sharing the benefits of the commercialisation of products resulting from genetic access that occurred prior to 29/06/2000⁸¹. Regarding the argument that the government had been *captured* by private groups, socio-environmentalists pointed to the fact that the bill originally imposed a limit on benefit sharing of 1% of annual net revenue of the product in question (Art 20), but allowed this to be reduced down to 0.1% through an exclusive agreement between the industry and the government “in order to ensure the competitiveness of the sector in question” (Art 21). Finally, it was often argued that the new law created so many restrictions and difficulties around *benefit sharing* that it actually *made it an exception and not a rule*. The group noticed, for instance, that the bill proposed that users of the genetic resources can choose whether they want to practice monetary or non-

⁸¹ This article was later vetoed by President Dilma Rousseff.

monetary benefit-sharing and are also entitled to select the destination of non-monetary contributions.⁸²

Among the responses of the administrative rationalist coalition to the socio-environmentalists was an emphasis on *national development* as well as the need to be quick in the approval of a new law, which was coded as the *managerialist argument*. Mentioned exclusively by members of the government, the idea behind *national development* was that a new self-declaratory system to be established under the new legislation would “provide much more security and increase the speed of the process of economic development” of the country, and that this law is justified by the fact that “no country renounces its capacity to grow”. This was closely associated with the administrative economic rationalist idea that barriers to the success of the bio-industry should be removed by the government. This argument was used five times. Additionally, members of the administrative economic rationalist coalition also maintained that more consultation would have ossified the process and that it would take too long time for the indigenous and traditional communities to be officially instructed and consulted on the issue through public consultations, as they had very little technical knowledge on the topic. The argument that the process be fast and efficient, coded as the *managerialist argument*, occurred seven times.

The arguments of the neo-developmental coalition were not counted as systematically, however, as all the above-described arguments, because they came mainly from two unrecorded interviews (as requested by interviewees 12 and 59) and from the tracing of the changes proposed by members of the Congress to the initial bill. The main argument of this third group was that the risks of altering the law to better regulate and facilitate access to genetic resources and traditional knowledge for the bio-industry would have negative effects for agriculture, because, in this sector, Brazil is a user of foreign genetic resources (rather than a provider, as in the case of the bio-industry). Therefore if benefit sharing became a regulated practice, there would be more burdens than benefits for this sector.

⁸² The non-monetary contribution do not have to go to conservation units or traditional or indigenous communities but can go, for example, to the “provision of human resources for themes related to conservation and the sustainable use of genetic resources or of associated traditional knowledge” (Art. 19, II, e) or to the consolidation of “infra-structure for research and technological development” (Art. 19, § 3; IV) within the industry itself.

This general point was specified in two main demands that were identified through the tracing of the changes made to the bill by the National Congress. First, by the request to *prevent agricultural products from bearing any of the costs that might come about as a consequence of the new law*, something that was pursued during negotiations and successfully achieved by the neo-developmental coalition through the addition of Article 9, § 3⁸³ to the bill, which determines that access to traditional, native or locally-adapted genetic resources for agricultural activities has to be considered to be access to traditional knowledge of ‘non-identifiable origins’, thus waiving the need for prior informed consent in the case of access to genetic resources for agricultural purposes. In this article of the bill, it was also established that any genetic resource that is used economically for agriculture is automatically considered to have non-identifiable origins and is thus excluded from the requirement of prior informed consent. Additionally, Article 10 – V states that indigenous and traditional communities as well as “traditional farmers” who “create, develop, retain or conserve traditional knowledge” are entitled to “freely use or sell products that contain genetic resources or associated traditional knowledge” as long as the stipulations of other agricultural regulations are observed. These provisions, therefore, safeguarded the agricultural sector from any obligations towards traditional or indigenous populations who might withhold the knowledge of the genetic resources they are using.

Second, the neo-developmental group demanded that *the definition of the recipients of benefits include farmers (large and small)* in addition to traditional and indigenous communities. This was achieved during negotiations through the inclusion of the expression ‘traditional farmers’ among those actors considered by the bill to be holders or providers of traditional knowledge. Thus, as opposed to the initial version of the bill, which only considered indigenous and traditional peoples as traditional knowledge holders, the Lower Chamber’s version allowed farmers to be

⁸³ “§ 3º Access to genetic resources of local, traditional or native varieties or locally-adapted or native species for agricultural activities comprises access to the non-identifiable traditional knowledge that originated the variety or species and does not depend on the previous consent of the indigenous population, traditional community or traditional farmer who creates, develops and detains or conserve the variety or species”. (Translated by the author, see original below).

“§ 3º O acesso ao patrimônio genético de variedade tradicional local ou crioula ou à raça localmente adaptada ou crioula para atividades agrícolas compreende o acesso ao conhecimento tradicional associado não identificável que deu origem à variedade ou à raça e não depende do consentimento prévio da população indígena, da comunidade tradicional ou do agricultor tradicional que cria, desenvolve, detém ou conserva a variedade ou a raça.”

included among the holders of traditional knowledge. Additionally, instead of defining ‘traditional farmers’ as small and family farmers, only the approved definition of a ‘traditional farmer’ was allowed.⁸⁴ The process through which the neo-developmental coalition had its demands represented in the bill will be clarified in section 6.4.2, which provides a more dynamic perspective of the negotiations.

6.3.3 Narrative Analysis

This subsection complements the argumentative mapping through the method of narrative analysis, which follow the strategies proposed by the Narrative Policy Framework (NPF) (Jones and McBeth, 2010). For the NPF, narratives are understood as “a story with a temporal sequence of events unfolding in a plot that is populated by dramatic moments, symbols, and archetypal characters that culminates in a moral to the story” (Jones and McBeth, 2010, p.329). Thus, the narrative analysis identifies four fundamental elements in the arguments of a debate: 1) the setting or the basic assumptions, which have already been analysed in the previous section through the identification of the discourse or view of the world epitomised by the arguments; 2) characters – who can be specified as victims, heroes and villains; 3) a plot – advancing causal mechanisms and the relationship between the setting and the characters, which has also been described in the previous analysis of specific arguments, and 4) a moral of the story – corresponding to the specific policy solution, goal or proposed policy change being advanced by the narrative (Jones and McBeth, 2010). Thus, because the settings and main plots of each of the narratives were already identified through argumentative mapping, this section will focus only on the analysis of characters and the moral of story of each of the three narratives.

Regarding the analysis of characters in neo-developmental arguments, the most clearly identified villain was the Ministry of the Environment, which was seen as paying no heed to the concerns of the agri-business sector and portrayed as a threat

⁸⁴ According to the definition of the final law, a “traditional farmer” is a:

“natural person who uses traditional, native or locally-adapted species, keeping and conserving genetic diversity, including family farmers” (Art 2, II, translation by the author).

to its interests, both in domestic and international negotiations (interview 59). Allegations that the MMA had never taken into consideration the Brazilian agri-business activities while negotiating national and international regulations on ABS were made by members of this group during interviews, and opposition to, and distrust of, the MMA was demonstrated. One interviewee from this coalition even described the relationship between the Ministries of the Environment and Agriculture as a “chat between the deaf” an expression meaning that the parts were not actually listening to and considering the positions of each other (interview 59). The heroes, and also the victims, according to this narrative were MAPA and agri-business, who were portrayed as those really considering the “economic reality of the country” and suffering the consequences of the MMA’s reckless behaviour (interview 59). The ‘moral of the story’ or policy solution proposed by this group was that the bill should be altered to exclude their potential negative effects on the use of genetic resources for agriculture.

As mentioned in the previous section, the socio-environmentalist coalition opposed the bill mainly on the claim that the procedures adopted for the drafting of the bill were illegitimate, secret and non-inclusive of traditional and indigenous communities. This coalition portrayed indigenous, traditional communities and family farmers as the main victims of the new regulation. The heroes were the people defending the interests of this vulnerable group (such as NGOs or scientists) and the villains were the government in general, the industry, and the representatives of agri-business, or, in other words, all parties that were trying to approve the new regulation without sufficiently involving indigenous and traditional communities. The ‘moral of the story’ for this coalition, on the other hand, can be summarised as a request for the participation and inclusion of indigenous and traditional communities in the process of drafting the new law. This entails, moreover, that more time should have been allowed for official consultation and inclusion of these groups.

Finally, the administrative economic rationalist coalition, which proposed and strongly supported the approval of the bill, differed from the other two because of its focus on demands around reducing red tape, facilitating access to genetic resources for the industry and researchers, and establishing a clear and more enforceable kind of regulation that was not an impediment to research and to the economic use of

biodiversity. The narrative presented by this very cohesive and organised coalition portrayed the bio-industry as the main hero of the country, able to advance technologies and research and with the potential to become a national champion (Rousseff, 20/05/2015). A parallel hero in this narrative was the Ministry of the Environment, described as a more modern, efficient and technical institution than it had been in the past, and as a ministry that encourages and facilitates the economic development of the country through its support for the highly-promising bio-industry (interview: Minister Izabella Teixeira, 20/10/2014). The villains in this narrative were those trying to add more complexity to the authorisation process (by adding requirements such as the prior informed consent of indigenous and traditional communities and the need for preliminary authorisation for access) or to impede the approval of the law, namely, critical NGOs and representatives of indigenous and traditional communities who wanted a formal consultation to take place. As an example of this vilification, Izabella Teixeira, then Minister of the Environment, declared in a public speech at the launch of the new law that President Rousseff had asked her “to get rid of the bureaucracy and to get rid of the people” in the approval process of the new law in order to bring “people” back on board in “a national policy of biodiversity that dialogues with sustainable development” (Teixeira, 20/05/2015). Finally, the victims in this narrative were mainly the bio-industry and researchers who needed to overcome so many bureaucratic hurdles to get access requests approved. At the same time, the losses of these two actors were also presented as a loss to Brazilian society and to traditional and indigenous communities, which could not claim any benefits if bureaucratic demands were so complex that they impeded access from being granted (interview 12, 21).

According to this latter perspective, the ‘moral of the story’ was that the law should be altered as soon as possible because Brazil would be at risk of missing out on important opportunities in terms of the international competitiveness of its bio-industry (if the previous burdensome law were to be maintained for much longer). This reasoning was motivated by the entry in force of the Nagoya Protocol in 2014, and the consequent likelihood that other countries would start regulating the issue and providing international competitors with less regulatory burdens than would be the case in Brazil if the previous regulation was maintained. This point is further discussed and clarified in section 6.4.

Table 25 - Narrative analysis

Setting	Victims	Villains	Heroes	Main plots	Moral of the story
Neo-developmentalists	Agricultural producers, Brazilian population (due to risks to economic stability)	Environmentalists, negotiators of the Nagoya Protocol (Ministry of the Environment, IBAMA), legal insecurity	Ministry of Agriculture, Agricultural producers	<p><i>“We cannot permit Ibama, which is very distant from the productive chain, to be in charge of monitoring research on agriculture, cattle ranching and forestry. It has to be the Ministry of Agriculture” (Moreira, 2014)</i></p> <p><i>“Brazil hasn’t adhered to the Nagoya Protocol because of the legal uncertainties about the matter. Part of Brazilian society is afraid of the possibility that royalties will have to be paid by the agricultural sector regarding commodities (soy, corn) which are of enormous importance for Brazilian exports” (Alves, Nov 2014)</i></p> <p><i>“Brazil has imposed its environmental model on Nagoya, but it never took into consideration our economic reality, based on commodity exports. Our agriculture is all based on exotic species but this fact was never considered [by the Ministry of the Environment in the negotiations of the NP]. It has always been a ‘chat between the deaf’” (interview 59, 05/12/2014)</i></p>	The law can be altered, so long as the agriculture sectors’ interests are taken in consideration
Socio-environmentalists	Indigenous and traditional communities, family farmers	Ministry of the Environment, industry, rural caucus	Those defending the interests of indigenous and traditional communities	<p><i>“And what happened is that the bill was totally based on the demands of the industry, it had incorporated nothing of what we had suggested. Instead, traditional peoples and communities lost very important rights which they had conquered through CBD. The bill itself goes against the CBD, which is absurd” (Interview 5, 19/09/2014)</i></p> <p><i>“I see no other choice but to withdraw this proposal from the agenda to allow time for us to have this debate. We know the importance of this for the development of this country, but we cannot approve a proposal that we did not debate and that has identified serious problems harming our segment” (Belo, President of the National Council of Extractive Populations, Congress Public Hearing 11/11/2014)</i></p> <p><i>“For me, as a biomedical researcher, [the bill] is excellent. However, as the president of a society which includes every area of knowledge, I am concerned with questions about traditional communities.” (Nader, Helena, SBPC, interview with the website Agencia Gestao CT & I, –Melo, 2015, 28 April)</i></p>	The law can be altered as long as indigenous and traditional communities are involved and their opinions are considered in the process

Administrative economic rationalist	Industry, scientists, Brazilian population, traditional and indigenous communities	Those willing to add red tape to the ABS process or to impede the approval of the bill	Ministry of the Environment, industry	<p><i>“Changing this regulation is urgent. We are chasing a debt that has perpetuated itself for 14 years and has been delaying scientific progress” (Diaferia, Adriana – Congress Public Hearing, 11/11/2014)</i></p> <p><i>“There is a phenomenon within the Ministry and people will only perceive it when we leave. They will see that there are very aggressive agendas, new guidelines, which are on the edge, for example, regarding access to genetic resources. For us to write a bill on access to genetic resources we have not met with our troops [traditional constituency], we met with the industry and commerce, science and technology and with all their supply chains and we spent three years seriously negotiating the Project of Law. And then if you compare [this group of negotiators] with the traditional ‘biodiversity gang’ you will notice that we opened space to the bio industry of this country... [the Ministry never experienced such a thing” (Interview, Izabella Teixeira – Minister of the Environment, Brasilia, 30/10/14)</i></p> <p><i>“We have all the conditions to lead in the area of biotechnology. To lead, we have approved this law, which creates the adequate environment. Because I’ve learnt that regarding chemical pharmaceutical products we are still behind, but in biotechnology, I have been told, we have the conditions to lead. The unequivocal benefit of this new legislation is to simplify, the word is simplification, it simplifies because it removes gaps and inaccuracies” (President Rousseff, launch event for the new law, 20/05/2015)</i></p> <p><i>“The idea of the new law is that everyone benefits, the industry will benefit but the communities will benefit as well because access to genetic resources and benefit sharing will no longer be curtailed” (interview 21, 26/09/2014)</i></p> <p><i>“We are in a new moment for Brazil, you [referring to President Rousseff] asked me to get rid of bureaucracy, to get rid of the people. I got rid of them but now they are on board the same boat, because now we have the conditions to have a national policy for biodiversity that dialogues with sustainable development” (Izabella Teixeira – Minister of the Environment, event for the launching of the new law, 20/05/2015)</i></p>	The law should be altered as soon as possible
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Source: Produced by the author

6.4. The ACF sources of policy change

6.4.1. Internal events

As mentioned in the introduction of this chapter, four internal events were identified as relevant for regulatory change during the analysis of this case. First, the '*Novartis Scandal*' in 2000, which was a consequence of an agreement between the Swiss pharmaceutical company Novartis and a Brazilian NGO over the sending of genetic samples to Switzerland. Second, *the limits of the administrative capacity of the State* in actually enforcing the previous law, as exposed by the long-time taken for authorisation of genetic access to be issued. Third, the imposition of fines on the bio-industry and researchers for not complying with the previous ABS law that began in 2010 or, in other words, *the strengthening in the enforcement of previous regulations*. Lastly, the *entry into force of the UN Nagoya Protocol in 2014* was also identified as a crucial occurrence that reignited a sense of urgency around the drafting of a new regulation in the view of the members of the administrative economic rationalist and neo-developmental coalition.

The reason why the Novartis scandal is considered to be one of the crucial internal events that lead to the regulatory changes in 2015 is related to the nature of MP 2.186/2001 – the regulation that was issued right after the scandal and later substituted by the 2015 law. As observed in section two, the public and industry commotion generated by this event was considerable. The event was labelled as a case of 'biopiracy' by prestigious public personalities in the national media. As a consequence, the nature of the 2001 regulation reflected attempts to avoid biopiracy and restrict genetic access, rather than promoting and facilitating it (interviews 20, 21). The restrictive and bureaucratic character of the 2001 regulation was, moreover, identified as a central argument for regulatory change, as demonstrated in section two. It provided the basis for later criticisms that the law was over-burdening the bio-industry and research sectors with bureaucratic requirements and holding these back in relation to foreign organisations, which did not have to comply with such requirements. An important (although indirect) relationship can, therefore, be identified between the 'biopiracy' Novartis scandal, the overly-restrictive and bureaucratic character of the 2001 regulation and the more recent demands for regulatory change that resulted in the 2015 law.

In relation to the limits to state to actually enforce the 2001 regulation, these started to become apparent in that same year, and were only tackled around 2013, when Cgen, the institution in charge of the authorisation of access to genetic resources was reorganised. Actors reported that until 2013, access authorisation would take up to one-and-a-half years to be issued, and researchers could not begin their research until authorisation had been given (Natura representative, Folha de Sao Paulo, 10/03/15). This fact, added to the requirement that companies or researchers obtain proof of prior and informed consent from indigenous and traditional communities before they submit an authorisation request, increased the costs associated with genetic resource access and fostered opposition against the 2001 law.

The Novartis scandal and the limits of the state's administrative capacity to issue authorisations for genetic access were not, however, the only reasons motivating regulatory change demands. Following a tradition of regulations being very strict on paper but much less so in terms of enforcement, the stringency and extensive paperwork requirements of the 2001 regulation did not motivate action until signs were given by the government that the law would actually be enforced. These signs came from what will be named the *fining event*, in reference to the fines that began to be issued by IBAMA in 2010 to companies that were not compliant with the 2001 regulation. The fining event made parts of the bio-industry aware of their duties in relation to the previous ABS law, which had often been ignored (interview 6). This event was, moreover, also identified by interviewees as the origin of the formation of the bio-industry/government administrative economic rationalist coalition (interviews 6, 8, 54). According to a member of Grupo FarmaBrasil, for example, the industrial mobilisation that resulted in the 2015 law began in 2010 when, after the fines, the group began to mobilise other entities to jointly draft a new bill. Grupo FarmaBrasil contacted the Ministry of the Environment and nine other entities, which began to have periodic meetings until the bill was finalised (interview 6). The fines issued by IBAMA were, therefore, an important internal event that raised awareness about the requirements of the previous regulations among members of the bio-industry and catalysed them to mobilise for regulatory change.

The fourth internal event that was identified during interviews as important for the 2015 ABS regulatory change was the *entry into force of the UN Nagoya Protocol in 2014*. This event was identified as crucial for reigniting and

increasing the urgency around the approval of a new regulation, particularly for its role as a catalyst for other countries to begin regulating the issue. The fact that other countries would start to regulate the topic increased the uncertainty of the agriculture sector around the impacts of other countries' regulations on Brazilian commodity exports. According to the interpretation of members of the neo-developmental coalition, if other countries regulated the issue and Brazil continued with the previous law, agri-business would have been required to share the benefits from the use of genetic resources of foreign origin (such as soy) with foreign countries, adversely affecting commodity prices. Therefore, a new internal law protecting the sector against this possibility needed to be approved before the protocol could also be ratified by Brazil (interview 59).

Another effect of the entry into force of the Nagoya Protocol that motivated the new law to be approved was related to the increase in business uncertainty it generated for Brazilian bio-industry (administrative economic rationalist coalition). The fact that the issue gained more international visibility and started to be regulated by other countries increased the risks associated with not following the previous law for the bio-industry. This can be attributed for example to the increased likelihood of international campaigns of 'naming and shaming' by international NGOs, and also by the competition represented by companies which followed less strict regulations in their home countries. It is maintained, therefore, that the approval of the Nagoya Protocol was another crucial internal event that catalysed the revision of national laws that culminated in 2015 with the approval of Law 13.123.

6.4.2. Negotiated agreement

Negotiated agreement is defined in the ACF literature as "agreements involving policy core changes [that] are crafted among previously warring coalitions" (Sabatier and Weible, 2007, p. 205). This case qualifies for the analysis of negotiated agreement because divergences between coalitions preceded the beginning of the negotiations of the 2015 law and were identified during interviews as having existed at least since the beginning of the negotiations of the Nagoya Protocol, due to divergences between MAPA and MMA on the need to regulate the issue (interview 55). Additionally, the first attempts to regulate the topic in the Congress – beginning in

1995 with the efforts of members of the socio-environmental coalition – and the production of four different regulations that were never approved, attests to the longstanding contentiousness of the issue. As opposed to what was identified in the previous two case studies, negotiated agreement was found to occur in this case, but only between two out of the three coalitions (between the neo-developmentalists and the administrative economic rationalists).

Following the procedures adopted for the analysis of negotiated agreement in the other case studies, this analysis was based on the identification of 1) *how often coalitions seek to influence decisions through instruments that are not based on personal interaction and negotiation* (such as vetoes, amendments and judicial actions). It is assumed that the higher the frequency of recourse to these non-agreement-based mechanisms of negotiation, the lower the level of negotiated agreement. 2) *the number of venues used by actors during the negotiation process*. The assumption is that the higher the number of venues used for negotiation, the lower the level of negotiated agreement. The logic underlying this assumption is that if coalitions carry out the negotiation within specific institutional venues (for example, within the National Congress or within specific commissions within the National Congress) and do not seek other venues, such as courts, other agencies or the media, that means that actors consider it legitimate to continue as the sole forum for debates because they feel that their positions are being heard. This means, therefore, that collaboration is likely to be happening (Weible, Pattinson and Sabatier, 2010). Alongside these two criteria is 3) *the occurrence of ‘devil shift’*, measured through *the identification of personal attacks and offenses and the use of pejorative terms to refer to the other coalitions* during debates. The phenomenon of ‘devil shift’ refers to situations in which “actors tend to view opponents as being more powerful than they actually are” (Leach and Sabatier, 2005, p. 494) and exaggerate their maliciousness (Jenkins Smith *et al.*, 2014, 45%; Sabatier, Hunter and McLaughlin, 1987).

First, the use of non-negotiation-based mechanisms was limited, particularly regarding the neo-developmentalists and the administrative economic rationalist coalitions, which underwent a clear process of negotiation and subsequent convergence (explicitly acknowledged by actors during interviews). As attested by a member of the industry-government group, initial disagreements with the agribusiness sector were due to “differences of economic model” between the agribusiness and

biotechnology industries. These differences were addressed after the biotechnology industry understood agribusinesses' "economic logic" and, as reported by one of the interviewees, both sides were ultimately able "to converge on a unified law" (interview 8). Additionally, the administrative economic rationalist group did not oppose the changes proposed by the neo-developmental group in Congress through vetoes or any other institutional mechanism, they simply requested that several items be maintained in the new regulation (interview 12). Finally, the few vetoes made by the president after the bill was voted on in Congress were mostly related to assurance of the competence of the executive power in the authorisation and implementation of the law rather than to the substance of the law itself (veto message 147⁸⁵). Representatives of the indigenous and traditional communities, on the other hand, were very vocal in their criticisms of the drafting procedures for the new law, which restricted their participation. These representatives did not demonstrate, however, sufficient power and cohesiveness to decisively block or alter the course of the negotiations through vetoes, judicial action, the passing of legislative amendments and other institutional mechanisms of negotiation. From this, it is concluded that direct negotiation and convergence occurred in this case, but only in relation to the two most powerful coalitions, namely the administrative economic rationalists and the neo-developmentalists.

Second, regarding the number of venues used by actors, the analysis revealed that debates remained restricted to certain, specific circles in the Ministry of the Environment and in the National Congress. The initial proponents of the law were part of a bio-industry group gathered by Grupo FarmaBrasil, which had periodic meetings with the Ministry of the Environment and to which different groups (such as selected representatives of traditional groups) were discretionarily invited (interview 8). The venue of negotiation, however, did not change, for example, to forums previously established by indigenous groups or other venues. Representatives of NGOs focused on Amazonian indigenous groups (such as *Grupo de Trabalho da Amazonia – GTA*) have reported, moreover, to have learned about the debates on the new bill by accident and of having been impeded from contributing through the mobilisation of other venues (interview 5). When the bill was sent to be voted on by the Lower Chamber, in turn, it was discussed by a special commission, which had been created

⁸⁵ <http://www2.camara.leg.br/legin/fed/lei/2015/lei-13123-20-maio-2015-780834-veto-146993-pl.html>

specifically to debate the topic. There were also public hearings in which the 'urgency regime' (*regime de urgência*) of the bill was criticised. This regime meant that the bill was sent to the Congress but was not debated by more than a single commission of the Lower Chamber, as was the case in the other case studies analysed in this thesis (such as forestry).

Additionally, although representatives of indigenous and traditional communities had been previously officially involved in the drafting of other bills through formal consultations promoted by the Ministry of the Environment (interview 26), the decision to follow different procedures and only select a few representatives of the group to participate in closed meetings in the Ministry of the Environment was made explicitly in order to accelerate the process (interview 26, 20). There were not, therefore, several venues of negotiation in the debates preceding the approval of the 2015 law. This fact indicates that the groups that had sufficient resources to alter the venue of negotiations (in this case the neo-developmentalists and administrative economic rationalist groups) considered the venues sufficiently legitimate and were satisfied with the level of negotiation occurring within them.

Finally, regarding the occurrence of devil shift, personal accusations and offences were not identified among members of the neo-developmentalists or the administrative economic rationalist coalitions (interview 8, 12, 54). As already mentioned, members of the bio-industry referred to previous disagreements as a matter of understanding each other's 'business models' and never publicly opposed the changes proposed by the neo-developmentalists group (interview 8). On the other hand, members of the socio-environmentalist coalition did not demonstrate a high level of trust towards either of the other two coalitions. As previously mentioned, they accused the industry-government coalition of secrecy in the drafting of the bill and of purposefully impeding their contributions and participation even when they actively tried to contribute (interview 5). They also disagreed with the efforts of the neo-developmentalists coalition to include large farmers as recipients of shared benefits and explicitly accused the other coalitions of having "ignored" them (Belo, 11/11/2014, Lower Chamber News Agency). The existence of trust between coalitions in this case was, thus, partial, and only observed between the neo-developmentalists and the administrative economic rationalist coalitions.

As observed in chapter two, negotiated agreements are associated with the occurrence of a hurting stalemate, defined as a situation in which there are 1) *consequential incentives* – namely, situations that present issues as salient to participants and the timing and pressure for a solution as ripe, 2) *interdependence* among actors and, 3) *uncertainty* (Emerson, Nabatchi and Balogh, 2011). It is associated with the occurrence of learning among coalitions. The analysis of this case provides support to these theoretical predictions.

The entry into force of the Nagoya Protocol generated at least three types of *consequential incentives* for negotiations between administrative economic rationalists and neo-developmentalists to take place. First, the agricultural sector was threatened by the possibility that, when other countries started to regulate the sector, they would have to share the benefits from the use of foreign genetic resources in agricultural production. They were, therefore, motivated to participate in the drafting of the Brazilian law in order to avoid this possibility. Second, it was predicted by actors in the debate that the entry into force of the protocol would motivate other countries to regulate the issue. The anticipation that other countries could potentially adopt less restrictive and less bureaucratic ABS regulations caused concerns related to international competition among members of the Brazilian industry and government, especially as the government saw huge competitive potential in the Brazilian bio-industry (Rousseff, 2015).⁸⁶ Similarly, the heightened international visibility of the issue increased business uncertainty and risks of ‘naming and shaming’ for companies which were not following the previous law. Finally, as demonstrated by Eimer and Donadelli (2016), negotiations around the international regime of patent regulations resulted in unenforceability (due to the unacceptance of several developed countries) of the requirements of prior and informed consent from indigenous and traditional communities for the registration of new patents. If Brazil were to strictly advance such requirements in its national regulations it would, therefore, suffer competitive

⁸⁶ “We have all the conditions to lead in the area of bio-technology. To lead, we have approved this law, which creates the adequate environment. Because I’ve learnt that in the chemical pharmaceutical products we are still behind, but in bio-technology, I have been told, we have the conditions to lead. The unequivocal benefit of this new legislation is to simplify, the word is simplification, it simplifies because it removes gaps and inaccuracies” (President Rousseff, launch event for the new law, 20/05/2015)

disadvantages internationally. This was a risk acknowledged both by the bio-industry and the government (interview 2; Rouseff, 2015).

Interdependence among actors, in turn, was high, at least between the administrative economic rationalist and the neo-developmental coalition. The administrative economic rationalist coalition was dependent on the approval of the bill by the Congress, which had a strong presence in the neo-developmental coalition. The neo-developmental coalition, in turn, depended on the negotiations and on the bill proposed by the other group to avoid that the ratification of the Nagoya Protocol would have any adverse effects on the use of foreign agricultural products. Both, therefore, perceived the other coalition's interests as useful for the advancement of their own, which motivated negotiation. *Uncertainty*, lastly, was high, both regarding the effects of the entry into force of the Nagoya Protocol for the agricultural sector (and the risk of affecting the price of the export of commodities) and for the bio-industry (with the risk of more international competition).

In summary, the analysis reveals that negotiated agreement occurred in this case, even if it was restricted to members of the neo-developmental and the administrative economic rationalist coalitions. Regarding the inclusion of the representatives of indigenous and traditional communities and the demands of the members of the socio-environmentalist coalition, little negotiated agreement took place. As will be demonstrated in the next section, learning also took place, at least between these two coalitions and in a less strict sense than is predicted by the definitions of policy-oriented learning given by the ACF.

6.4.3. Policy-oriented learning

Policy-oriented learning refers to “relatively enduring alternations of thought or behavioural intentions that result from experience and/or new information and that are concerned with the attainment or revision of policy objectives” (Sabatier and Jenkins-Smith, 1999, p. 123). Similar to the analytical procedure adopted in the other empirical chapters, this chapter will focus on three observable implications of the relevance of learning for policy change, which are: 1) *heightened public and political attention to technical information*, 2) *mobilisation of coalitions to exploit or exchange technical information*, or in other words, *the occurrence of ‘analytical*

debate' and, 3) *change in the content of policy or regulations* (for the justification of the choice of these three observable implications see chapter 2, section 2.3). All three observable implications are considered necessary to attest the relevance of learning in processes of policy change. It shows that, although scientific evidence and the participation of scientists did not play a large role in the interactions between coalitions, learning and convergence of policy proposals occurred through 'elite networking', namely "an identifiable elite bound by knowledge and expertise of a common policy problem and a shared concern for its resolution" (Bennett, 1991 p. 224). The shared intention of neo-developmentalists and administrative economic rationalists to establish a new regulation and their capacity to be 'bound by knowledge and expertise' made it possible for each side to become aware of the other's concerns, utilise their own technical knowledge in amending the original regulatory proposition and promote its adoption.

First, once the Nagoya Protocol entered in force, the overall attention paid to the topic of ABS regulation increased, with both the bio-industry and agricultural sector fearing the consequences of international regulation of their sector. *Attention to technical information*, on the other hand, also increased, but technical information was provided by actors from the coalitions themselves, instead of by scientists or external policy analysts as predicted by the ACF. The role of scientists as providers of technical information across the entire process was, thus, not found to be important. No scientific studies of economic impacts were produced or discussed during the drafting or negotiation of the new regulations. When scientists explicitly participated in the debates of the National Congress, they participated as an interest group that wanted to reduce red tape in the approval of research involving genetic material, not as a group providing technical information.

The analysis of the National Congress News Agency articles revealed only three instances in which there was a direct participation by, or reference to, scientists in the debates in the Congress. Two were from Helena Nader, the president of the Brazilian Society for Scientific Progress (SBPC). Her main arguments were that the emergency character of the bill should be removed to allow for more debate and participation by the scientific community and other social groups. She also defended the idea that the Council in charge of the approval of the requests to make use of genetic resources (Cgen) be reorganised to become more inclusive, guaranteeing

participation and voting rights to researchers, indigenous peoples and industry groups, and not only to members of the government as was previously the case. She also argued for indigenous peoples to have the right to represent themselves in the discussions and suggested that the research request registrations should not be entirely considered classified so that the process is more transparent (see lines 1 and 2 of table 26). Finally, 'specialists' are mentioned by the National Congress News Agency to be supporting the new law in terms of its advances in de-criminalising and reducing red tape around scientific activities (line 3, table 26). This argument, although not specified in the texts analysed, was found to be considerably close to the perspective of the Ministry of Science and Technology (CNPQ) and of the Embrapa researchers, as revealed by interviews (interviews 20, 54). Scientists were, therefore, divided between the positions of either accelerating or allowing more time for the debates about the bill and, overall, did not contribute with technical information, but only with their opinions as coalition members.

The political attention paid to technical information, on the other hand, was assessed through the analysis of the use of scientific/technical arguments by politicians. However, because scientists did not contribute with technical information, there was no opportunity for politicians to use technical contributions from that group. The only mention by policy-makers of the arguments of scientists was found in a reference made by Deputy Luciana Santos (PcdoB - PE) (Lower Chamber News Agency, 06/11/2014). This reference did not relate, however, to technical/scientific facts but only to the position of the SBPC regarding the low percentage of the profits that was being used to calculate the amount of benefit sharing and to their view that benefit sharing should not only apply to final products. It can be concluded, therefore, that because scientists did not participate in the debate as providers of scientific information but only as an interest group, policy-makers could not rely on information provided by them to advance their positions.

These findings about the participation of scientists do not mean, however, that there was no *analytical debate* among coalitions. This analysis identified at least two main points at which analytical debate occurred between the neo-developmental and the administrative economic rationalist coalitions in this negotiation process. First, there was a debate on which types of genetic resources should be considered in the new legislation. The risk here, which was avoided by the

neo-developmental coalition, was that the new regulation would imply benefit sharing for the use of foreign agricultural species such as soy (interview 12). Another empirical point on which there was analytical debate focused on specific technical points in relation to most sensitive points of the productive chain for each industry. While the bio-industry did not want the initial links of the production chain, namely the research and development stage, to be impacted, agri-business was more concerned about the impacts of benefit sharing in the later stages of the productive process and preferred that the reproductive material (such as seeds) be taxed instead of the final products. Once both coalitions learnt from each other about their respective positions, preferences and exceptions were agreed regarding agricultural products and the divergence between both coalitions ceased to exist (interview 8, 12). There was, therefore, analytical debate, at least regarding these two specific points, even though neither scientists nor external policy analysts were directly involved.

Finally, after the bill was sent by the executive government to the National Congress, extensive *changes in the content of the bill*, particularly concerning the exceptions created for agricultural products were made. As mentioned in the section 6.3.1, these changes ranged from including 'traditional farmers' as recipients of benefit sharing to the removal of agricultural products from the list of products that require prior and informed consent to be given before access to traditional knowledge is permitted. The acknowledgement by members of the administrative economic rationalist coalition that these changes were a result of learning about the agribusiness 'business model' was considered sufficient evidence of learning between this coalition and the neo-developmental coalition (interview 5). The learning that was found to take place between the neo-developmental and the administrative economic rationalist coalitions was, however, based on evidence provided by members of the pharmaceutical and agri-business industries themselves and did not explicitly involve independent technical studies. This provides reason for a revision of the concept of 'policy-oriented learning', which should also consider the role of *elite networking* as a factor that leads to policy change.

Table 26 - Participation of scientists in Lower Chamber debates

	Date	Scientist – organisation	Claim	Predominant coalition alignment
1	July 2014	Helena Nader (President of the Brazilian Society for Scientific Progress – SBPC)	“The emergency character of the bill should be removed. The negotiation process should allow for public hearings to take place, with the participation of the scientific community and of other representatives of social groups impacted by the issue in order to allow for a more careful analysis of the bill and to improve it.”	Socio-environmentalist
2	Nov 2014	Helena Nader (President of the Brazilian Society for Scientific Progress – SBPC)	<p>“We defend the idea that representatives from all different relevant sectors – producers and users – participate in the Cgen, have their voice represented and have the right to vote: researchers, indigenous peoples, industry groups. Cgen has to work as an interest mediation institution and provide effective social control over the activities of the Council and of the use of genetic resources”.</p> <p>“SBPC also proposes that indigenous and traditional communities personally represent themselves in the defence of their interests, without the need for intermediaries. Our organisation criticises the exemption of benefit sharing for micro and small companies as provided for by the bill”.</p> <p>“There should not be excessive secrecy as proposed by the bill. The text of the bill determines that information provided by companies and researchers in their preliminary registrations for research should be made secret. We can define what is to be classified and what is not in order to assure more transparency.”</p>	Socio-environmentalist
3	June 2015	‘Specialists’	“One of the advances of the new law was the de-criminalisation of scientific activities. According to the legislation previously in force, research conducted without the authorization of Cgen was classified as bio-piracy. Because the authorisation process is slow, many scientists used to work illegally.”	Administrative economic rationalist

Source: produced by the author

Table 27 - Use of scientific information by politicians in Lower Chamber debates

Date	Actor using the information	Source of information	Claim	Alignment of the policy-maker
Nov 2014	Federal Deputy Luciana Santos (PcdoB - PE)	The scientific community	“The scientific community has criticised the low percentage of royalties to be charged to those who manufacture products originating from biodiversity research. (The bill proposed the payment of 1% of the net profit attributed to a product). Scientists also disagree that only the final products should be eligible for benefit sharing, because sometimes intermediary products are also commercialised.”	Socio-environmentalist

Source: produced by the author

6.5. Conclusion

This chapter presented the history of ABS regulation in Brazil, and focused on the main coalitions, narratives and the process of negotiation that preceded the regulatory changes that occurred in Brazilian ABS law in May 2015 with the approval of Law 13.123. The main goal was to identify the main sources of this regulatory change. The analysis identified three main coalitions. The first coalition displayed an administrative economic rationalist view of the world and was composed of several members of the Brazilian bio-industry, by the Ministry of the Environment, Ministry of Science and Technology and Ministry of Industry and Foreign Trade and was not only strongly supportive of the new law, but was the group that initially proposed it. The second coalition held a neo-developmental view and was composed of the Ministry of Agriculture and representatives of the rural caucus in the National Congress (which favours the agri-business sector). This coalition initially opposed the approval of the bill but, after negotiation and amendments to the first proposal in the National Congress to protect the agriculture sector, they became supportive of its approval. Finally, the socio-environmentalist coalition, composed of representatives of traditional and indigenous communities, NGOs and members of the Congress, opposed the 'hasty' approval of the law and demanded more time and a more inclusive debate before approving the law. Therefore, although members of this group were, in principle, supportive of the reform of previous regulation, they opposed the proposed bill due to the non-inclusive procedures used by the administrative economic rationalist coalition in the drafting of the law and also because of specific points considered to be disadvantageous to the interests of the group. Sectors of the scientific community (such as the SBPC) also supported the demands of the socio-environmentalists.

Through the analysis of the history of the regulation and policies of this subsystem, this chapter has identified four internal events considered relevant motivating factors of regulatory change. The first internal event found to be relevant to the 2015 regulatory changes, although in a more indirect manner, was the Novartis scandal. After an agreement between Novartis and a Brazilian NGO was categorised as an act of 'biopiracy' in the media, the government responded with a regulation aimed at restricting access to genetic resources. The draconian nature of the regulation that

emerged after the scandal motivated opposition by researchers and members of the bio industry and provoked a push for a new law. Second, the limits of the administrative capacity of the state that until 2013 took approximately one-year-and-a-half to issue genetic access authorisations fostered discontentment with the previous regulation, particularly among the bio-industry and researchers. Third, the decision by IBAMA (the enforcement agency of the MMA) to begin imposing fines on the bio-industry and researchers in 2010, due to the non-observance by these actors of the authorisation procedures stipulated by the previous regulation generated further opposition to the 2001 regulation. Finally, the entry into force of the Nagoya Protocol in 2014 stirred fears in the agribusiness sector that they would be required to share benefits for exporting commodities and also raised concerns in the bio-industry and government related to international regulatory competition (i.e. if other countries regulated the issue in a less restrictive way, the Brazilian bio-industry would be at a comparative disadvantage) and business risks. The protocol, therefore, catalysed recognition of the previous regulation as a problem by a greater proportion of society and sparked the actual negotiations.

In terms of relevant external events, the strength of the rural caucus in the National Congress, similar to the other two cases, figured prominently in the analysis of this case. Although negotiation with the socio-environmentalist coalition was not fundamental for the approval of the law, there had to be agreement between members of the neo-developmental coalition (largely represented by the Congress' rural caucus) and members of the administrative economic rationalist coalition who originally proposed the bill.

Finally, the analysis of whether negotiated agreement and policy-oriented learning took place revealed that, in contrast to the other two cases in which these two sources of policy change could not be identified, in this case they occurred. Their occurrence was, however, partial and took place only between the neo-developmental and the administrative economic rationalist groups. This is explained by the importance of the hurting stalemate that emerged between these two coalitions and by the importance of 'elite networking' in allowing these two groups to share and learn about technical information provided by each group. This explains, moreover, why the negotiations and requests of these two coalitions were most successfully represented in the final law than the claims of the socio-environmentalist

group, which were consistently disregarded. In summary, this was another case in which the demands of the neo-developmental group were met. The role of negotiated agreement and learning in this process differed, however, from the other two case studies.

PART 3: COMPARATIVE DISCUSSION

CHAPTER 7 - COMPARATIVE ANALYSIS

7.1. Introduction

The aims of this chapter are threefold: firstly, to provide a comparison of the three case studies analysed in this thesis; secondly, to further advance and systematise, based on this comparative analysis, the main contribution of this thesis to the ACF literature and; thirdly, to remark on the contributions of this thesis to wider debates on Brazilian environmental regulations. After this introduction, section 7.2 provides a recapitulation of the coalitions identified in each of the case studies and analyses their patterns of success and failure across cases. This section highlights the predominance of the neo-developmental coalition across the case studies between 2005 and 2015, and puts this finding into historical perspective in order to pinpoint a rupture with the previous period, during which the predominant narrative was the socio-environmentalist. Section 7.3 analyses the narratives used by the government to legitimise this turn towards neo-developmentalism. It provides an assessment of how ideas of development for social inclusion were used to justify this rupture and avoid severe electoral consequences for the Workers' Party. Section 7.4 provides an overview of the main findings of the empirical chapters in terms of internal events. The importance of internal events in altering actors' cost-benefit calculations is evidenced by this analysis, which provides support to the claim that the ACF should more explicitly incorporate interest-based explanations (Nohrstedt, 2005; Nohrstedt, 2010; Hoberg, 1996; Hann, 1995; Ladi, 2005; Szarka, 2010; Schlager, 1995). Section 7.5 delves into the comparative analysis of the three case studies in terms of negotiated agreement. It observes that negotiated agreement only occurred in one of the three cases investigated and advances that its occurrence can be attributed to the existence of a 'hurting stalemate'. It also debates the revised definition of a hurting stalemate proposed by this thesis in light of the empirical findings, and empirically attests to the benefits of incorporating insights from the collaborative governance literature into the analysis of this concept. Finally, section 7.6 explores what can be learnt about 'policy-

oriented learning’ from the analysis of the case studies. The main remark advanced by this section relates to the importance of incorporating the role of ‘elite networking’ and of elites as providers of technical information in the ACF’s conceptualisation of learning. Section 7.7 concludes.

7.2. The Time for Neo-Developmentalism?

This section compares the composition and main positions of the coalitions identified in the case studies and provides an analysis of which coalitions were more and less successful in having their demands reflected in the final regulations of the subsystems analysed (i.e. winning and losing coalitions) between 2005 and 2015. It provides support to the claim made in chapter 3 (section 3.3) about the dominance of a neo-developmental discourse in Brazilian environmental politics since at least 2005 (see figure 13 below, which summarises the dominance of different discourses throughout history, as debated in chapter 3).

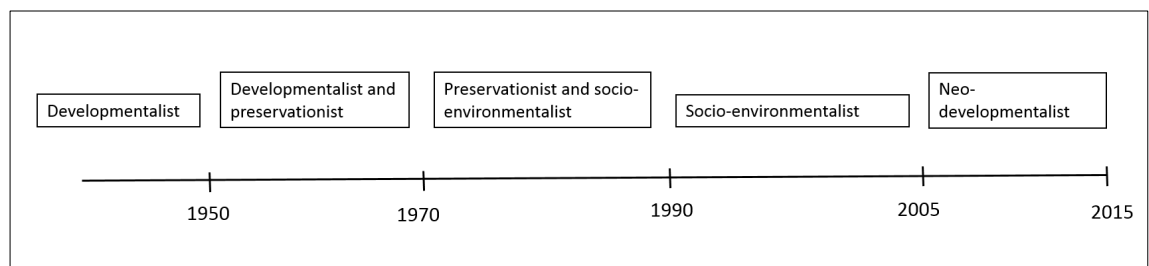


Figure 13 - Dominance of discourses in Brazilian environmental politics

Source: produced by the author

The comparison of coalitions active in the debates in each case study revealed that in each of them there were three active coalitions, some of which simultaneously incorporated more than one discourse in the period analysed (2005 - 2015) (table 28, below, provides a summary of the active coalitions in each case). In the forest case, administrative economic rationalists and socio-environmentalists formed a single coalition, and the two other coalitions were formed by neo-developmentalists and preservationists, respectively. In the pesticide case, preservationists and socio-environmentalists were in the same coalition, while administrative economic rationalists and neo-developmentalists comprised,

separately, the other two. In the ABS case, administrative economic rationalists, socio-environmentalists and neo-developmentalists formed three separate coalitions and the preservationist discourse was not used in the debate.

Table 28 - Summary of the coalitions

	Active coalitions	Main actors in each coalition	Winning coalition(s)	Losing coalition(s)
Forests	Administrative economic rationalists and Socio-environmentalists	Workers' Party, forest industry, executive power	Neo-developmentalists and of the administrative economic rationalist/socio-environmentalist	Preservationists
	Neo-developmentalists	Rural caucus, agri-business		
	Preservationists	NGOs, environmentalist caucus		
Pesticides	Preservationist and Socio-environmentalists	Civil society, social movements, Ministry of Agrarian Development	Neo-developmentalists	Preservationist/socio-environmentalists and administrative economic rationalists
	Administrative economic rationalists	Executive government ministries (agriculture, health, environment)		
	Neo-developmentalists	National Confederation of Agriculture, pesticide industry, MPs from the rural caucus		
ABS	Socio-environmentalists	Traditional and indigenous communities, NGOs, FUNAI	Administrative economic rationalists and neo-developmentalists	Socio-environmentalists
	Neo-developmentalists	Rural caucus, ministry of agriculture, agri-business		
	Administrative economic rationalists	Bio-industry and executive government (ministry of environment, science technology and innovation, Casa Civil)		

Source: produced by the author

An implication of these findings for the ACF is that actors with different core beliefs (as manifested by their narratives) can be part of the same coalition (meaning that they can adopt the same positions in the debate) when it is deemed convenient for the advancement of their interests. This finding contradicts the ACF's claim that "actors within an advocacy coalition will show substantial consensus on issues pertaining to the policy core [beliefs]" (Sabatier and Jenkins-Smith 1999, p. 124). Additionally, the fact that the same actors adopted different discourses across the

different case studies⁸⁷ provides support to the idea that actors are strategic in selecting their positions and that it might be misleading to take actors' narratives as representative of their true beliefs. These two points highlight the importance of the incorporation of 'interests' as a relevant factor, not only in the analysis of coalition formation but also in the analysis of narratives.

The comparative analysis of the three cases highlights, in addition, the recurrent success of the neo-developmental coalition in having its positions adopted in new regulations between 2005 and 2015. In the debate about the new Forest Code, for instance, the results of the regulatory change reflected the demands of the neo-developmental and of the administrative economic rationalist/socio-environmentalist coalitions and for this reason both were considered as winning coalitions. The neo-developmentalists were, however, those that had demanded regulatory reforms in the first place, and succeeded both in putting the issue on the agenda and in having several of their demands met. The other two coalitions mostly responded, to the neo-developmentalists' demands to debate the topic. Some tried to oppose any changes (preservationists) and others tried to prevent the changes from being as drastic as the neo-developmentalists initially intended (administrative economic rationalist/socio-environmentalist coalition) the latter having success.

In the pesticide case study, the neo-developmentalists were also responsible for proposing the regulatory and institutional changes in question (i.e. setting the agenda) and, although the decision about reforming the institutional apparatus of pesticide registration had not been yet approved at the time of writing, the neo-developmental coalition had had several victories with regard to the flexibilisation of pesticide control in previous regulations and were also found to have high chances of being the winning coalition in relation to the proposal of reformulating the registration institutions. Due to the analysis of previous and potential victories, therefore, they were considered the winning coalition in this case.

Lastly, in the ABS case study, the administrative economic rationalists (composed mainly of the bio-industry and the Ministry of the Environment) proposed the regulation, which was later altered according to the demands of the neo-

⁸⁷ For instance, the executive power adopted an administrative economic rationalist discourse most of the time, but in the forest case they also used socio-environmentalist arguments about the importance of protecting small farmers.

developmentalist group. Both coalitions were considered to have succeeded in having their demands included in the new regulation (and, as a consequence, were considered winning coalitions), while the socio-environmentalists had practically none of their demands reflected in the final regulation. The coalitions considered most and least successful in having their demands reflected by regulatory change (i.e. the winning and losing coalitions) are summarised in table 28 (above).

Considering the three cases in conjunction, therefore, the most frequent winner in achieving its regulatory objectives in the time period analysed was indisputably the neo-developmental coalition, while the socio-environmentalists and preservationists tended to lose most often. The socio-environmentalists only had one victory, in the forest case, when they were part of the administrative economic rationalist coalition. This evidence provides support to the claim, made in chapter 3, of the existence of a rupture after the mid-2000s in the historical predominance of the socio-environmentalist coalition that characterised the 90s and early 2000s. This claim is, in addition, largely supported by the secondary literature on related topics, such as by studies on the flexibilisation of policies of environmental licensing for the construction of large infrastructure projects (see Fearnside, 2016; Boratti, *forthcoming*), on the emphasis on the promotion of bio-ethanol in the Brazilian *cerrado* despite environmental concerns (see Freitas, 2016), and on changes in the types of protected areas preferred by the government and in the speed of the creation of new areas during Rousseff's government (see Shalynn, M., *et al.*, 2016),⁸⁸ all of which also point (even though not using the same terminology) to an increase in the influence of a neo-developmental mentality in Brazilian environmental policies.

As argued in chapter 4 (part 4.3, section 4.3.2), external events related to the increasing economic and political power of the agri-business sector were crucial to these results. These were, however, accompanied and legitimised by a strategic narrative of development for social inclusion that has been embodied in the governments of the Workers' Party since at least Lula's second mandate (which began in 2006). The analysis of the narrative that contributed for the upsurge of the neo-developmental coalition is provided in the next section.

⁸⁸ For further details on protected area policy changes you may also see the author's conference paper available at: <http://www.icpublicpolicy.org/conference/file/reponse/1434991108.pdf>

7.3. External Events and the Legitimising Power of a Strategic Narrative

The analysis of external events provided in chapter 4 (part 4.3, section 4.3.2) identifies the increase in the material (political and economic) power of the agribusiness sector as a crucial factor underpinning the regulatory changes investigated by this thesis. As maintained in that chapter, changes in socioeconomic conditions and in the governing coalition were particularly impactful to regulatory changes occurring in Brazilian environmental policies between 2005 and 2010. Favoured by the upsurge in the prices and quantities of commodities exported between 2008 and 2013, by the marked growth of the rural caucus in the composition of the National Congress, and by the increase in its share of campaign donations to presidential elections, the agribusiness sector clearly gained in importance in Brazilian policy-making in the period analysed by this thesis. This section intends to complement these findings with an analysis of the main legitimising narratives that accompanied and contributed to these changes in material power. I argue that, although they do not necessarily reflect the beliefs of members of the government (which are likely to be more akin to an administrative economic rationalist perspective, as supported in chapter 3), a legitimising narrative of development for poverty reduction used by the Workers' Party, contributed to the political predominance of the neo-developmental coalition. This analysis underpins, in this manner, the importance of *ideas*, even if they are strategically used to advance political interests (such as electoral support).

The Workers' Party is a left-wing party traditionally associated with equity-enhancing policies as their signature initiatives. President Rousseff (2011–2016) (of the Workers' Party) is frequently seen as a custodian of '*lulismo*' – a social contract built on upward social mobility for the lower classes (Power, 2014). Peixoto and Rennó (2011) shows that, although lower educational and income levels are reliable indicators of belonging to Rousseff's electorate, multivariate analysis points to the greater importance of perceptions of upward social mobility as the key determinant of voting for her. In other words, her electorate was largely influenced by the rise of a celebrated 'new middle class' during Lula's government and to programmes of

conditional cash transference (such as *Bolsa Familia* or ‘family stipend’⁸⁹) that were often associated with a ‘pro-poor’ government, used for electoral purposes (Hall, 2012) and seen as one of the most remarked-upon ‘signatures’ of the Workers’ Party while in power.⁹⁰

Between 2003 and 2008, while Marina Silva was Lula’s Minister of the Environment, the Workers’ Party was a close ally of groups such as indigenous communities and extractivists and actively promoted a socio-environmentalist agenda in environmental policies, which was representative of Silva’s political base.⁹¹ Disagreements about environmental licenses for the construction of large dams in the Amazon forest between the then Chief of Staff of the Presidency, Dilma Rousseff, and Minister Silva resulted, however, in Silva’s resignation as Minister of the Environment in 2008 and her departure from the Workers’ Party. This event has been described as a watershed event between the historical alliance of the Worker’s Party with socio-environmentalist groups and the beginning of marked contradictions between the demands of the two groups (Castro, 2014). As observed by Castro (2014, p. 249), for example, “the institutional arrangements of environmental policy has changed radically during both Lula terms, from close association with socio-environmental movements and a solid sustainable approach⁹², through integration with other ministries, to a developmentalist, pragmatic, perspective characterized by a national discourse of sustainability under deepened socio-environmental conflicts”.

President Rousseff (2011–2016) inherited these contradictions and the evidence suggests that the strategy for avoiding the electoral costs associated with them has been to change the focus of the debate from environmental damages and contradictions to the importance of this development strategy for the continuation of

⁸⁹ Although *Bolsa Familia* has benefited more than 12 million families and reduced absolute poverty it has been criticised for being used for electoral purposes, for encouraging the adoption of short-term perspectives in social policies (Hall, 2012)

⁹⁰ The Workers’ Party held the Brazilian presidency from 2003 until 2016. Lula da Silva was the president between 2003 and 2010, and Dilma Rousseff commanded the post between 2011 and 2016, when she was impeached.

⁹¹ Marina Silva started her political career in Acre, in the Amazon region. She was part of the movement of Amazonian extractivists created by Chico Mendes, which was at the core of the Brazilian socio-environmentalist movement. The Workers’ Party and Mendes’ Rubber Tappers’ movement have been allied since the 80s, when Mendes was among the founders of the Workers’ Party in Acre. (Fox, 1994, p.32)

⁹² By using the expression ‘solid sustainable approach’ the author referred to environmental policies that were coherent with a discourse of sustainability.

the inclusion of more vulnerable groups. This strategy became clear in the analysis of the forest case, in which the establishment of different protection requirements for large and small farmers (known as *escadinha* or small scale) was a demand that was particularly strongly advanced by the executive government as a condition for changing the Forest Code. Rousseff’s Minister of the Environment, Izabella Teixeira, emphatically supported this argument, advancing for instance that the regulatory changes were necessary to make the law less burdensome to small farmers. Table 29 provides specific citations that support this argument.

Table 29 - Example of the argument of social inclusion being used in debates about the new Forest Code

Code	Actor	Quotation
Small farmers/social argument	Teixeira, Izabella 21/06/2012 – youtube video Rio+20 UN Conference	<p>“I’m not talking about big loggers, I’m talking about people who have been planting since the last century in this country and who are illegal according to the current law”.⁹³</p> <p>“And we have to seek the inclusion of all and not the exclusion of people. And a policy of inclusion is a solution-building policy”.⁹⁴</p> <p>“We observed income and size of the properties, in order not to have to remove people from the fields.”⁹⁵</p>

Source: produced by the author with data from YouTube (2012)

Similarly, and although not selected as a case study for this thesis, the government’s justification for large infrastructure projects in environmentally sensitive areas often relied on the social inclusion argument. Although more analysis and data is required to make this argument more forcefully, a speech made by the president on the occasion of the inauguration of one of the Amazon dams (which were at the epicentre of the dissent with former Minister of the Environment, Marina Silva), emphasised that those kinds of projects were a result of a “type of development” that promoted development generating employment and distributing income (Rousseff, 2011).⁹⁶

⁹³ *Eu não to falando dos grandes desmatadores não, eu estou falando de gente que planta nesse pais desde o século passado e que estão ilegais perante a lei.*

⁹⁴ *E a gente tem que buscar a inclusão de todos e não a exclusão dos outros. E uma politica de inclusão, ‘e uma política de construção de soluções*

⁹⁵ *nos olhamos o critério social para não tirar o povo do campo,*

⁹⁶ *“We had stopped investing in large hydroelectric power plants in Brazil and recently resumed. Santo Antonio and Jirau reflect, precisely, the moment in Brazil when we started to think again about our*

I therefore hypothesise that PT's signature policy of income redistribution seems to have been used by the Workers' Party as an ideological legitimation for decisions with negative environmental impacts. Although more data and analysis is certainly required in order to turn this into more than an initial speculation, the logic of this narrative would be that the protection of agribusiness and other big business (such as construction companies) has been related by PT to the continuation and success of income redistribution. Some evidence for this reasoning was found in speeches by President Rousseff or her Minister for the Environment on the decisions mentioned above, which have significant environmental impact, and also in declarations by representatives of the agribusiness in debates about pesticides. Senator Gilberto Goellner (DEM-MT) from the rural caucus, for example, has argued in the context of pesticide regulation debates that expenditure on food represented 65% of low-income family budgets in large metropolitan areas, and that anything that might result in the increase of food prices would directly affect these groups. (Senate News Agency, 03/09/2009).

Thus, a possible interpretation of the way in which the government was able to abandon socio-environmentalist claims without incurring in major electoral effects was through an emphasis on the importance of neo-developmental policy decisions for social inclusion. This way, the government was capable to maintain popular support and win the presidential elections of 2014, despite the roll-back in environmental regulations, also contributing to the dominance of the neo-

development and to see that this development is not just any kind of development but development that will lead to economic growth, our gross domestic product will grow. But it is also development that is based on the view that we have to create jobs in Brazil, that we have to have a strong economy in Brazil, and that this process will only be truly great and consistent if it includes the Brazilian population in the share of its fruits. We can say that, in the past, Brazil has grown, it is true, but Brazil has grown very unevenly. Many people were very poor and a few people were very rich. We want a different kind of development. And it is from this kind of development that this project results, it is a project in which we promoted development that generates employment and distributes income. Our country today is different than in the past, and it is different also from countries such as China, India, Russia, and the so-called BRICS. We are different because we are a country where growth has been accompanied by a significant improvement in income distribution. For you to have a better idea the latest data from the Getulio Vargas Foundation show that Brazil had 39.5 million people reaching the middle class. So we can have an idea, it means that from 2003 to May 2011, an entire Argentina reached the middle class in Brazil, because Argentina has 41 million inhabitants, then the 39.5 million increase is almost an Argentina, or two-and-a-half or so Chiles. This is very important and Santo Antonio has everything to do with it, because a project of these dimensions is a project that will ensure the energy for our country to continue growing and include people". (Dilma Rousseff, 05/07/2011 - speech available at <https://www.youtube.com/watch?v=myYUykz-j10>. Translation and emphasis by the author).

developmentalist coalition in the process of regulatory change investigated in this thesis. It is important to remark, however, that the confirmation of this initial speculation would require more data and analysis than what is within the scope of this thesis, particularly regarding the position and perceptions of PT's electorate on the ground. Additionally, alternative interpretations of environmental concerns simply not being particularly relevant for PT's electorate would have to be assessed.

7.4. Internal Events and Changes to the cost/benefit Calculation

This section describes and compares the internal events identified as drivers of regulatory change in the three case studies. According to this thesis's revision of the causal mechanisms through which they operate (see chapter 2), one of the causal mechanisms through which internal events motivate policy change is through changes in the incentives (cost and benefit calculations) of actors. This section provides support to this claim by showing how different categories of internal events affected actors' cost and benefit calculations and motivated mobilisation for regulatory change in each of the cases.

Four categories of prominent internal events leading to the regulatory changes were identified across the cases and were found to recur in at least two of the cases: *media scandals*, the *strengthening of the enforcement of previous regulations*, the *exposure of the limits of the administrative capacity of the state* to properly enforce previous regulations and the impact of *international regulations or negotiations* on national regulatory debates. Each of these four kinds of internal events and their occurrences in the case studies are summarised in table 30 and described in the rest of this section. Cells were left blank when the internal event under consideration was not identified as relevant in relation to a particular case study.

Table 30 - Summary of relevant internal events

	Strengthening of the enforcement of previous regulations	Limits of the administrative capacity of the state	International regulations/ context	Historic public scandals
Forests	Executive Decree 7.029/09 published in December 2009 fixed a deadline for farmers to comply with Legal Reserves regulation	-	UN 1992 Rio Conference	The murder of Chico Mendes – Amazonian rubber tapper and environmental activist – in 1988
ABS	Fines applied by IBAMA in 2010 to the bio-industry and researchers who have not complied with the 2001 Provisional Measure	Delays in the process of genetic access authorisation by Cen	Entry into force of the Nagoya Protocol (2014)	Novartis scandal – when the Swiss pharmaceutical company Novartis signed an agreement for the collection and remittance of genetic samples by a Brazilian NGO
Pesticides	-	Delays in the registration of new pesticides by ANVISA	-	Contamination of River Guiana (RS) by organochlorine products used as pesticides in 1982

Source: Produced by the author

There were two instances in which the *strengthening of the enforcement of previous regulations* was found to be significant for regulatory changes in the case studies. The first relates to the forest case study and involved the determination, by a presidential decree issued in 2009, of 2011 as the year in which monitoring and punishment for non-compliance with Legal Reserve forest regulations should begin. This decision was frequently mentioned in the Lower Chamber debates about the new Forest Code as a reason for the proposed changes to the previous code and it was suggested that the date established by the decree be postponed in order to allow more time for debate about the new code (Lower Chamber News Agency, 2011, 25 April) The second instance relates to the ABS case study and regards the onset of fines, in 2010, for members of the bio-industry and scientists for not complying with the 2001 ABS regulation (Provisional Measure 2.186/2001). Members of the bio-industry have explicitly identified the first fines as a milestone prompting the mobilisation of the bio-industry to work towards altering the law (interview 6, 8). Thus, although the previous regulation had been in place since 2001, it was the beginning of its enforcement by the government’s environmental agency (IBAMA) in 2010 that raised the awareness, and catalysed the reaction, of the bio-industry against the regulation. Both examples, therefore, point to an association between the beginning of (or the plan to begin) the enforcement of previously non-enforced regulations and the beginning of the mobilisation of affected groups to promote regulatory change. The

increase in the costs to particular groups associated with the strengthening of the enforcement of previous regulations had, therefore, an important effect in sparking the processes that led to regulatory change.

The second important internal event found to motivate the regulatory changes in question was the *exposure of the limits of the administrative capacity of the state to properly enforce previous regulations*. The exposure of these limits led to pressures for regulatory change from the private sector and members of the government affected by administrative delays and inefficiencies. These events were observed in the cases of extremely long processing times for pesticide registration and biodiversity access requests. In the pesticide case, for instance, a list of 1207 products was awaiting toxicological evaluation by the health agency (ANVISA) on 23rd June, 2015, and the average waiting time for registration was approximately 40 months (ANVISA website, 2015; Oeco, 2016).⁹⁷ This situation has been referred to by the pesticide industry as a “collapse of the Brazilian pesticide regulatory system” and has motivated members of ANVISA, the Ministry of Environment and the pesticide industry to remark on the unsustainability of the situation and the need for change (public hearing in the Lower Chamber, 2015, 2nd July). A similar issue was observed in the ABS case. Actors reported that until 2013 (when Cgen, the institution in charge of the authorisation of access to genetic resources was reorganised), access authorisation would take up to one-and-a-half years to be issued, and researchers could not begin their research until authorisation had been given (Natura representative, *Folha de Sao Paulo*, 10/03/15). Additionally, the requirement that companies or researchers obtain proof of prior and informed consent from indigenous and traditional communities before they submit an authorisation request increased the costs associated with genetic resource access as many companies or researchers did not have specialised know-how for interacting and negotiating with these communities. In both cases, therefore, the reduced administrative capacity of the state to enforce previous

⁹⁷ In addition, companies started to ask for toxicological evaluations of products that they did not intend to commercialise just to ‘save a place’ in the evaluation queue in case other companies tried to commercialise similar products, exacerbating the problem (CONASQ meeting, 26/11/2014). Additionally, ANVISA officials complained of further delays generated by constant judicial requests companies for the re-evaluation of products that had previously been rejected (public hearing in the Lower Chamber, 2015, 2nd July).

regulations was an important driver of demands for regulatory change due to the increased costs it generated for specific groups.⁹⁸

Another category of internal events leading to policy change through the alteration of actors' cost and benefit calculations was related to *international regulations and negotiations*. In the forest case, the occurrence of the 1992 UN Conference in Rio raised international attention around the issue of deforestation in the Amazonian rainforest and provided Brazilian NGOs with important connections and resources. This fact directed governmental attention to the issue, which resulted in the government starting to issue stricter forest laws and pursue more effective enforcement during the 1990s and 2000s. Those changes contributed to the increase in the costs of land intensive activities such as agriculture and fostered agri-business discontent that led to the new Forest Code in 2012. Similarly, in the case of ABS, the entry into force of the Nagoya Protocol in 2014 led to alterations in actors' strategic calculations of the costs and benefits of keeping the previous regulation, motivating regulatory change. It did this in two ways. First, the international context increased the costs of non-negotiation for the agribusiness sector, due to the uncertainties for this group about the potential consequences of the Nagoya Protocol for the prices of commodity exports. The protocol, in this way, made this group more open to debate on domestic regulation that would protect them against potential costs (interview 40). The second way was through promoting fear of international regulatory competition within the bio-industry and the Brazilian government. This fear emerged in the context of WTO TRIPS⁹⁹ negotiations, at which developed countries refused to consider requirements of 'prior and informed consent' for the use of traditional knowledge from indigenous and traditional groups in the provision of patents (see Carvalho, 2000).^{100,101}

⁹⁸ Eventually, the mobilisation of industry resulted in less bureaucratic regulation in the ABS case. For instance, it was no longer required that authorisation be obtained before access to genetic resources could be granted but only that an online registration be completed by those seeking access. In the pesticide case, facilitating mechanisms (or the proposition of facilitating mechanisms) for pesticide use and registration were introduced, such as the authorisation of the use of unregistered pesticides in phytosanitary emergencies and debate about reforming the tripartite institutional structure of pesticide authorisation to exclude the Ministry of the Environment and the Ministry of Health and centralise registration procedures under the Ministry of Agriculture.

⁹⁹ Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS Agreement)

¹⁰⁰ As explained by Eimer and Donadelli (2016), the international community did not accept this requirement of the Nagoya Protocol regarding the regulation of patent applications for pharmaceutical

Lastly, *historic public scandals* generated costs for specific groups, which later reacted by demanding the regulatory changes under investigation. In the ABS case, for example, the Novartis scandal motivated the drafting of a law that was focused on avoiding 'biopiracy'. Therefore, rather than promoting access to genetic resources, the law acted as an impediment to it, which generated a reaction from the bio-industry and researchers. Similarly, in the case of pesticides, the pollution of River Guaíba in Rio Grande do Sul by organochlorine products that had been used as pesticides in 1982 raised public awareness of the topic and led to the passing of a pesticide law in 1989 that was restrictive in terms of environmental and health requirements and assessment procedures. Lastly, in the forest case study, the public outcry resulting from the murder of the Amazonian rubber tapper and environmental activist Chico Mendes by a rancher in 1988, in combination with the emergence of a local civil society demanding stricter environmental regulations and increased international visibility of the deforestation of the Amazon, led to stricter forest regulations being approved in 2001 as an addendum to the 1965 Forest Code. The murder of Chico Mendes, which was widely publicised by the international media¹⁰², served in this way to strengthen the power of the socio-environmentalist coalition¹⁰³ in the 90s and 2000s, nurturing the resentments of the agriculture sector against regulations approved during these two decades.¹⁰⁴

These three kinds of events therefore, have motivated the drafting of progressive laws in the history of each subsystem, which, later, when agribusiness gained more power, enforcement became stricter or the limits of administrative capacity became apparent, were changed. It is in this way that these events were

or other substances, engendering, in this way, a competitive disadvantage for Brazilian companies, which, according to the 2001 Brazilian regulation had to comply with this requirement.

¹⁰¹ This analysis recalls insights from the 'Europeanisation literature', according to which decisions taken in the international or supranational arena create pressures that interact with and alter domestic dynamics. (Thatcher, 2007, 2009).

¹⁰² See for example the New York Times article 'Why They Killed Chico Mendes' by James Brooke. August 19, 1990. Available at: <http://www.nytimes.com/1990/08/19/books/why-they-killed-chico-mendes.html> Accessed 04/07/2016.

¹⁰³ For an analysis of the importance of Chico Mendes' death for the emergence of socio-environmentalism in Brazil see Hochstetler and Keck, 2007, Chapter 3 – also explored in the third chapter of this thesis.

¹⁰⁴ Although the event of Chico Mendes' murdering had its effects due to the mobilisation of both national and international communities, it has been characterised as an 'internal event' in this thesis because of the ACF's differentiation of internal events as those more closely associated to the policy subsystem. I sustain, therefore, that this event was predominantly related to forest and environmental debates rather than to more systemic changes.

indirectly linked to the three regulatory changes investigated by this thesis, namely, by determining the previous balance of power that was later reversed. The influence of these events in the coalitions' calculations of costs and benefits was, therefore, evident during the analysis of the cases, which provides support for the claim that cost and benefit calculations should be included among the causal pathways that link internal events and policy change.

7.5. Negotiated Agreement and the Importance of a Hurting Stalemate

Negotiated agreements happen in “situations in which coalitions that have been fighting for decades come to a negotiated agreement representing a substantial change from the status quo” (Sabatier and Weible, 2007, p. 205). The analysis of the three cases indicated that negotiated agreement occurred only in the ABS case and the investigation of the reasons for this variance underpinned the importance of the existence of a ‘hurting stalemate’ in that case. Considered by the ACF to be “the most important [element] for instigating negotiations between coalitions” (Weible and Nohrstedt, 2013, p. 132; Weible and Jenkins-Smith, 2016, p. 24) a hurting stalemate is defined as a situation in which all parties agree to negotiate seriously because they see the continuation of the status quo as unacceptable. Three criteria were drawn from the literature on collaborative governance and incorporated into this definition to guide the empirical analysis, namely, 1) *consequential incentives* – situations that present issues as salient to participants and the timing and pressure for their solution as ripe, 2) *interdependence* among actors and, 3) *uncertainty* (Emerson, Nabatchi and Balogh, 2011). The analysis of these three criteria has proved sufficient to explain the occurrence of negotiated agreement in the ABS case. The empirical findings evidence, therefore, that this qualified definition of a hurting stalemate might be a sufficient predictor of the occurrence of negotiated agreement and that the list of nine elements¹⁰⁵ that foster negotiated agreement provided by Sabatier and Weible (2007, pp. 205–206) can be narrowed down. The results of the empirical assessment of the

¹⁰⁵ The nine elements are: a hurting stalemate, broad representation, leadership, consensus decision rules, funding, commitment by actors, the importance of empirical issues, trust, and the lack of alternative venues (Sabatier and Weible, 2007, pp. 205–206).

three elements used here to identify a hurting stalemate are summarised in the table below and explained in the following paragraphs.

Table 31 - Comparative analysis of the occurrence of a hurting stalemate between cases

Hurting stalemate	Forest	ABS	Pesticides
Consequential incentives	Low	High	Low
Interdependence among actors	Low	High	Low
Uncertainty	Low	High	Low
NEGOTIATED AGREEMENT	NO	YES (among two of the three coalitions)	NO

Source: Produced by the author

As can be gleaned from table 31, in two of the three cases (forests and pesticides) none of the three drivers of negotiated agreement investigated were present. In the forest case, for instance, incentives for negotiation were not perceived by all coalitions to be sufficiently pressing. Only the neo-developmental coalition had pressing incentives to negotiate due to the effects that the stricter enforcement of previous forest laws would have on farmers. For the preservationist coalition the previous regulation was satisfactory and no negotiation in order to change it was seen as necessary. The administrative economic rationalist coalition, in turn, preferred to avoid negotiations due to the unpopular character of the topic, and due to the potential for negative electoral consequences for the government (interview 42). Similarly, uncertainty around the outcomes of keeping the previous forest regulation was low because the government had already issued a decree determining a date for enforcement to begin. Interdependence among coalitions was also low because the proposers of the regulatory change (the neo-developmental coalition) had sufficient political power to pass the regulation without negotiations with other groups.

A similar absence of a hurting stalemate was identified in relation to the pesticide case. Consequential incentives were not identified because members of the socio-environmentalist/preservationist coalition never agreed that regulations and institutions in charge of the registration process should be altered. ANVISA (the health agency) and the members of the administrative economic rationalist coalition also opposed the reforms and pleaded simply for more staff and resources to make registration quicker. Thus, only the neo-developmentalists had incentives to alter the

regulation. Interdependence among actors was also low in this case because the neo-developmental coalition (which had enough political power to pass the regulatory changes without negotiation) was the proposer of the changes. Finally, there was little uncertainty around the outcomes of continuing with the same regulations, as the consequences were already very clear to all actors (such as delays in the registration of new products) and there were no international or other influences that could change them.

In the ABS case, on the other hand, the three elements that characterise a hurting stalemate were present or at least partially present among two of the three coalitions (administrative economic rationalist and neo-developmental coalitions). The entry into force of the Nagoya Protocol generated consequential incentives for both the administrative economic rationalist and the neo-developmental coalitions to negotiate a new law. For the former it accentuated the fear of increased international competition arising from the fact that other countries would start to regulate the issue (in a potentially less restrictive way than in Brazil) and also augmented, by increasing international visibility to the issue, business uncertainty for Brazilian companies who were not compliant with the previous law (it increased, for instance, the risk of companies to be called illegal, and to be part of 'name and shame' strategies promoted by international NGOs). For the latter coalition, consequential incentives increased because of the concern about the need to share benefits with other countries for the use of genetic resources of foreign origin in agricultural products. The uncertainties generated by these possibilities were also high for the two groups. Finally, each group depended on the other to have the new law approved, what made them interdependent. The administrative economic rationalist coalition depended on the majority of the Congress's rural caucus voting to approve the new law, while the neo-developmental group depended on the bill elaborated by the administrative economic rationalists to regulate the issue before the Nagoya Protocol was ratified by Brazil (and could generate any negative effects for the agri-business sector). There were, therefore, high uncertainties and interdependence between these two coalitions, which were also attributed to the entry into force of the Nagoya Protocol one year earlier. This analysis, therefore, shed light on the importance of international regulations and context for the alteration of costs and benefits of

domestic actors, which, in turn, led to negotiated agreement. Also in this case, cost/benefit calculations were a relevant causal pathway through which negotiated agreement led to regulatory change.

7.6. Learning through ‘Elite Networking’

According to Sabatier and Jenkins-Smith (1988, p. 155) the first condition for policy-oriented learning to occur is that “both sides have sufficient technical resources to be able to criticize the other’s causal model and data”. Although the framework does not consider external researchers (i.e. university scientists, consultants and policy analysts) to be the only sources of technical information in debates, it gives a privileged role to the contribution of these actors in the analysis of processes of policy change (Sabatier and Weible, 2007, p. 192). This thesis qualifies this conception of policy-oriented learning by calling attention to the role of elites and ‘elite networking’ as important sources of technical information and motivators of learning. Elite networking is defined by Bennett (1991, p. 224) as “an identifiable elite bound by knowledge and expertise of a common policy problem and a shared concern for its resolution”.

The role of communities of experts (or epistemic communities) in learning has been extensively debated from a transnational perspective in the literature about epistemic communities (Haas, 1992), but less attention has been dedicated to the experts who are explicit parts of the coalitions debating issues in domestic contexts. I maintain that these actors might be particularly relevant in contexts such as the Brazilian one, in which the political system is relatively closed to the participation and influence of external actors due to a deep-seated tradition of log-rolling and clientelism as the main routes of access to political decision-making processes. This is a crucial contribution of this thesis to the ACF, to which I return to in the concluding chapter (chapter 8).

As demonstrated by the ABS case (which was the only case in which learning occurred among the case studies analysed), learning may also be promoted by the interaction of members of the coalitions themselves, insofar as they have enough technical knowledge and incentives to share and learn from each other. In this

particular case, the interactions between the bio-industry and representatives of the agribusiness led the administrative economic rationalist and the neo-developmental coalition to learn about each other's business models and converge towards a consensual alteration of the bill. This was made possible by the shared incentives of both coalitions to agree on a new regulation and by their expertise about their own business areas (Bennett, 1991, p. 224).

This proposal for a reformulated definition of policy-oriented learning resonates with the view of learning advanced by McBeth, Jones and Shanahan (2014, e-book, 56%) according to which "the acceptance of a new policy narrative in a policy subsystem might equate to a form of policy learning, even when scientific evidence remains constant. Thus, changes in underlying narratives not necessarily linked to the arguments of scientists or external policy analysts may prompt policy learning and change". This qualification of the concept of learning is, thus, supported by this thesis's empirical analysis and contributes to the development of the ACF. Therefore, although the importance of analytic debate based on neutral technical information is not discarded, emphasis should also be given to the possibility of learning through elite networking. Table 4 below provides a summary of the results of the analysis of learning in the three cases, which is briefly described in the subsequent paragraphs.

Table 32 - Summary of findings about the occurrence of learning

Forestry	No learning among coalitions
Pesticides	No learning among coalitions
ABS	Learning through 'elite networking' between neo-developmentalists and administrative economic rationalists.

Source: produced by the author

As demonstrated by the empirical analysis, policy makers did not rely on scientific information to advance their arguments in any of the case studies. As a consequence, policy-oriented learning as strictly defined by the ACF did not occur. Learning through 'elite networking' was, however, found to have occurred in the ABS case due to interactions between the administrative economic rationalist and the neo-developmental coalition. In this case, the production of scientific studies or the participation of scientists as providers of scientific evidence to support debates was perceived to be even less notable than in the other two cases. Although the SBPC, the CNPq (the National Council for Scientific and Technological Development in the

Ministry of Science and Technology) and scientists from EMBRAPA (the agricultural research agency from the Ministry of Agriculture) were involved in the debate, they participated as coalition actors and not as providers of technical information. Scientific analysis was not used or presented in public debates on the topic. Despite the absence of scientific contributions to the debates, learning and convergence of policy proposals occurred through 'elite networking'.

In the forest case, although the Brazilian Society for the Progress of Science (SBPC) directly contributed to the debates of the Lower Chamber through a systematised report with scientific evidence related to the most contentious points being debated, the analysis of the types of arguments proffered by key coalition participants before and after this evidence was produced, revealed no significant impact on their narratives or any kinds of redefinitions of their understandings of the issue. Additionally, a scientist who participated in the elaboration of the report further confirmed this evidence by observing that their efforts were not considered in the policy-making process of the new Forest Code, neither by legislators nor by the executive government (interview 30).

The pesticide case revealed a similar picture in terms of the absence of policy-oriented learning (or any other type of learning) among coalitions. Although scientific evidence was used in the debates of the Lower Chamber (such as evidence regarding the high incidence of contamination of breast-milk in women of Rio-Verde used by the preservationist/socio-environmentalist coalition or that the poisoning of rural workers was actually very infrequent, as argued by a scientist invited by the neo-developmental coalition) this evidence was always considered to be biased and was dismissed by members of opposing coalitions. Actual analytical debate and the refinement of positions after scrutinising scientific evidence did not happen as participants perceived the scientific evidence to be biased and unreliable.

In sum, the empirical findings revealed that, at least in the Brazilian context, scientists and policy analysts had very few of its contributions adopted in the process of regulatory change. Even the impact of the international scientific community, which is often stronger than the impact of national scientists could not be identified in the data. In the only case in which learning was identified, the most crucial players involved in the process of learning were not found to be scientists or policy analysts

but members of the coalitions, particularly from the bio-industry and agri-business. It is argued, therefore, that the concept of 'policy-oriented learning' should be qualified to consider the role of actors who are part of the coalitions (and not only of allegedly independent of external analysts), particularly in situation in which there are shared incentives for learning. This finding is particularly important in contexts such as the Brazilian one, in which the openness of the political system to the participation of external actors is limited. This is, moreover, a central contribution of this thesis to the ACF as it expands the concept of 'policy oriented learning' pointing to the importance of alternative sources of information as potentially relevant for learning, as far as these sources are considered legitimate by coalition actors (McBeth, Jones and Shanahan, 2014, e-book, 56%). It is sustained, therefore, that as far as actors display knowledge (scientific or not; independent or not) and a shared concern for the resolution of a problem, there is potential for learning to occur. In the particular context of Brazil (in which there is low political openness) the role of elites taking part in the coalitions was found to be fundamental for learning to occur.

7.7. Conclusion

This chapter has compared the three case studies in relation to the main analytic parameters investigated by this thesis and reinforced the main implications of this comparison to the ACF and to the analysis of Brazilian environmental policy change. It has advanced five main claims. First, it maintains that the predominance of the neo-developmental coalition across cases characterises a pattern that represents a rupture with the two previous decades that were characterised by the predominance of socio-environmentalist perspectives in environmental regulations. This finding is further supported by secondary literature focused on related areas such as the environmental licensing of large infrastructure projects, mining, and sugar cane production in the *cerrado* biome. Second, the chapter has advanced that the predominance of neo-developmental discourse between 2005 and 2015 was motivated and accompanied by not only external events that increased the economic and political power of large economic sectors of the country (such as agri-business), but also by a legitimising narrative from the Workers' Party, which emphasises the importance of these sectors and of developmentalist policies for the continuation of

social inclusion programmes. This narrative was used to avoid electoral consequences of the environmental contradictions associated with recent regulatory and policy changes, moving the focus away from them and towards income redistribution. These findings advance, moreover, the notion that both interests and ideas matter for policy change.

Third, this chapter has noted that internal events identified as relevant sources of regulatory change across the case studies pointed consistently to the importance of the changes in incentives as a cause of actors' mobilisation for regulatory change. The four categories of internal events identified shared a common role in altering actors' costs and benefit calculations in relation to previous regulations. Fourth, the implications of the comparison of the three case studies for the study of negotiated agreement were that the analysis of the existence of a hurting stalemate might provide a more parsimonious alternative for explaining negotiated agreement. Inputs from the literature on collaborative governance were used to qualify the definition of the concept of a hurting stalemate with three criteria, namely, consequential incentives, uncertainty and interdependence among actors, the relevance of which was confirmed through the empirical analysis of the cases. Additionally, the analysis has shown that international regulations and negotiations are particularly important for the generation of a hurting stalemate, as demonstrated by the case of the Nagoya Protocol.

Fifth, the empirical findings revealed that the contribution of external scientists or policy analysts might not be necessary for learning between coalitions to take place, and highlighted the role of elites which are part of the coalitions and share technical information. A claim for the broadening of the focus of policy-oriented learning to a larger category of actors and types of information was made, therefore, advancing McBeth, Jones and Shanahan (2014 e-book, 56%) view of learning according to which "changes in underlying narratives not necessarily linked to the arguments of scientists or external policy analysts may prompt policy learning and change". The chapter has emphasised, in this manner, the need to qualify the concept of 'policy-oriented learning' in order to allow for the consideration of 'elite networking' as a source of technical information and learning between coalitions. This qualification is

considered to be particularly relevant for countries with fairly inaccessible political systems such as Brazil, a crucial point to which the concluding chapter will return.

CHAPTER 8 - CONCLUSION

8.1. Introduction

This concluding chapter intends to draw the main implications of this thesis for wider theoretical and empirical debates and qualify them in relation to the specific social and political context of Brazil. Additionally, it sheds light on the limits of the conclusions reached, and illuminates potential paths for continuing inquiry. The chapter starts by presenting the results of the thesis in terms of the assessment of the ACF hypothesis about the sufficiency and necessity of the four sources of policy change (internal events, external events, negotiated agreement and learning) (section 8.2.1). It maintains that unless there is a hurting stalemate, only internal and external events are necessary and sufficient sources of policy change among the four sources investigated. Section 8.2.2, in turn, emphasises the importance of a hurting stalemate for both learning and negotiated agreement to occur. It supports that the fact that these phenomena occurred despite the unfavourable opportunity structure of Brazil strengthens the case for the importance of the effect of a hurting stalemate. Section 8.3 is dedicated to summarising this thesis's contributions to wider theoretical and empirical debates. Regarding theoretical debates, the first part of section 8.3 reflects on the potential of the ACF to incorporate both interests and normative values among its explanatory factors. It assesses criticisms that have been directed to the ACF by both argumentativist and positivist scholars, and emphasises the way in which the thesis addresses these criticisms. This section concludes that both interests and ideas have a place in applications of the ACF and that the methodological difficulties of the framework can be addressed through the use of narrative analysis. The second part of section 8.3 debates interpretations of what claims about the 'roll-back' in Brazilian environmental standards mean. It problematizes, moreover, whether these claims are not a misinterpretation of an alternative regulatory logic being advanced by the government. Finally, section 8.4 concludes, summarising the answers to the four research questions posed in the first section of the introductory chapter.

8.2. Results: What Explains Regulatory Change in the Brazilian Case?

8.2.1. Sources of Policy Change: What is Sufficient? What is Necessary?

This thesis investigated the four sources of policy change advanced by the ACF in relation to three cases of Brazilian regulatory changes – forestry, pesticides, and access to genetic resources and benefit sharing. The sources of policy change investigated were: 1) *external (i.e. systemic) events*, which refer to changes in socioeconomic conditions, changes in public opinion, changes in the systemic governing coalition and changes in other policy subsystems (Sabatier and Weible, 2007, pp. 198–199); 2) *internal events*, meaning events that are directly related to the policy sector under investigation (policy proximate events); 3) *policy-oriented learning*, defined as “relatively enduring alternations of thought or behavioural intentions that result from experience and/or new information and that are concerned with the attainment or revision of policy objectives” and is achieved through analytical or informed debate between coalitions (Sabatier and Jenkins-Smith, 1999, p. 123; 1988 p. 155) and 4) *negotiated agreement*, consisting in “agreements involving policy core changes [that] are crafted among previously warring coalitions” (Sabatier and Weible, 2007, p. 205). According to the ACF, these four sources of change or some combination of them is necessary but not sufficient for policy change to occur.¹⁰⁶ The tracing of any of these paths (or combination of them) from its manifestation to actual policy change has been highlighted in the ACF literature as an underdeveloped area of the framework (Weible & Nohrstedt, 2012, p. 133) to which this thesis aimed to contribute.

The empirical findings indicate that of the four sources of policy change investigated, internal and external events were necessary and sufficient sources of regulatory change in two of the three cases. This qualifies the ACF’s hypothesis that the four sources, or some combination of them, are necessary, but not sufficient, sources of policy change. In the forestry and pesticide cases, regulatory change

¹⁰⁶ The ACF’s hypothesis states that “*significant perturbations external to the subsystem, a significant perturbation internal to the subsystem, policy-oriented learning, negotiated agreement or some combination thereof, are necessary, but not sufficient sources of change in the policy core attributes of a governmental programme*” (Weible and Nohrstedt, 2013, p. 133).

occurred despite the absence of learning and negotiated agreement between actors from different coalitions. Nevertheless, the findings imply that negotiated agreement and learning might be necessary for policy change in situations in which there is a hurting stalemate. The analysis of the ABS case revealed a situation in which learning and negotiated agreement were crucial for the resulting regulatory change, even though these were intervening variables activated by internal and external events, rather than the original causes of regulatory change. The comparison of this latter case with the first two pointed to the importance of three main factors that were used to qualify the definition of a ‘hurting stalemate’, namely, high *interdependency* among coalitions to achieve their regulatory or policy objectives, *uncertainty* about the consequences of non-negotiation, and *consequential incentives*, the perception or prediction of future negative consequences as a result of non-negotiation. In short, negotiated agreement and learning were considered to be necessary intermediate variables that link events (external and internal) and policy change in situations of high uncertainty, interdependence and with consequential incentives. The resulting causal pathway identified in this analysis is summarised in line 3 of figure 14, which has also been explained in chapter 2 (section 2.3.5):

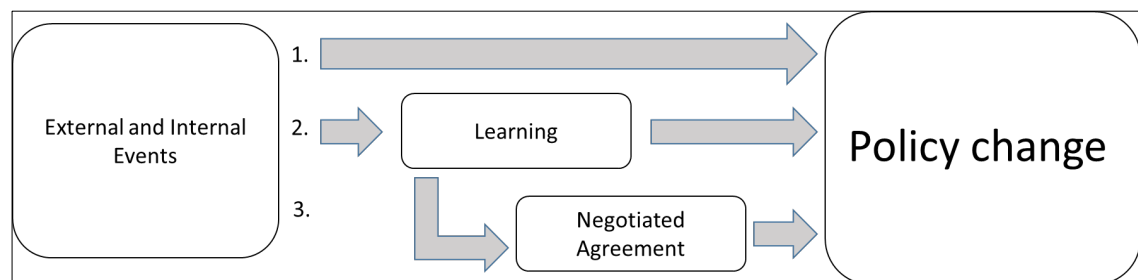


Figure 14 - Summary of the causal pathways to policy change
 Source: produced by the author

8.2.2 What is the Impact of Opportunity Structures?

Although revealing about the pathways of policy change in Brazil, the generalisation of this causal pathway to other contexts should be cautiously pursued. A common criticism addressed to the ACF is that, in its aim to produce generalisable hypotheses, it does not properly consider the role of the social and historical contexts

(Hajer, 1995, p. 5; Fischer, 2003, p. 101). Taking this criticism into account, chapter 2 developed a debate about the ‘opportunity structures’ of Brazil, or, in other words, the “relatively enduring features of a polity that affect the resources and constraints of subsystem actors” (Sabatier and Weible 2007, p. 200). The analysis pursued in chapter 2 maintained that Brazil has low levels of political openness and requires a medium degree of consensus for decisions to take place. I now provide an analysis of the implications of this particular opportunity structure on the analysis of the four sources of policy change pursued by this thesis and well as an elaboration of its impacts for the within-case comparison.

Table 33 - Summary of Brazilian opportunity structure

Openness of political system	Degree of consensus needed for major policy change		
	High	Medium	Low
High	Pluralist	Pluralist	
Medium	Recent corporatist	Westminster	
Low	Traditional corporatist	Brazil	Authoritarian executive

Source: Produced by the author with inspiration from Sabatier and Weible (2007, p. 201)

Regarding internal and external events, the analysis has shown that the way in which they redistribute resources and alter the costs to different actors has been proven to be an effective trigger of mobilisation for regulatory change in Brazil. Because of the country’s low political system’s openness, however, the groups with direct access to political power (i.e. those that had representatives in the executive or in the National Congress) were those most likely to have a decisive influence on regulatory decisions. Interest groups who participated in the debates, but had less official representation in the government (such as indigenous and traditional communities in the ABS case, of preservationist scientists in the forestry case) were found to have less impact on the final regulatory changes, even if their demands were often visible and supported by the media. The medium degree of consensus needed for the regulatory changes to take place often led to the exclusion of these groups from final decisions. Policy decisions could be made by the National Congress and executive power alone, even if extremely unpopular among specific groups (as was the case with the Forest code and the preservationist coalition) and even if these two

institutions had not reached an agreement (as they could use vetoes and amendments on each other's proposals – as also epitomised by the forestry case).

The impact of Brazil's opportunity structure was also relevant to learning and negotiated agreement. As observed in the previous chapter, these two sources of policy change were not identified in two out of the three cases investigated. It is argued that this result was affected by the opportunity structure of the country in at least two ways. First, in a context of low political openness, the opinions of independent experts, scientists or analysts have more difficulty reaching and being considered in political debates. Even if they are requested by the policy makers themselves – as was the case in the forestry and pesticide case – they might simply be ignored in actual decision making without any severe consequences. This is also related to the medium degree of consensus needed for major policy change to occur, which naturally reduces the necessity of negotiation with groups that are not decisive in the voting process. The ample opportunities for the executive and legislative powers to use regulatory-changing mechanisms that are not dependent on negotiations, such as vetoes and amendments, although useful for avoiding deadlocks and approving contentious bills, reduced the necessity of negotiation with external actors or even between these two branches of the government themselves. In a context of reduced political openness and medium consensus requirements for major policy change, the occurrence of these two more interaction-based types of drivers – learning and negotiated agreement – is, thus, hampered. Their 'necessity' for policy change in the Brazilian context, might, therefore, not be comparable to their necessity in other more consensual and open political systems, which is a crucial impact of Brazilian opportunity structure for this analysis.

The low political openness and medium level of consensus required for decisions to take place also contributed decisively to the differences identified among the three cases in terms of the occurrence of learning and negotiated agreement. The fact that there was a politically powerful coalition that was not directly part of the government in the ABS case (the business or administrative rationalist coalition) but not in the other two cases is found to be a crucial determinant of the occurrence of negotiation and learning in this case but not in the other two. Because of the low political openness of the system, less powerful actors such as environmentalist and

indigenous groups – active in the three cases analysed - did not have the chance to fully interfere with the results of policy changes in any of the cases. Additionally, the medium level of consensus requires allowed members of the executive and legislative powers to push the approval of reforms, even without much negotiation in the pesticides and forestry cases because none of the opposing groups had enough political power to avoid it. As a consequence, a crucial implication arising from this within case comparison regarding the impacts of Brazilian opportunity structure on the occurrence of learning and negotiated agreement is that the political power of actors involved in each debate is a crucial variable to be considered. The involvement of powerful actors might drive negotiated agreements and learning despite the limitations imposed by the contextual variables, what makes these actors even more powerful in comparison to others. In other words, the institutional context reinforces the power of very specific authors who are already powerful enough to be heard in negotiations while preventing others from decisive intervention.

8.2.3. Observing Variation: What Motivates Learning and Negotiated Agreement?

Despite the fact that the above-described contextual characteristics are not conducive to negotiated agreement and learning in Brazil, negotiated agreement and learning still occurred in one of the cases (the ABS case). This unexpected variation among cases originally assumed to be ‘most-similar’ opened the possibility for the investigation of factors conducive to learning and negotiated agreement, or, in other words, to the analysis of what was different about the ABS case that motivated learning and negotiated agreement to occur in that case but not in the others.

Regarding learning, the empirical analysis revealed that ‘elite networking’, defined as “an identifiable elite bound by knowledge and expertise of a common policy problem and a shared concern for its resolution” (Bennett, 1991 p. 224) led two of the three active coalitions in the ABS case to learn about each other’s business models and logics in service of their different demands and priorities in the process of amending of the law. Members of the bio-industry and representatives of the agri-business gathered behind closed doors to share technical knowledge (e.g. about reproductive material, production chains, the potential impacts of different options) and agreed on

an alternative bill that was acceptable to both parties. This was, therefore, a clear case of learning, which occurred without the involvement of scientists or external analysts.

The analysis revealed that what motivated these actors to learn from each other was the same factor that led them to negotiate, namely, a hurting stalemate. Defined as a situation in which *consequential incentives* (meaning those incentives that make issues salient to participants and the timing and pressure for solutions ripe), *uncertainty* and *interdependence* among actors are present, a hurting stalemate was only identified in the ABS case (as debated in the previous chapter). This finding has, therefore, provided support for the identification of this as a crucial variable for the occurrence of learning and negotiation, even in contexts less prone to them, such as the Brazilian one. It is acknowledged, nonetheless, that the low number of cases investigated by this thesis and the fact that the analysis was restricted to the context of only one country reduces the strength of this finding, which should be further investigated.

Finally, it is important to remark that these findings could be used to qualify the ACF hypothesis about policy change, thereby producing the following hypothesis:

Significant perturbations external to the subsystem, a significant perturbation internal to the subsystem, policy-oriented learning, and negotiated agreement are necessary sources of policy change insofar as a hurting stalemate exists. In the absence of a hurting stalemate, policy-oriented learning and negotiated agreement are not necessary sources of policy change.

This qualification adds further elements to the finding that negotiated agreement and policy-oriented learning are not necessary sources of policy change. At last, the fact that these phenomena occurred despite the unfavourable opportunity structure of the country strengthens the case for the importance of the effect of a hurting stalemate in motivating learning and negotiation. A note of caution should be made, however, that this might be only valid in countries with opportunity structures similar to Brazil. The need for further examination of this qualified hypothesis in different contexts is therefore acknowledged.

8.3. Contributions to Wider Debates

8.3.1. Contributions to Theoretical Debates

8.3.1.1. Can the ACF incorporate both interests and normative values as explanations of policy change?

One of the crucial theoretical debates with which this thesis engages is the consideration of interests in the development of the ACF. The ACF originally emerged from efforts to incorporate beliefs into the analysis of public policies in a way that allowed for hypothesis testing, generalisation and theory development. The framework distanced itself, in this manner, from post-positivist or interpretivist approaches that traditionally emphasised the role of beliefs but were averse to attempts at generalisation. One of the main innovations of the ACF, therefore, was to propose the assessment and use of beliefs through positivistic lenses that allow for generalisations and take reality as given and not socially constructed. Criticisms of the ACF emerged, however, both from positivist scholars (e.g. Szarka, 2010; Hann, 1995; Ladi, 2005; Schlager, 1995; Nohrstedt, 2010; Parsons, 1995), who perceived the framework to be insufficient in its consideration of material interests, and by argumentativists, who found the framework's assumptions excessively instrumentalist and insufficiently attentive to the transformative role of normative values (i.e. Fischer, 2003; Hajer, 1995, McBeth, Jones and Shanahan, 2014). In this section, the main criticisms of the ACF by representatives of both research traditions are presented and the way in which this thesis addresses them is reinforced.

From an interpretivist perspective, the ACF has been commonly criticised for its positivist nature and technocratic bias (Fisher, 2003; McBeth, Jones and Shanahan, 2014; Hajer, 1995). Fischer (2003), for instance, points to the framework's limited consideration of 'interpretive schemes' or normative values that actors use to interpret facts. As observed by this author, the ACF improperly considers these factors to be 'secondary' or submissive to technical knowledge and empirical information in debates about policy-oriented learning. They neglect, thereby, "social and political aspects of learning" (Fischer, 2003, pp. 104–109). The framework is, moreover, accused of resting on "an outdated understanding of how science works" in which science is based on objective realities and ignores the social and historical context

from which policy problems and scientific knowledge is generated (Fischer, 2003, p. 108–109) A similar criticism of the ACF's excessive emphasis on the role of technical or scientific information in learning is also advanced by McBeth, Jones and Shanahan (2014, e-book, Section title 'Policy Narrative and Policy Narrative Learning', second paragraph, 56%) According to these authors "the acceptance of a new policy narrative in a policy subsystem might equate to a form of policy learning, even when scientific evidence remains constant". Thus, changes in narratives not necessarily linked to scientific arguments might also promote policy learning. Finally, the ACF's treatment of 'learning' is also criticised for its non-consideration of trust, credibility and acceptability among actors as factors important for the occurrence of learning (Hajer, 1995, p. 8). Thus Hajer (1995, p. 8) raises awareness of, and opposes, the "purely cognitivist criteria of persuasion" identified by the ACF in relation to the learning process.

These criticisms have been addressed in this thesis through a detailed historical analysis of each of the policy subsystems under investigation, by tracing actors' definitions of policy problems and by assessing the position and use of scientific information within broader discursive strategies. Although pre-determined categories of discourses were used to allow for comparability between different conceptualisations of policy problems, these categories were drawn from the analysis of Brazilian environmental policy and are, thus, specifically tailored to the Brazilian context and history. They provide, moreover, a comprehensive analysis of 'interpretive schemes' and normative values historically associated with Brazilian environmental policy. The consideration of the role of 'elites' and of 'elite networking'¹⁰⁷ in the definition of learning proposed by this thesis tackles, moreover, both the criticism against the limits of the information considered by the ACF to be conducive to learning (which, this thesis holds, do not have to be necessarily scientific or technical), as well as the critique against the "purely cognitivist criteria of persuasion" (by acknowledging, in the definition of elite networking, bonds of trust and mutual recognition arising from similar identities in the negotiation, e.g. elites, business groups).

¹⁰⁷ "An identifiable elite bound by knowledge and expertise of a common policy problem and a shared concern for its resolution" (Bennett, 1991, p. 224).

On the other hand, the ACF has been criticised by positivist scholars for not adequately incorporating the role of either material interests or the interactions between ideas and interests in its hypotheses about coalition formation and policy change (Szarka, 2010; Hann, 1995; Ladi, 2005; Schlager, 1995; Nohrstedt, 2010). On this issue, even Sabatier and Jenkins-Smith (1999, p. 135) themselves have acknowledged ACF's "failure to recognize the role of individual/organizational self-interest" in the formation of coalitions. Schlager (1995, p. 204) notes that, although the framework provides a "sophisticated explanation of the role that beliefs, information and policy learning play in affecting policy choices, it lacks an adequate explanation of policy action". In other words, the display of similar belief systems is not perceived by the author to be sufficient explanation for why actors coordinate to form coalitions and why they maintain these coalitions. Strategic calculations and political compromises are, thus, highlighted as necessary complements to explanations of action (Schlager, 1995).

Another criticism raised against the framework consists in its inability to properly account for the 'strange bedfellows' situation, in which coalitions are formed by actors sharing similar interests and aims but not similar beliefs (Hann, 1995, pp. 23–4; Szarka, 2010). Szarka (2010), for instance, provides a relevant example of these types of situations in European wind policies, in which coalitions were formed by NGOs and by the industry of green technologies, both with different normative goals but similar interests in promoting renewable energy. Also related to the importance of considering interest-based explanations within the ACF, Parsons (1995, p. 202), emphasises the need to consider core interests as motivations for learning, instead of relying exclusively on cognitive rational learning processes based on new technical information, as proposed by the ACF.

In order to address these criticisms, this thesis has explicitly incorporated the analysis of changes in incentives (costs and benefits) and resource redistribution among the main causal pathways of policy change investigated. It has thus provided a theoretical revision of the four analytical parameters and observable implications proposed by the ACF to explain policy change, with the explicit intent of incorporating interest-based explanations (see chapter 2, section 2.3, table 3). Moreover, the qualified definition of policy-oriented learning, including elite networking, clearly

emphasises the necessity of a 'shared concern' for the resolution of a policy problem as one of the motivators of learning. Finally, to account for the identification of coalitions of 'strange bedfellows', the narratives of actors were associated with broader discursive frameworks, but coalitions were identified according to the main empirically identifiable positions (or 'policy core policy preferences') of actors in relation to policy problems/regulatory change. Because of the non-consideration of normative beliefs as a basis for the identification of coalitions, coalitions of members departing from different ideological standpoints (the strange bed-fellows' situation) could, therefore, be successfully considered, such as in the case of the preservationist/socio-environmentalist coalition that formed to oppose regulatory changes in the pesticide case.

Finally, on the methodological side, the ACF has been criticised for the difficulties involved in empirically identifying and comparing belief systems (Schlager, 1995, p. 24; Hann, 1995; McBeth, Jones and Shanahan, 2014). This difficulty has been demonstrated in at least four ways during this research. First, individuals were not necessarily willing to reveal their normative beliefs in interviews and public statements, and it was impossible to assess whether what they said represented their normative beliefs or not. Second, the formulation of questionnaires and interview questions had clear limits in validly assessing normative beliefs due to their level of abstraction and their instability. Finally, even if individuals could be identified as having particular empirical beliefs ('policy core policy preferences') they could still find it more beneficial to act against their normative beliefs, depending on their political and professional circumstances. A politician from a left-wing party, for example, might have to prioritise big businesses in tax policies for electoral reasons even if this is not part of his or her normative beliefs. It was concluded, therefore, that normative beliefs might not always be adequate indicators of coalition formation and of the positions adopted by actors and therefore only the empirical aspect of 'policy core beliefs' was utilised for the identification of coalitions.

This thesis has, thus, addressed this methodological difficulty by analysing 'policy core policy preferences' instead of including both the normative and empirical elements that characterise 'policy core beliefs' and by linking these empirical policy preferences to specific discursive categories that are representative of shared

interpretive schemes (but that does not necessarily imply that actors actually believe in these more normative shared interpretations – the assessment of that would require a more in depth/comprehensive kind of data than public statements). It has not been attempted, in this manner, to identify the actual normative beliefs held by actors but simply to locate their narratives in a broader interpretive framework. Additionally, this thesis proposed an alternative definition of policy change, distancing itself from the definition of policy change provided by the ACF, according to which policy change is a result of belief change¹⁰⁸. In this thesis, policy changes have been defined as *noticeable changes in the content of regulations*, facilitating their identification and also allowing for the consideration of various factors (in addition to beliefs) in the causal process that leads to policy change.

In short, one of the main theoretical debates to which this thesis contributes is related to the ACF's incorporation of material interests among its causal mechanisms and to the investigation of the ways in which they lead to policy or regulatory change. It does so, however, without losing sight of the importance of shared interpretive schemes, epitomised by the analysis of Brazilian environmental discourses (chapter 3) and relied upon for the categorisation of narratives during the analysis of debates.¹⁰⁹ But apart from its role in aiding in the identification of coalitions, the implications of changes in normative values for policy change acknowledged by this thesis are recognisably limited. In this sense, this thesis could be subjected to the same kind of criticisms of the ACF that are advanced by interpretivist scholars, namely, that normative values are not properly considered in the investigation of policy change. This limitation is, however, justified by the methodological difficulties encountered in identifying and attributing normative values/beliefs to actors during the empirical analysis of public statements.¹¹⁰

¹⁰⁸ According to the ACF, policies are “translations” of beliefs and “can be conceptualized and measured hierarchically like belief systems” (Jenkins-Smith, Nohrstedt, Weible and Sabatier, 2014, e-book 48%). In the ACF, therefore, changes in beliefs lead to changes in policies.

¹⁰⁹ The ideological framework described in chapter 3 provided a systematisation tool in a way that allowed for the comparison of coalitions across cases. It was not meant to imply, however, that actors held the specific normative values associated with each of the discourses, but simply that their narratives could be associated with these shared interpretive schemes.

¹¹⁰ A complementary collection of more in-depth interviews can potentially address that limitation in the future.

8.3.2. Contributions to Empirical Debates

8.3.2.1. *Is there an actual 'roll-back' in Brazilian environmental standards?*

As debated in chapter 1 (section 1.2), the occurrence of an environmental roll-back (*'retrocesso ambiental'*) in Brazilian environmental regulations has become, since at least 2009, almost a 'mantra' repeated *ad nauseum* by the national media, scholars and *environmental* activists. This roll-back has been defined in the literature as a "real tendency of diminishing, adulteration and elimination of environmental protection standards" (Lima and Garcia, 2014, p. 273). The term could, however, certainly benefit from further qualification and analysis. The aim of this section, therefore is to assess the roll-back claim, assessing whether regulatory changes actually point to an alteration of standards in the three policy subsystems investigated, and reflecting on the actual nature and practical impacts of this alleged "elimination of environmental protection standards".

The results obtained with this analysis support claims of a 'roll-back' regarding environmental standards. In at least two of the three areas investigated, the regulatory changes advanced actually represented the diminishing of environmental protection requirements through a decrease in the strictness of standards. In the forestry subsystem, for instance, the new 2012 Forest Code resulted in the weakening of the preservation requirements of forested areas in riparian zones and as a percentage of private properties (legal reserves). In the pesticide case, authorisation for the import and use of unregistered products in cases of zoo- and phyto-sanitary emergencies as well as the suggestion of a restructuration of the institutions in charge of the registration of new products (to exclude the environmental and health ministries) also represented a decrease in environmental controls. Lastly, the ABS case did not reveal an environmental roll-back in terms of making environmental controls less strict, but did reveal a roll-back in the rights of prior and informed consent of indigenous and traditional communities. Because these groups are traditionally associated with the sustainable use of natural resources this might have indirect environmental impacts.

These findings, however, can still be put to further tests. First, the possibility that these apparently 'less strict' standards are not simply a reflection of a

different regulatory logic aiming to substitute a harsh deterrence/ 'command and control' approach with a more hands-off approach characteristic of 'responsive regulation' (Ayres and Braithwaite, 1992) or 'smart regulation' approaches (Gunningham and Grabosky, 1998) has to be considered. These extensively debated regulatory approaches propose a stronger reliance on the self-regulatory power of the private sector and a pyramidal approach to enforcement, intended to focus limited state resources on actors less likely to adhere to regulations, allowing more freedom for actors that are usual compliant. Although this is not a dominant interpretation, (see Gunningham and Grabosky, 1998; Baldwin, 2005), some have interpreted these new regulatory rationales as a simple disguise for actual de-regulation (Tombs and Whyte, 2013; Tombs, 2015). In other words, according to this view, this new regulatory rationale of responsive/smart regulation would not actually alter the logic of deterrence, but simply substitute it by something less strict and demanding to the regulated sectors.

Departing from evidence of this potential interpretation, it becomes necessary to inquire into whether allegations of the 'elimination of environmental standards' related to Brazilian 'roll-back' claims are not simply the result of the adoption of a new regulatory rationale akin to the 'responsive regulation' rationale discussed above. This would moreover, reflect an economic rationalist discourse, as explained in chapter 3. As observed in that same chapter, however, the economic rationalist mentality has not been fully manifested in Brazilian environmental debates but exists in an altered state, which has been called the administrative economic rationalist discourse. It cannot be stated, as a consequence, that the claims of environmental roll-back are a simple reflection of a particular interpretation of a new regulatory logic (more responsive and less based on 'command and control') by the government. Although the narrative of stronger reliance on the private sector's capacity to self-regulate and preserve the environment was at times used, a reduction in the dependence of the government's centralised controls has not materialised in practice.

An enlightening example of this absence of economic rationalism and actual change in regulatory rationale was the attempt to develop a system of forest credits, according to which farmers would be able to buy stocks of preserved forests

from other farmers (who were preserving more) through a digital platform. This system would facilitate forest preservation and compliance with the forest regulations through a voluntary market mechanism, and would also serve to economically reward those farmers that were maintaining more forested areas, incentivising them to maintain them. Although forest regulations provided for the development of such a 'forest exchange' system (both before and after the 2012 changes), it had not yet been implemented at the time of writing (September 2016). Interviews have revealed, moreover, pessimistic perspectives from the private sector regarding the actual intent of the government to rely more decisively on forestry regulatory strategies based on self-regulation by the private sector and such market-based strategies (interview 53). Similarly, the changes allowing unregistered pesticides to be imported in cases of zoo- or phyto-sanitary emergencies did not include any exceptional requests from the importers, nor alternative methods for monitoring the use of these products (i.e. self-monitoring). This also supports, therefore, that no actual change took place in the regulatory rationale of environmental regulations in Brazil, and that the 'roll-back' allegations were not a simple misinterpretation of a different trend (i.e. a change in regulatory rationale).

Regarding, the ABS case, however, the possibility of a change in regulatory rationale (instead of an actual 'roll-back') could not be discarded. As opposed to the other two cases, the new regulations in ABS clearly indicated a more explicit reliance on the self-regulatory capacity of the private sector. The greater freedom provided for industries and researchers to access genetic resources without the need for previous authorisation from the government, and to use self-declaratory requests to gain genetic access, point to a rationale more akin to smart and responsive regulation logics. Whether the actual implementation of the law will reflect these original intentions remains, however, to be seen.

In sum, from the evidence of implementation available at the time this thesis was finalised (September 2016), the reduction in the strictness of environmental standards had not been decisively accompanied by a consistent alteration in the rationale of enforcement proposed. The possibility that the phenomenon investigated by this thesis was not an actual 'roll-back' (in the deregulatory sense), but simply a change in the rationale of regulations proposed is, under further scrutiny, not

supported. At least two of the three cases investigated (forest and pesticide) demonstrated an actual relaxation of environmental controls or requirements, with no offsetting in terms of a stronger emphasis on self-regulation or alternative methods of monitoring or enforcement.

8.4. Conclusion

This analysis could not be concluded without a return to the questions that motivated it in the first place. In what follows, I provide summarised answers to each of the four questions that were posed in the introductory chapter (chapter 1). I also point to the limits on the external validity of these claims that the research design of this thesis entailed.

The first question inquired *whether the regulatory changes investigated actually point to a 'roll-back' in Brazilian environmental standards*. As debated in the previous section, in at least two of the three cases investigated standards have actually become less strict in terms of environmental demands. The possibility that the roll-back claims refer not to an actual process of deregulation, but to a change in the regulatory rationale adopted by the government towards a more 'hands-off' approach, has also been assessed and rejected for two of the three cases. This was not found to be the case due to the lack of evidence of alternatives (such as market mechanisms, self-regulatory principles and so on) being put in place to off-set the reduction in environmental requirements. This thesis, has, thus, provided support to roll-back allegations as an actual diminishing of standards of environmental protection, at least in the forest and pesticide case studies.

The second question was *whether the four sources of policy change advanced by the ACF (or some combination of them) are sufficient motivators of policy change*. This thesis found that a combination of internal and external events might be sufficient motivators of policy change in the absence of a hurting stalemate. Therefore, in situations in which there are not consequential incentives, interdependence among coalitions and uncertainty involved in the outputs of the policy change, only internal and external events were found to be sufficient sources of policy change. If these three later criteria are present, external and internal events are not sufficient and policy-

oriented learning and/or negotiation also have to occur in order for policy change to happen.

An acknowledged limitation of this answer concerns the small number of cases investigated, which did not allow for the observation of much variability. For instance, in all the three cases investigated, external and internal events happened simultaneously, so the identification of the specific causal influences of each of them in the process of regulatory change was not possible. Therefore, the specific role of each of them (individually) could not be assessed. On the other hand, the fact that negotiated agreement and learning occurred in only one of the cases, allowed for verification of the factors that are conducive to them. In other words, it allowed for the analysis of the differences between the ABS case and the other two, which pointed to the importance of a hurting stalemate and was one of the contributions of this thesis to the development of the ACF.

The third question posed in the introductory chapter was *whether the four sources of policy change advanced by the ACF (or some combination of them) are necessary motivators of policy change*. The answer to this question is that the four sources of policy change are not necessary for policy change to occur in every situation, but internal and external events were always found to be. In situations in which there are consequential incentives, interdependence among coalitions and uncertainty involved in the outputs of the policy change (i.e. a hurting stalemate), however, learning and negotiated agreement might also be necessary. Similarly to the answer provided to the previous question, the limits of this answer are related to the small number of cases investigated by this thesis. Further research with other case studies is, therefore, deemed necessary to strengthen this and the other claims made by this thesis.

Finally, the initial chapter proposed an investigation of *what factors favoured the occurrence of learning and negotiated agreement among coalitions, when they occurred*. The results of the empirical and theoretical analysis pursued by this thesis point to the existence of a 'hurting stalemate' as the most important factor, and redefined this concept according to the high incidence of three criteria, namely, consequential incentives, uncertainty and interdependence. The hurting stalemate was particularly high in the ABS case, and mostly attributed to the fact that the Nagoya

Protocol increased the costs and uncertainty for two highly interdependent coalitions (the neo-developmentalists and the administrative economic rationalists) of not having a national law on access to genetic resources and benefit sharing. These latter factors (costs, uncertainty and interdependence), therefore, rely on internal and external events, which bring them about. They are, thus, intervening variables between events and policy change. The limitations identified in this part of the analysis were also related to the small number of cases. Additionally, the fact that learning and negotiated agreement occurred simultaneously did not allow for the disentanglement of their individual causal influences, as with external and internal events. Finding cases that more clearly allow for this disentanglement is a desirable goal for future analysis.

Hence, the main theoretical contribution of this thesis consists in the qualification of the ACF's hypothesis about policy change and the investigation of the causal pathways leading to it. The thesis has maintained that not all the four sources of policy change identified by the ACF are necessary for policy change and that internal and external events might be the only necessary ones, depending on the case. The main difference between the two cases in which negotiated agreement and learning did not occur and the one in which it occurred refers to the type of the actors involved. In the ABS case, two coalitions of politically and economically powerful actors were involved (bio-industry and agri-business). As a consequence, the 'hurting stalemate' that characterised their disagreements had to be solved, leading to learning and negotiation. This thesis has shown, therefore, that internal and external events combined might be sufficient motivators of policy change particularly in situations in which the coalitions of actors are more heterogeneous in terms of political and economic power. The application of the ACF to the Brazilian context of low political openness and medium degree of consensus required for decision-making reveals, in this manner, the importance of a highly relevant criteria in general political science debates (see for example Wilson, 1989) which has not been sufficiently emphasised by the ACF, namely the distribution of power among coalitions. This finding points to the importance of considering the characteristics of the coalitions involved when applying the ACF to countries with opportunity structures similar to the Brazilian one. Finally, another theoretical contribution of this thesis has been to qualify the definition of a few of the ACF's concepts (such as learning and negotiated agreement) and also to

apply it to a context to which it has not been traditionally applied. It has also addressed many of the criticisms the ACF has received, both from positivists and interpretivist scholars.

In empirical terms, the thesis has provided support for the alleged occurrence of an environmental roll-back in Brazilian environmental regulations and contrasted this claim with alternative explanations related to a change in regulatory rationale. Finally, the thesis has also contributed with an original theoretical and historical framework of Brazilian environmental discourses that can be applied to future studies of Brazilian environmental regulations and policies.

The next steps of this journey shall follow at least three main pathways. First, they shall strengthen the proposed qualifications to the ACF through the analysis of a larger set of cases both in Brazil and in other contexts. They would, in this manner, clarify whether these propositions shall be restricted to contexts with an opportunity structure similar to the Brazilian one, or whether they can be safely generalised. Second, they shall, through the analysis of more cases, answer whether the causal role of internal and external events on one hand, and of negotiated agreement and learning on the other, can be more clearly discernible in relation to policy change. In other words, a larger set of cases might help to isolate the effect of each of these two sources of policy change, in situations in which there is no stalemate. Similarly, a clearer differentiation of the effects of learning and negotiations for policy change might be achieved through the analysis of cases in which only one of both occur. Finally, the next steps shall involve additional efforts to overcome difficulties in assessing the role of normative values' in policy change, without losing sight of the attested importance of interests.

APPENDIX I

List of Interviewees (anonymised)

Interview No.	Interviewee affiliation	Date	Location
Interview 2	Representative of bio-industry	Conducted on 03/09/2014	São Paulo
Interview 3	Academic from University of Sao Paulo focused on the study of forest policies	Conducted on 04/09/2014	São Paulo
Interview 4	Scholar from Getulio Vargas Foundation (GVCes) focused on environmental and agriculture policies	Conducted on 10/09/2014	São Paulo
Interview 5	Consultant for an NGO focused on Amazonian indigenous groups	Conducted on 10/09/2014	São Paulo
Interview 6	Representative of bio-industry (association of cleaning products)	Conducted on 16/09/2014	Brasília
Interview 7	Representative of the Ministry of Science and Technology	Conducted on 18/09/2014	Brasília
Interview 8	Representative of the bio-industry	Conducted on 01/10/2014	Brasília
Interview 9	Representative of the Ministry of Environment	Conducted on 27/11/2014	Brasília
Interview 10	Former Secretary of Environment and former Secretary of State for Science and Technology	Conducted on 08/10/2014	São Paulo
Interview 12	Representative of the federation of Agro-industries from the state of São Paulo (FIESP Agro)	Conducted on 26/09/2014	Brasília
Interview 13	Representative of the NGO Institute for Society, Nature and Population (ISPN)	Conducted on 18/09/2014	Brasília
Interview 14	Representative of the Brazilian forum on NGOs and Social Movements (FBOMS)	Conducted on 06/09/2014	São Paulo
Interview 15	Representative of the Foreign Affairs Ministry	Conducted on 13/10/2014	Brasília
Interview 16	Former representative of the Brazilian Forestry Service. Former member of the Institute for Environmental Research in the Amazonia (IPAM)	Conducted on 13/10/2014	Brasília

Interview 17	Representative of Conservation International	Conducted on 01/10/2014	Rio de Janeiro
Interview 18	Lawyer of the Lower Chamber	Conducted on 23/09/2014	Brasília
Interview 19	Representative of the Department of Biodiversity and Forests of the Ministry of Environment	Conducted on 25/09/2014	Brasília
Interview 20	Representative of the Department of Genetic Resources of the Ministry of Environment	Conducted on 26/09/2014	Brasília
Interview 21	Former representative of the genetic resources department. Representative of the department of forestry of the Ministry of Environment	Conducted on 26/09/2014	Brasília
Interview 22	Representative of USAID - involved with biodiversity policies	Conducted on 16/10/2014	Brasília
Interview 23	Representative of the Climate Change division of the Ministry of Environment	Conducted on 30/09/2014	Brasília
Interview 24	Representative of the protected areas department of the Ministry of Environment	Conducted on 02/10/2014	Brasília
Interview 25	Former Secretary for Science and Technology Policy in the Ministry of Science and Technology, co-chair of the IPCC Science Working Group	Conducted on 09/10/2014	São Paulo
Interview 26	Representative of the Department of Biodiversity and Forests of the Ministry of Environment	Conducted on 09/11/2014	Brasília
Interview 27	Former Federal Deputy/ Former executive secretary of the climate change Brazilian forum	Conducted on 11/10/2014	São Paulo
Interview 28	Representative of the department of forests of the Ministry of Environment	Conducted on 02/10/2014	Brasília
Interview 29	Representative of agri-business (soy production)	Conducted on 05/09/2014	Tupã - SP
Interview 30	Academic from University of Campinas/ Leading scientist of the scientific assessment of the forest code	Conducted on 07/10/2014	Campinas - SP

Interview 31	Representative of Department of Biodiversity and Forests (Caatinga Biome) of the Ministry of Environment	Conducted on 02/10/2014	Brasília
Interview 32	Representative of the Department for the prevention of deforestation of the Ministry of Environment	Conducted on 16/10/2014	Brasília
Interview 33	Representative of the NGO Institute for Environmental Research in the Amazonia (IPAM)	Conducted on 20/10/2014	Brasília
Interview 34	Representative of the Department of Biodiversity Conservation of the Ministry of Environment/ Former representative of World Wildlife Fund (WWF)	Conducted on 24/10/2014	Brasília
Interview 35	Former Secretary of Biodiversity and Forests of the Ministry of Environment/ Deputy Secretary of WWF	Conducted on 10/12/2014	Brasília
Interview 36	Member of the Brazilian Academy of Science / Member of the IPCC	Conducted on 14/11/2014	Rio de Janeiro
Interview 37	Former member of the Brazilian Institute of Forestry Development (IBDF)	Conducted on 08/12/2014	Brasília
Interview 38	Representative of the Secretary of Strategic Affairs of the Government	Conducted on 04/11/2014	Brasília
Interview 39	Representative of Global Environmental Facility (GEF)	Conducted on 22/10/2014	New York (by phone)
Interview 40	Representative of the Ministry of Foreign Affairs	Conducted on 23/10/2014	Brasília
Interview 41	Consultant for Conservation International about Forest Policies/ Former director of the department of prevention of deforestation	Conducted on 08/12/2014	Brasília
Interview 42	Minister of the Environment	Conducted on 30/10/2014	Brasília
Interview 43	Representative of the NGO Socio-Environmental Institute (ISA)	Conducted on 28/10/2014	Brasilia

Interview 44	Representative from IBAMA (environmental enforcement agency of the ministry of the environment)	Conducted on 04/12/2014	Brasília
Interview 45	Representative of the Ministry of Agriculture	Conducted on 24/10/2014	Brasília
Interview 46	Representative of the NGO Socio-Environmental Institute (ISA)	Conducted on 05/11/2014	Brasília
Interview 47	Representative of the department of biodiversity conservation of the Ministry of Environment	Conducted on 31/10/2014	Brasília
Interview 48	Representative of the Brazilian Forest Service	Conducted on 31/10/2014	Brasília
Interview 49	Representatives of the Laboratory of the Brazilian Forest Service	Conducted on 31/10/2014	Brasília
Interview 50	Representative of the Secretary of Strategic Affairs of the Government (planted forests department)	Conducted on 07/11/2014	Brasília
Interview 51	Representative of the Secretary of Strategic Affairs of the Government (planted forests department)	Conducted on 07/11/2014	Brasília
Interview 52	Representative of the Chico Mendes Institute of the Ministry of Environment	Conducted on 12/11/2014	Brasília
Interview 53	Representative of the BVRio (in charge of the development of a forest stock market system)	Conducted on 13/11/2014	Rio de Janeiro
Interview 54	Representative of the department of genetic resources of the Ministry of Environment	Conducted on 03/12/2014	Brasília
Interview 55	Representative of the Brazilian Association of Anthropology	Conducted on 04/12/2014	Brasília
Interview 56	Representative of Amazonian Indigenous Communities	Conducted on 04/12/2014	Brasília
Interview 57	Representative of the Secretary of pesticides (agricultural defence) of the Ministry of Agriculture	Conducted on 05/12/2014	Brasília (by phone)
Interview 58	Representative of the Industrial Environmental Safety of the Ministry of Environment	Conducted on 08/12/2014	Brasília

Interview 59	Representative of the Ministry of Agriculture (juridical consultant)	Conducted on 05/12/2014	Brasília
Interview 60	Academic focused on pesticides' regulations	Conducted on 23/07/2015	London (via Skype)

* Interviews 1 and 11 were excluded from the list because they were not considered relevant.

Chapter 4

Appendix I

Actor	Appearances	Affiliation/party/role	Position in terms of regulatory changes
1. Aldo Rebelo	389	Federal Deputy/PCdoB-SP/rapporteur of the bill	Extensive changes
2. Marco Maia	224	Federal Deputy/PT-RS/President of the Deputies' Chamber 2010-2012	No clear position
3. Sarney Filho	165	Federal Deputy/PV-MA/coordinator of the environmental caucus	No changes
4. Dilma Rousseff	146	President of Brazil/PT	Partial changes
5. Paulo Piau	143	Federal Deputy/PMDB-MG	Extensive changes
6. Valdir Colatto	122	Federal Deputy/PMDB-SC	Extensive changes
7. Cândido Vaccarezza	93	Federal Deputy/PT-SP	Partial changes
8. Luis Carlos Heinze	70	Federal Deputy/PP-RS	Extensive changes
9. Ivan Valente	71	Federal Deputy/Psol-SP	No changes
10. Izabella Teixeira	68	Minister of the Environment after 2010	Partial changes
11. Reinhold Stephanes	60	Minister of Agriculture (2007–2010)	Extensive changes
12. Moacir Micheletto	58	Federal Deputy/PMDB-PR	Extensive changes
13. Ronaldo Caiado	54	Federal Deputy/DEM-GO	Extensive changes
14. Luiz Henrique	50	Senator/PMDB-SC	Partial changes
15. Arlindo Chinaglia	46	Federal Deputy/PT-SP	Partial changes
16. Homero Pereira	41	Federal Deputy/PSD-MT/ coordinator of the rural caucus	Extensive changes
17. Antonio Carlos Magalhães	40	Federal Deputy/DEM-BA	Extensive changes
18. Sérgio Carvalho	39	Federal Deputy/PSDB-RO	Extensive changes
19. Antonio Carlos Mendes Thame	38	Federal Deputy/PSDB-SP	No clear position
20. Henrique Eduardo Alves	37	Federal Deputy/PMDB-RN	Extensive changes
21. André Lima	31	NGOs – SOS Mata Atlântica/Instituto Socio-Ambiental (ISA) /Instituto de Pesquisa Ambiental da Amazônia (Ipam)	No changes
22. Edson Duarte	30	Federal Deputy/PV-BA	No changes
23. CONTAG (No name mentioned)	30	Rural Workers	Partial Changes
24. Jilmar Tatto	29	Federal Deputy/PT-SP	Partial changes
25. Paulo Teixeira	28	Federal Deputy/PT-SP	Partial changes

26. Michel Temer	28	Vice-president/Federal deputy until 2011/PMDB-SP	No clear position
27. Jorge Khoury	25	Federal Deputy/DEM-BA	Partial changes
28. Mendes Ribeiro Filho	24	Minister of Agriculture (2011–2013)	Partial changes
29. Kátia Abreu	24	Senator (PMDB-TO) until 2014/Minister of Agriculture after 2014/Representative of the National Confederation of Agricultura (CNA) – Industry	Extensive changes
30. Wagner Rossi	23	Minister of Agriculture between (2010–2011)	Partial changes
31. Carlos Minc	22	Minister of Environment (2008–2010)	No changes
32. Alfredo Sirkis	22	Federal Deputy/PV-RJ	No changes
33. José Sarney	22	Senator/PMDB-AP	No clear position
34. Márcio Macêdo	21	Federal Deputy/PT-SE	Partial changes
35. Rodrigo Rollemberg	18	Senator/PSB-DF	No changes
36. Eduardo Gomes	17	Federal Deputy/PSDB-TO	No clear position
37. Marina Silva	17	Minister of Environment (2003–2008)/Senator PT and PV-AC (1995–2003/2003–2011)	No changes
38. Afonso Florence	16	Federal Deputy/PT-BA	Partial changes
39. Luiz Sérgio	16	Federal Deputy / PT - RJ / Minister of Institutional Relations (Jan-Jun 2011)	Partial changes
40. Abelardo Lupion	15	Federal Deputy/DEM-PR	Extensive changes
41. Jorge Viana	14	Senator (PT - AC)	Partial changes
42. Darcísio Perondi	14	Federal Deputy/PMDB-RS)	Extensive changes
43. Celso Maldaner	14	Federal Deputy/PMDB-SC	Extensive changes
44. Pepe Vargas	13	Federal Deputy/PT-RS (2007–2012/2014–present)/Minister of Agrarian Development (2012–2014)	Partial changes
45. Giovanni Cherini	13	Federal Deputy/PDT-RS	No clear position
46. Rodrigo Justus	13	Industry (Agribusiness) CNA	Extensive Changes
47. Giovanni Queiroz	11	Federal Deputy/PDT-PA	Extensive changes
48. Sérgio Leitão	11	NGO – Greenpeace	No changes
49. Julio Semeghini	9	Federal Deputy/PSDB-SP	Partial changes
50. Alceu Moreira	9	Federal Deputy/PMDB-RS	Extensive changes
51. Fernando Gabeira	8	Federal Deputy/PV-RJ	No changes
52. Wandenkolk Gonçalves	8	Federal Deputy/PSDB-PA	Extensive changes
53. Roberto Rocha	8	Federal Deputy/PSDB-MA	No changes
54. Roberto Klabin	8	NGO – SOS Mata Atlântica	No changes
55. Edinho Araújo	8	Federal Deputy/PMDB-SP	Extensive changes
56. Mario Mantovani	8	NGO – SOS Mata Atlântica	No changes
57. Fernando Henrique da Fonseca	6	Industry – President of the Brazilian Association of Planted Forests	Extensive Changes
58. Gerd Sparovek	6	Scientist – University of Sao Paulo	No changes
59. Helena Nader	5	Scientist – President of SBPC	No changes
60. Celso Moretti	5	Scientist (EMBRAPA)	Partial changes
61. Jean Paul Metzger	3	Scientist – University of Sao Paulo	No changes
62. Raul Krauser	3	Rural Workers – Via Campesina	No changes
63. Maria Tereza Piedade	3	Scientist (Inpa)	No changes
64. José Antônio Aleixo da Silva	2	Scientist – Secretary of SBPC	No changes

65. Ricardo Rodrigues	2	Scientist – University of São Paulo (Esalq)	No changes
66. Carlos Alfredo Joly	2	Scientist	No changes
67. João de Deus Medeiros	2	Scientist (Federal University of Santa Catarina)	Partial changes
68. Cezar Augusto dos Reis	2	Industry (Brazilian Association of Planted Forests Producers)	Partial Changes
69. José Luciano Penido	1	Industry – Fibria	Partial Changes
70. Elisabeth Carvalhaes	1	Industry – Associação Brasileira de Papel e Celulose (Abracelpa)	Partial Changes
71. Neveraldo Oliboni	1	Rural Workers – Federation of Agriculture Workers from Rio Grande do Sul	Partial Changes
72. Walfrido Tomaz	1	Scientist (EMBRAPA)	Partial changes
73. Luis Carlos Moraes	1	Scientist – Centro Universitário do Oeste Paulista	Extensive Changes
74. Vicente Almeida	1	Sindicato Nacional dos Trabalhadores de Pesquisa e Desenvolvimento Agropecuário,	No changes

Appendix II

Number of actors with an identifiable position separated per party or social group

Party/Social group	Total number of actors (people) with an identifiable position
PV	4
Psol	1
PSB	1
NGOs	4
Scientists	13
Industry (Planted Forests)	4
PSDB	3
PT	8
Rural Workers	4
DEM	3
PMDB	11
PP	1
PCdoB	1
PDT	1
Industry (Agribusiness)	2
Executive Power	7
Total	68

Source: Produced by the author (please refer to appendix I for more details)

Appendix III - Codification of the arguments of those promoting extensive changes

Code	Author/date/source	Quotes coded
(1) Agribusiness – contribution to the economy	Abreu, Katia - 20/10/2012 – Folha de São Paulo	<p>“[they] ignore the economic and social benefits that rural production has brought to Brazil”¹¹¹</p> <p>“...several year of surplus in the trade balance...”¹¹²</p>
(2) Food Security	Abreu, Katia - 20/10/2012 – Folha de São Paulo	<p>“FAO has affirmed, repeatedly, that the world needs to increase food production by 40% and that Brazil is one of the qualified countries to make this contribution”¹¹³</p> <p>“The expenditures of Brazilians with food were reduced from 48% to 13%”¹¹⁴</p>
(3) Nationalist Argument	Abreu, Katia - 20/10/2012 – Folha de São Paulo	<p>“It is good to bear in mind that the term "legal reserve" exists only in Brazilian legislation. The same applies to Areas of Permanent Preservation (APPs), which do not exist in the countries which are pressuring us to have them”¹¹⁵</p> <p>“Brazil is the only country in the world that produces its food in less than a third of the territory --27%. It is also the only one to keep untouched no less than 61% of its biomes”¹¹⁶</p> <p>‘We proposed at the recent Rio + 20 and other multilateral fora, that the APPs should be adopted worldwide. Why must rivers be defended only here if the water issue is global?’¹¹⁷</p>
(4) Legal Security	Abreu, Katia - 20/10/2012 – Folha de São Paulo	<p>“The first and foremost [benefit of the new code] is legal security for producers”¹¹⁸</p> <p>“The new Forest Code replaces the one from 1965 and is a patchwork of provisional measures, decrees, ordinances and regulations, imposed, for years, without any public debate, by bureaucrats of the Ministry of Environment. It had never been voted on by Congress”¹¹⁹</p>

Source: Translated by the author based on the articles mentioned.

¹¹¹ *Ignora os benefícios econômicos e sociais que a produção rural tem trazido ao Brasil*

¹¹² *anos de superávit da balança comercial*

¹¹³ *A FAO tem afirmado, reiteradas vezes, que o mundo precisa aumentar em 40% a produção de alimentos e que o Brasil é um dos países mais qualificados a dar essa contribuição.*

¹¹⁴ *o gasto do brasileiro com alimentos foi reduzido de 48% para 13%.*

¹¹⁵ *É bom lembrar que o termo "reserva legal" só existe na legislação brasileira. O mesmo se dá com as áreas de preservação permanente (APPs), que também não existem nos países que nos pressionam a tê-las.*

¹¹⁶ *O Brasil é o único país do mundo que produz o seu alimento em menos de um terço do território -- 27%. É, também, o único a manter intocados nada menos que 61% dos seus biomas.*

¹¹⁷ *... 'propusemos, na recente Rio+20 e em outros fóruns multilaterais, que as APPs sejam adotadas em todo o mundo. Por que só aqui os rios devem ser defendidos se a questão da água é mundial?*

¹¹⁸ *O primeiro e mais importante-- é a segurança jurídica para os produtores.*

¹¹⁹ *O novo Código Florestal substitui o de 1965 e uma colcha de retalhos de medidas provisórias, decretos, portarias e regulamentos, impostos, durante anos, sem nenhum debate público, por burocratas do Ministério do Meio Ambiente. Nunca havia sido votado pelo Congresso Nacional.*

Appendix IV - Codification of the arguments of those opposing changes

Code	Author/ date/source	Quotes coded
(1) Capture	Silva, Marina – 26/10/2012 – Folha de São Paulo	"...the reforms of the code are not justified by the defense of small farmers and, in fact, serve the interests of large companies" ¹²⁰
(2) Amnesty	Silva, Marina – 26/10/2012 – Folha de São Paulo	"Art. 67 waives properties smaller than four fiscal modules to restore Legal Reserves cleared before July 2008. This is amnesty. The IPEA estimates that 3.9 million hectares will no longer be recovered" ¹²¹ "Art. 63 opens several exceptions that amnesty illegal deforestation on hilltops and slopes, and art. 61-A offers the same kindness, depending on the property size, to those who illegally deforested banks of rivers, water springs, lakes and trails" ¹²²
	Silva, Marina 12/10/12 – Folha de São Paulo	"They say it is because of soybeans, cattle, gold. But it is the certainty of impunity – allowed by the amnesty between the government and the majority – which drags the backwardness chain in the Congress" ¹²³
	Telles, Raul; Lima, André and Pinto, Luís Fernando - 27/05/2014 – Folha de São Paulo	"Having as its main objective the amnesty to deforestation carried out before July 2008, the new law resulted in waiving the environmental recovery of at least 29 million hectares that should have been protected by the earlier law, as pointed by a study published by "Science" magazine" ¹²⁴
(3) Environmental losses	Silva, Marina – 26/10/2012 – Folha de São Paulo	"In the mangroves and swamps, degraded areas will not be recovered and new areas can be occupied with shrimp farming and urban settlements (Art. 11a). The riparian forest ceases to be measured considering the margin of the river when the water level is higher and the definition of "hilltop" is changed, reducing in some cases, up to 90% of the protected area" ¹²⁵ "Whoever has not been amnestied, can still use 50% of exotic plants (commercial) to recover degraded areas (Articles 61-A 13 and 66, paragraph 3)" ¹²⁶
(4) Agribusiness does not feed Brazilians	Silva, Marina – 26/10/2012 – Folha de São Paulo	"Isn't it a fact that agribusiness (which importance in macroeconomics and international trade no one denies) is not placing "food on the table" of the Brazilian people, and that 60% of basic food is guaranteed by family farmers, also responsible for 7 out of 10 jobs in the field?" ¹²⁷
(5) Productivity can be improved through the use of more technology	Silva, Marina – 26/10/2012 – Folha de São Paulo	"Isn't it a fact that there are more than 140 million hectares of degraded areas which are unproductive or which have extremely low productivity and that it is possible to double agricultural production and the herd of cattle without clearing new areas, just by adding simple and affordable technology?" ¹²⁸

Source: Provided by the author based on the articles mentioned.

¹²⁰ *as reformas no código perdem a justificativa de defender os pequenos agricultores e, de fato, atendem ao interesse de grandes empresas.*

¹²¹ *O art. 67 dispensa imóveis menores que quatro módulos fiscais de recuperar reserva legal desmatada até julho de 2008. Isso é anistia. O Ipea calcula que 3,9 milhões de hectares deixarão de ser recuperados.*

¹²² *O art. 63 abre várias exceções que anistiam desmatamento ilegal em topos de morro e encostas, e o art. 61-A oferece as mesmas bondades, dependendo do tamanho do imóvel, a quem desmatou ilegalmente margens de rios, nascentes, olhos d'água, lagos e veredas.*

¹²³ *Dizem que é a soja, o gado, o ouro. Mas é pela certeza da impunidade -propiciada pela anistia feita entre governo e maioria- que arrasta o correntão do atraso no Congresso*

¹²⁴ *Tendo como objetivo central a anistia a desmatamentos realizados até julho de 2008, a nova lei resultou em dispensar a recuperação ambiental de pelo menos 29 milhões de hectares que deveriam ter sido protegidos pela lei anterior, conforme apontou um estudo publicado pela revista "Science".*

¹²⁵ *Nos mangues e apicuns, as áreas degradadas não serão recuperadas e novas áreas podem ser ocupadas com criação de camarões e loteamentos urbanos (art. 11-A). A mata ciliar deixa de ser contada a partir do ponto de cheia do rio e muda a definição de "topo de morro", reduzindo, em alguns casos, até 90% da área protegida.*

¹²⁶ *Quem não foi anistiado, ainda pode usar 50% de plantas exóticas (comerciais) para recuperar áreas degradadas (artigos 61-A 13 e 66, parágrafo 3º).*

¹²⁷ *1) É fato que o agronegócio (cuja importância na macroeconomia e no comércio internacional ninguém nega) não é que coloca "comida na mesa" do povo brasileiro, que 60% da cesta básica é garantida pela agricultura familiar, também responsável por 7 em cada 10 empregos no campo?*

¹²⁸ *É fato que existem mais de 140 milhões de hectares de áreas degradadas, improdutivas ou com baixíssima produtividade e que é possível dobrar a produção agrícola e o rebanho bovino sem desmatar novas áreas, bastando agregar tecnologia simples e disponível?*

Appendix V - Codification of the arguments of those promoting partial changes

Code	Author/ date/ source	Quotes
(1) Food security	Teixeira, Izabella 09/11/2012 – youtube video Rio+20 UN Conference	“And we have to seek the inclusion of all and not the exclusion of people. And a policy of inclusion is a solutions-building policy” ¹²⁹ “We observed a social criterion in order not to remove people from the countryside” ¹³⁰
(2) Small farmers are economically vulnerable and cannot invest in technology	Teixeira, Izabella 09/11/2012 – youtube video Rio+20 UN Conference	“And we have to seek the inclusion of all and not the exclusion of people. And a policy of inclusion is a solutions-building policy” ¹³¹ “We observed a social criterion in order not to remove people from the countryside” ¹³²
(3) Ecological protection based on the size of the property is fair	Teixeira, Izabella 09/11/2012 – youtube video Rio+20 UN Conference	“90% of rural properties in this country belong to small farmers and they represent 24% of the country’s territory. 10% [of properties] correspond to 76% of the agriculture territory of this country, so we asked this 10% to restore everything” ¹³³
(4) Legal Security	Teixeira, Izabella 09/11/2012 – youtube video Rio+20 UN Conference	“I’m not talking about big loggers; I’m talking about people who plant since the last century in this country and who are illegal according to the current law” ¹³⁴ “We have at least 90% of farmers in an illegal situation according to the current code” ¹³⁵ “Do you think that a farmer of the Amazon, who arrived there in 1970 and who was instructed by the government to deforest, do you think this farmer is equal - he who followed the law - to a farmer arriving now and deforesting illegally? Is that what you think? I don’t think so. This is called inter-temporal law” ¹³⁶

Source: Translated by the author based on a video available at https://www.youtube.com/watch?v=ecDq_sY1C_4

¹²⁹ *E a gente tem que buscar a inclusão de todos e não a exclusão dos outros. E uma política de inclusão, é uma política de construção de soluções*

¹³⁰ *nos olhamos o critério social para não tirar o povo do campo,*

¹³¹ *E a gente tem que buscar a inclusão de todos e não a exclusão dos outros. E uma política de inclusão, é uma política de construção de soluções*

¹³² *nos olhamos o critério social para não tirar o povo do campo,*

¹³³ *“ 90% das propriedades rurais desse país são de pequenos agricultores e representam 24% do território agrícola desse país. 10% [das propriedades] representam 76% do território agrícola desse país e nós mandamos que os 10% recuperem tudo.*

¹³⁴ *Eu não to falando dos grandes desmatadores não, eu estou falando de gente que planta nesse país desde o século passado e que estão ilegais perante a lei.*

¹³⁵ *nos temos 90% de agricultores familiares ilegais pelo atual código brasileiro ...*

¹³⁶ *A senhora acha que um agricultor da Amazônia, que chegou lá em 1970 e que o governo mandou desmatar, que esse agricultor é igual (ele cumpriu a lei) a um agricultor que chega agora e desmata ilegalmente? A senhora acha isso? Eu não acho. Isso se chama direito intertemporal*

Chapter 5

Appendix I - Outputs from the narrative analysis pursued with (Atlas.ti)

List of all objects

HU: Pesticides_7
File: [H:\Atlasti\TextBank\Pesticides_7.hpr7]
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Pesticides_7

Primary Documents

P 1: Agencia Senado _de 01_01_08 ate 08_07_15.docx {191}
P 2: Alberto da Rocha Neto_com transcricao.docx {3}
P 3: Audiência Pública _comissao de agricultura e reforma agraria 02_07_15.docx {36}
P 4: CÂMARA DOS DEPUTADOS.docx {253}
P 5: DossieAbrasco_2015_web.pdf {0}
P 6: Entrevista Meirelles_Galileo.docx {0}
P 7: Entrevista_Luiz_carlos_Meirelles_10_10_14.docx {12}
P 8: Folha_05_06_15_Guedes_LuisFernando.docx {0}
P 9: Folha_12_04_2014_Katia_Abreu_Glifosato D-2,4.docx {0}
P10: Folha_30_11_2013_Katia_Abreu_Burocracia e pirotecnia.docx {0}
P11: Júlio Sérgio de Britto_com transcricao.docx {7}
P12: Le Monde_Brasil envenenado_Abril_2010.docx {0}
P13: Le Monde_Katia_Abreu_na europa.docx {0}
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 7:6 1. Qual é o papel da Agência N.. (10:26)
 7:7 E mais recentemente, frente a .. (15:15)
 7:9 Quando você fala de prazo tem .. (19:19)
 7:10 Aqui no Brasil temos uma press.. (21:21)
 7:11 O Brasil proíbe alguns compost.. (21:22)
 7:12 5. Como você vê a proposta da .. (23:24)
 7:13 Essa proposta nasce ali no boj.. (24:24)
 11:1 05/12/14 – por telefone – grav.. (1:35)
 11:2 . O melhor dos mundos é centra.. (5:5)
 11:3 Todos os três órgãos têm consc.. (18:18)
 11:4 O melhor dos mundos é centrali.. (5:5)
 11:5 O MAPA é favorável à desburocr.. (20:20)
 11:6 Porque iria desburocratizar, n.. (22:24)
 11:7 mas o nosso grande problema ho.. (33:33)

Codes

ACTOR: Acir Gurgaz (PDT-RO) President of the Commission for Agriculture and Agrarian Settlement {1-1}
 ACTOR: Alceu Moreira (PMDB-RS) {1-1}
 ACTOR: Alessio Marostica (National Confederation of Agriculture) {1-1}
 ACTOR: Alexandre Jose Cattelan (EMBRAPA) {1-1}
 ACTOR: Ana Maria Vekic (ANVISA) {2-1}
 ACTOR: ANDEF {1-1}
 ACTOR: Angelo Trape (UNICAMP) {1-1}
 ACTOR: ANVISA {5-1}
 ACTOR: Brazilian Agroecological Association {1-1}
 ACTOR: Cesar Koppe Grisolia (Universidade de Brasilia) {1-1}
 ACTOR: Cleber Folgado (Coordinator of the Permanent Campaign against Pesticides and for Life) {2-1}
 ACTOR: CNA {3-1}
 ACTOR: Deputado Beto Faro (PT-PA) {1-1}
 ACTOR: Deputy Abelardo Lupion (DEM-PR) {1-1}
 ACTOR: Deputy Alfredo Kaefer (PSDB-PR) {1-1}
 ACTOR: Deputy Amaury Teixeira (PT-MG) {2-1}
 ACTOR: Deputy Amaury Teixeira (PT-MG)Ou (PT-BA)? {2-1}
 ACTOR: Deputy Antonio Roberto (PV-MG) {2-1}
 ACTOR: Deputy Arnaldo Jordy (PPS-PA) {1-1}
 ACTOR: Deputy Celia Rocha (PTB-AL) {1-1}

ACTOR: Deputy Dirceu Sperafico (PP-PR) {1-1}
 ACTOR: Deputy Jesus Rodrigues (PT-PI) {1-1}
 ACTOR: Deputy Joao Dado (PDT-SP) {1-1}
 ACTOR: Deputy Joao Daniel (PT-SE) {1-1}
 ACTOR: Deputy Luis Carlos Heinze (PP-RS) {2-1}
 ACTOR: Deputy Marcos Montes (PSD-MG) (DEM-MG) {3-1}
 ACTOR: Deputy Moacir Micheletto (PMDB-PR) {2-1}
 ACTOR: Deputy Padre Joao (PT-MG) {5-1}
 ACTOR: Deputy Reinaldo Azambuja (PSDB-MS) {1-1}
 ACTOR: Deputy Roberto Balestra (PP-GO) {1-1}
 ACTOR: Deputy Sarney Filho (PV-MA) {1-1}
 ACTOR: Deputy Stefano Aguiar (PSC-MG) {1-1}
 ACTOR: Deputy Valdir Colatto (PMDB-SC) {2-1}
 ACTOR: Deputy Ze Silva (PDT-MG) {1-1}
 ACTOR: Eduardo Daher (National Association for the diffusion of fertilizers - ANDA e National Association of Vegetable Defence - ANDEF) {4-1}
 ACTOR: Eduardo Guimaraes (National Association of Vegetal Defense - ANDEF) {1-1}
 ACTOR: Federal University of Mato Grosso and Fundacao Oswaldo Cruz {1-1}
 ACTOR: Fernando Carneiro (ABRASCO) {2-1}
 ACTOR: Geraldo Papa (Professor UNESP) {1-1}
 ACTOR: Guilherme Franco (Ministry of Health) {1-1}
 ACTOR: Helton dos Santos (National Secretariat of Food and Nutritional Security - SESAN) {1-1}
 ACTOR: IBAMA {1-1}
 ACTOR: Inacio Kroetz (MAPA) {1-1}
 ACTOR: Joao Pedro Stedile (Movement of Landless Rural Workers - MST) {1-1}
 ACTOR: Jose Agenor Alvares da Silva (ANVISA) {4-1}
 ACTOR: Jose Cunha (Brazilian Apiculture Confederation) {1-1}
 ACTOR: Jose Roberto Ros (National Union of Agricultural Defense) {2-1}
 ACTOR: Juliana Hosken (National Institute for the Processing of Empty Packages) {1-1}
 ACTOR: Julio Sergio de Britto (MAPA) {3-1}
 ACTOR: Kenia Godoy (IBAMA) {1-1}
 ACTOR: Luiz Carlos Lima (National Union of Agricultural Defense Products) {1-1}
 ACTOR: Luiz Carlos Meireles (ANVISA) {3-1}
 ACTOR: Marcelo Goncalves (National Council of Nutritional and Food Security - CONSEA) {1-1}
 ACTOR: Marcelo Morandi (EMBRAPA) {1-1}~
 Comment:
 Code: ACTOR: Marcelo Morandi (EMBRAPA)
 Created: 27/07/2015 13:18:51 by Super
 Modified: 29/07/2015 17:19:00
 Families (2): ACTORS, EMBRAPA
 Quotations: 1
 ACTOR: Marcio Freitas (IBAMA) {5-1}
 ACTOR: Michael Haradom (National Association of Pesticides - AENDA) {1-1}
 ACTOR: Minister of Agriculture Reinhold Stephanes {1-1}
 ACTOR: MMA {2-1}~
 Comment:
 Code: ACTOR: MMA
 Created: 25/07/2015 14:11:31 by Super
 Modified: 29/07/2015 16:46:29
 Families (2): ACTORS, IBAMA/Ministry of Environment
 Quotations: 2
 ACTOR: Nazareno Fonteles (PT-PI) {1-1}
 ACTOR: Permanent Campaigning against Pesticides and for Life {1-1}

ACTOR: Professor Anamaria Tambellini (Brazilian Association of Post-Graduation in Collective Health) {2-1}
 ACTOR: Professor Victor Pelaez {1-1}
 ACTOR: Reginaldo Minare (National Confederation of Agriculture) {2-1}
 ACTOR: Roberto Brandao (MMA) {1-1}
 ACTOR: Rosangela Cordeiro (Via Campesina) {1-1}
 ACTOR: Senator Acir Gurgacz (PDT-RO) {1-1}
 ACTOR: Senator Ana Rita (PT-ES) {2-1}
 ACTOR: Senator Antonio Carlos Valadares (PSB-SE) {2-1}
 ACTOR: Senator Blairo Maggi (PR-MT) {4-1}
 ACTOR: Senator Casildo Maldaner (PMDB-SC) {1-1}
 ACTOR: Senator Donizete Nogueira (PT-TO) {1-1}
 ACTOR: Senator Gilberto Goellner (DEM-MT) {5-1}
 ACTOR: Senator Gleisi Hoffmann (PT-PR) {1-1}
 ACTOR: Senator Heraclito Fortes (DEM-PI) {2-1}
 ACTOR: Senator Katia Abreu (PMDB-TO) In 2010 (DEM-TO) and president of CNA {10-1}~
 Comment:
 Code: ACTOR: Senator Katia Abreu (PMDB-TO) In 2010 (DEM-TO) and president of CNA
 Created: 20/07/2015 22:46:39 by Super
 Modified: 29/07/2015 17:42:40
 Families (4): ACTORS, CNA, DEM, PMDB
 Quotations: 10
 ACTOR: Senator Neuto de Conto (PMDB-SC) {1-1}
 ACTOR: Senator Pedro Taques (PDT-MT) {2-1}
 ACTOR: Senator Valter Pereira (PMDB-MS) {1-1}
 ACTOR: Senator Waldemir Moka (PMDB-MS) {3-1}
 ACTOR: Silvia Fagnani (National Union of the Industry of Vegetable Defense Products - SINDIVEG) {3-1}
 ACTOR: Tarciso Bonachela (Brazilian Association of chemicals and biotechnology - ABIFINA) {1-1}
 ACTOR: Valter Bianchini (MDA) {1-1}
 ACTOR: Valter Israel (National Secretariat of the Movement of Small Producers) {1-1}
 ACTOR: Vicente Eduardo Soares e Almeida (EMBRAPA and Permanent Campaign Against Pesticides and for life) {1-1}
 ACTOR: Vinicius Freitas (Brazilian Association of Agroecology) {2-1}
 ACTOR: Waldir Stumpf Junior (EMBRAPA) {1-1}
 ACTOR: Wanderley Pignati (Researcher University of Mato Grosso) {1-1}
 ACTOR: Willian da Silva (National Confederation of Agricultural Workers - CONTAG) {1-1}
 ACTOR: Wilson Assis (Procurador da Republica de Rio Verde) {1-1}
 ACTOR: Deputy Beto Faro (PT-PA) {2-1}
 ACTORS {0-91}
 Environmental Commission of the Deputies Chamber {1-1}
 HEROE: Agroecology {7-0}
 HEROE: GMO's {1-0}
 HEROE: Monitoring, control, punishment {2-0}
 HEROE: New technologies for agricultural defense {1-0}
 HEROE: New unified agency {2-0}
 HEROE: Pesticides {8-0}
 HEROES: Agricultural Producers {4-0}
 HEROES: Small family producers {3-0}
 PLOT: 94% of pesticides packages are being recycled in Brazil, we are doing very well {1-0}
 PLOT: A careful toxicological evaluation takes time {1-0}
 PLOT: Aerial spraying is an irresponsible and inefficient method {1-0}

PLOT: Aerial spraying is already sufficiently regulated {1-0}

PLOT: aerial spraying needs clearer regulations {1-0}

PLOT: Agribusiness is bad for the environment and for rural workers {1-0}

PLOT: Agricultural high productivity requires the use of pesticides {16-0}

PLOT: Agriculture is an issue of national security {1-0}

PLOT: ANVISA is inefficient {1-0}

PLOT: ANVISA is not transparent {1-0}

PLOT: ANVISA/IBAMA are under pressure/no staff or resources for efficiency {6-0}

PLOT: Big business is capturing regulations {3-0}

PLOT: Brazilian bee is different it is more resistant {1-0}

PLOT: breast milk is contaminated by pesticides {4-0}

PLOT: Companies are entering the line to protect themselves {1-0}

PLOT: crisis shall not be used to justify previous structural problems {1-0}

PLOT: Economic benefits of pesticides {7-0}

PLOT: Economic crisis has put agricultural production under pressure {3-0}

PLOT: Extinction of bees is bad for agriculture {2-0}

PLOT: illegal use is justified by the lack of authorised products {1-0}

PLOT: Imported products are too expensive {1-0}

PLOT: Irregular use of pesticides are a consequence of red tape {4-0}

PLOT: Irresponsible approval of pesticides put economic competitiveness at risk {1-0}

PLOT: Lack of pesticides control generates trade barriers which are bad for agricultural producers {1-0}

PLOT: New Agency will favour only agribusiness and harm society {1-0}~

Comment:

ANVISA

PLOT: New pesticides make plagues resistant {1-0}

PLOT: New plagues are emerging and we have no products to deal with them {1-0}

PLOT: Not only pesticides causes the extinction of bees {1-0}

PLOT: People drink water in pesticides packages {1-0}

PLOT: Pesticides are necessary for food security {7-0}

PLOT: Pesticides are not necessary for food security and high agricultural productivity {1-0}

PLOT: Pesticides are not so bad for health and environment/ not too many cases of intoxication {2-0}

PLOT: Pesticides cause extinction of bees {1-0}

PLOT: Pesticides forbidden abroad are allowed here {4-0}

PLOT: Red tape hinders market efficiency/competitiveness {6-0}

PLOT: Red tape is promoted by the industry {2-0}

PLOT: Regulation of pesticides in Brazil is already very strict {4-0}

PLOT: Small producers use less pesticides {1-0}

PLOT: the majority of pesticide application is not aerial {1-0}

PLOT: There is no such a thing as a safe level of pesticides use {1-0}

PLOT: There is no way to produce without pesticides {1-0}

PLOT: There is prejudice against pesticide use in Brazil {2-0}

PLOT: Tropical countries require more use of pesticides {4-0}

PLOT: unified agency is a regulatory rollback {1-0}

PLOT: US and Canada have unified agencies for registration of pesticides {1-0}

PLOT: We have technologies available to reduce the use of pesticides {3-0}

POLICY PROBLEM: Aerial spraying {11-0}

POLICY PROBLEM: Amount of pesticides used in the country {12-0}

POLICY PROBLEM: Excessive taxation of pesticides or need of further incentives for unbranded products {15-0}

POLICY PROBLEM: Extinction of bees {4-0}

POLICY PROBLEM: Illegal production, use and disposal of pesticides {4-0}

POLICY PROBLEM: Lack of reliable information about pesticides use {1-0}

POLICY PROBLEM: National industry is not internationally competitive {2-0}

POLICY PROBLEM: Pesticides are toxic and bad for the environment {16-0}

POLICY PROBLEM: Registered products are outdated {9-0}

POLICY PROBLEM: Registration red tape/takes too long {17-0}

POLICY PROBLEM: Tax exemptions to pesticides {5-0}

POLICY PROBLEM: We are too dependent on imports of pesticides {3-0}

POLICY PROPOSAL: more coordination between IBAMA, ANVISA, and MAPA {4-0}

POLICY PROPOSAL: Allowance of unbranded pesticides to be registered after patents expire {5-0}

POLICY PROPOSAL: Exemption of taxes/more incentives for pesticides {5-0}

POLICY PROPOSAL: Government should subsidise national industry of pesticides {1-0}

POLICY PROPOSAL: More investment in Agroecology {8-0}

POLICY PROPOSAL: More investment in control and qualification of staff {9-0}

POLICY PROPOSAL: More investments in ANVISA {3-0}

POLICY PROPOSAL: More severe punishment for irregular use {1-0}

POLICY PROPOSAL: National policy of incentive to natural pesticides or agroecology {4-0}

POLICY PROPOSAL: New Unified Agency {8-0}

POLICY PROPOSAL: New Unified Agency but with every agency properly represented {1-0}

POLICY PROPOSAL: Pesticides forbidden abroad should be forbidden {1-0}

POLICY PROPOSAL: Pesticides in food labels {1-0}

POLICY PROPOSAL: Re-evaluations should be quicker {1-0}

POLICY PROPOSAL: Registrations should expire/or cancelation of registrations should be faster {4-0}

SETTING: Administrative rationalism {7-0}

SETTING: Developmentalist {5-0}

SETTING: Preservationist (Deep green) {10-0}

VICTIM: Agricultural Producers {16-0}

VICTIM: Bees {1-0}

VICTIM: Brazilian pesticide industry {1-0}

VICTIM: Brazilian population {10-0}

VICTIM: IBAMA {2-0}

VICTIM: Pesticides industry {2-0}

VICTIM: Regulatory Agencies {10-0}

VICTIM: rural workers {4-0}~

Comment:

 Le Monde

VICTIM: Small organic producers {1-0}

VILLAIN: Agricultural producers (pesticide users/agribusiness) {5-0}

VILLAIN: ANVISA {4-0}

VILLAIN: Pesticides {7-0}

VILLAIN: pesticides industry {6-0}

VILLAIN: Red tape {4-0}

YEAR: 2008 {6-0}

YEAR: 2009 {4-0}

YEAR: 2010 {11-0}

YEAR: 2011 {12-0}

YEAR: 2012 {9-0}

YEAR: 2013 {6-0}

YEAR: 2014 {12-0}

YEAR: 2015 {2-0}

Code Families

ACTORS (90)
ANVISA/Ministry of Health (5)
CNA (4)
DEM (4)
EMBRAPA (4)
HEROES (8)
IBAMA/Ministry of Environment (5)
Judicial Power (1)
MDA and MDS (3)
Ministry of Agriculture (3)
PDT (5)
PESTICIDES INDUSTRY (8)
PLOTS (46)
PMDB (8)
POLICY PROBLEMS (12)
POLICY PROPOSAL (15)
PP (3)
PPS (1)
PR (1)
PSC (1)
PSD (1)
PSDB (2)
PT (11)
PTB (1)
PV (2)
SCIENTISTS (10)
SETTINGS (3)
Social Movements and Civil Society (7)
VICTIMS (9)
VILLAINS (5)
YEAR (8)

Code-Links

ACTOR: Acir Gurgaz (PDT-RO) President of.. <is a> ACTORS
ACTOR: Alceu Moreira (PMDB-RS) <is a> ACTORS
ACTOR: Alessio Marostica (National Confe.. <is a> ACTORS
ACTOR: Alexandre Jose Cattelan (EMBRAPA).. <is a> ACTORS
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ACTOR: ANDEF <is a> ACTORS
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ACTOR: Brazilian Agroecological Associat.. <is a> ACTORS
ACTOR: Cesar Koppe Grisolia (Universidad.. <is a> ACTORS
ACTOR: Cleber Folgado (Coordinator of th.. <is a> ACTORS
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ACTOR: Deputy Luis Carlos Heinze (PP-RS).. <is a> ACTORS
ACTOR: Deputy Marcos Montes (PSD-MG) (DE.. <is a> ACTORS
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ACTOR: Deputy Padre Joao (PT-MG) <is a> ACTORS
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ACTOR: Eduardo Daher (National Associati.. <is a> ACTORS
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ACTOR: Federal University of Mato Grosso.. <is a> ACTORS
ACTOR: Fernando Carneiro (ABRASCO) <is a> ACTORS
ACTOR: Geraldo Papa (Professor UNESP) <is a> ACTORS
ACTOR: Guilherme Franco (Ministry of Hea.. <is a> ACTORS
ACTOR: Hetel dos Santos (National Secret.. <is a> ACTORS
ACTOR: IBAMA <is a> ACTORS
ACTOR: Inacio Kroetz (MAPA) <is a> ACTORS
ACTOR: Joao Pedro Stedile (Movement of L.. <is a> ACTORS
ACTOR: Jose Agenor Alvares da Silva (ANV.. <is a> ACTORS
ACTOR: Jose Cunha (Brazilian Apiculture .. <is a> ACTORS
ACTOR: Jose Roberto Ros (National Union .. <is a> ACTORS
ACTOR: Juliana Hosken (National Institut.. <is a> ACTORS
ACTOR: Julio Sergio de Britto (MAPA) <is a> ACTORS
ACTOR: Kenia Godoy (IBAMA) <is a> ACTORS
ACTOR: Luiz Carlos Lima (National Union .. <is a> ACTORS
ACTOR: Luiz Carlos Meireles (ANVISA) <is a> ACTORS
ACTOR: Marcelo Goncalves (National Counc.. <is a> ACTORS
ACTOR: Marcelo Morandi (EMBRAPA) <is a> ACTORS
ACTOR: Marcio Freitas (IBAMA) <is a> ACTORS
ACTOR: Michael Haradom (National Associa.. <is a> ACTORS
ACTOR: Minister of Agriculture Reinhold .. <is a> ACTORS
ACTOR: MMA <is a> ACTORS
ACTOR: Nazareno Fonteles (PT-PI) <is a> ACTORS
ACTOR: Permanent Campaing against Pestic.. <is a> ACTORS
ACTOR: Professor Anamaria Tambellini (Br.. <is a> ACTORS
ACTOR: Professor Victor Pelaez <is a> ACTORS
ACTOR: Reginaldo Minare (National Confed.. <is a> ACTORS
ACTOR: Roberto Brandao (MMA) <is a> ACTORS
ACTOR: Rosangela Cordeiro (Via Campesina.. <is a> ACTORS
ACTOR: Senator Acir Gurgacz (PDT-RO) <is a> ACTORS
ACTOR: Senator Ana Rita(PT-ES) <is a> ACTORS
ACTOR: Senator Antonio Carlos Valadares .. <is a> ACTORS

ACTOR: Senator Blairo Maggi (PR-MT) <is a> ACTORS
ACTOR: Senator Casildo Maldaner (PMDB-SC).. <is a> ACTORS
ACTOR: Senator Donizete Nogueira (PT-TO).. <is a> ACTORS
ACTOR: Senator Gilberto Goellner (DEM-MT).. <is a> ACTORS
ACTOR: Senator Gleisi Hoffmann (PT-PR) <is a> ACTORS
ACTOR: Senator Heraclito Fortes (DEM-PI).. <is a> ACTORS
ACTOR: Senator Katia Abreu (PMDB-TO) In .. <is a> ACTORS
ACTOR: Senator Neuto de Conto (PMDB-SC) <is a> ACTORS
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ACTOR: Senator Valter Pereira (PMDB-MS) <is a> ACTORS
ACTOR: Senator Waldemir Moka (PMDB-MS) <is a> ACTORS
ACTOR: Silvia Fagnani (National Union of.. <is a> ACTORS
ACTOR: Tarciso Bonachela (Brazilian Asso.. <is a> ACTORS
ACTOR: Valter Bianchini (MDA) <is a> ACTORS
ACTOR: Valter Israel (National Secretari.. <is a> ACTORS
ACTOR: Vicente Eduardo Soares e Almeida .. <is a> ACTORS
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ACTOR: Waldir Stumpf Junior (EMBRAPA) <is a> ACTORS
ACTOR: Wanderley Pignati (Researcher Uni.. <is a> ACTORS
ACTOR: Willian da Silva (National Confed.. <is a> ACTORS
ACTOR: Wilson Assis (Procurador da Repub.. <is a> ACTORS
ACTOR:Deputy Beto Faro (PT-PA) <is a> ACTORS
Environmental Commission of the Deputies.. <is a> ACTORS

Chapter 6

Appendix I - Codes-quotations list

HU: ABS_09_06_15
File: [H:\Atlasti\TextBank\ABS_09_06_15.hpr7]
Edited by: Super
Date/Time: 2015-06-12 15:59:12

Code: Allowance of no prior informed consent {5-0}

P 2: ISA_06_05_15.docx - 2:6 [A carta pede o veto de inciso ..] (16:16) (Super)

Codes: [Allowance of no prior informed consent]

No memos

A carta pede o veto de inciso que prevê a avaliação de consentimento prévio para acesso ao conhecimento tradicional feita por órgãos oficiais

P 2: ISA_06_05_15.docx - 2:7 [seu acesso não dependeria do c..] (18:18) (Super)

Codes: [Allowance of no prior informed consent]

No memos

seu acesso não dependeria do consentimento prévio de comunidades tradicionais ou povos indígenas.

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:9 [O inciso III, que prevê a poss..] (3:1310-3:1658) (Super)

Codes: [Allowance of no prior informed consent]

No memos

O inciso III, que prevê a possibilidade de comprovação mediante “parecer do órgão oficial competente”, não pode ser mantido. Nenhum órgão público pode falar em nome de qualquer povo indígena, comunidade tradicional ou agricultor familiar no ato de conceder ou negar o consentimento prévio para acesso ao conhecimento tradicional destes.

P26: Agencia Camara de Noticias.docx - 26:4 [Cerca de 10 pontos específicos..] (14:14) (Super)

Codes: [Allowance of no prior informed consent]

No memos

Cerca de 10 pontos específicos são contestados, entre eles os artigos que tratam do consentimento prévio às empresas interessadas no conhecimento tradicional

P32: Interview 26_Com transcrição.docx - 32:4 [Então seria uma das reclamações..] (52:52) (Super)

Codes: [Allowance of no prior informed consent]

No memos

Então seria uma das reclamações deles sim, que o acesso é facilitado, é muito facilitado, vai pagar, mas o acesso é facilitado, vc tem o conhecimento que é ancestral, que veio do seu avô, que é uma relação afetiva, emocional, aí chega uma pessoa faz o acesso facilitado, inclusive pode ser um acesso mal-educado que não contemple aquela forma, aquele hábito de ver das pessoas...e o que recebe de volta é um pagamento. Que liberou geral, que tem pouco pudor, não tem critérios.

Code: Amnesty {5-0}

P 2: ISA_06_05_15.docx - 2:8 [Anistia aos biopiratas A isenç..] (24:25) (Super)

Codes: [Amnesty]

No memos

Anistia aos biopiratas

A isenção da repartição de benefícios sobre exploração econômica de produtos cujo patrimônio genético tenha sido acessado antes de 2000 é outro problema do projeto. Isso significa que os exploradores que tenham acessado produtos antes desse ano e estejam lucrando com ele agora não precisam repartir os benefícios com as comunidades de origem.

P 3: ISA_11_02_15.docx - 3:1 [texto final permite anistia de..] (6:6) (Super)

Codes: [Amnesty]

No memos

texto final permite anistia de multas de empresas que tenham cometido infrações no acesso e exploração do patrimônio genético

P 3: ISA_11_02_15.docx - 3:3 [Das 14 propostas de alteração ..] (11:11) (Super)

Codes: [Amnesty]

No memos

Das 14 propostas de alteração apresentadas (destaques) ontem, só foi aprovada mais uma flexibilização em benefício do setor privado: a possibilidade de anistiar empresas que tenham sido multadas antes da entrada em vigor da nova lei por infrações no acesso aos recursos genéticos.

P 5: ISA_19_03_15.docx - 5:4 [a série de anistias para empre..] (17:17) (Super)

Codes: [Amnesty]

No memos

a série de anistias para empresas que cometeram irregularidades e as isenções à repartição de benefícios pelo uso desses recursos e de conhecimentos tradicionais, previstas no projeto.

P17: Folha_15_04_15_Senado aprova marco legal da biodiversidade_Gabriela Guerreiro.docx - 17:5 [Pela proposta aprovada, as mul..] (17:17) (Super)

Codes: [Amnesty]

No memos

Pela proposta aprovada, as multas aplicadas a pesquisadores ou empresas que não respeitaram a legislação em vigor no acesso ao patrimônio genético do país serão anistiadas.

Elas somam R\$ 214 milhões. O texto prevê a anistia para aqueles que assinarem termo de compromisso para se adequarem às novas regras.

Code: Biodiversity is not treated as an opportunity but as a curse {1-0}

P 4: ISA_12_05_15_Nurit.docx - 4:3 [Trata-se de uma nova lei que c..] (14:14) (Super)

Codes: [Biodiversity is not treated as an opportunity but as a curse]

No memos

Trata-se de uma nova lei que confirma a dificuldade que o Brasil tem em perceber sua biodiversidade como oportunidade, como passaporte para o futuro, e não como maldição da qual quer se livrar.

Code: BS became an exception {4-0}

P 3: ISA_11_02_15.docx - 3:4 [Ele avaliou que, do jeito que ..] (15:15) (Super)

Codes: [BS became an exception]

No memos

Ele avaliou que, do jeito que o projeto está, a repartição de benefícios será uma exceção, e não a regra.

P 4: ISA_12_05_15_Nurit.docx - 4:5 [A repartição de benefícios pas..] (15:15) (Super)

Codes: [BS became an exception]

No memos

A repartição de benefícios passará a ser uma exceção ao invés da regra

P 6: ISA_22_04_15_Nurit.docx - 6:1 [fazendo com que a repartição d..] (18:18) (Super)

Codes: [BS became an exception]

No memos

fazendo com que a repartição de benefícios não se torne sempre uma exceção

P17: Folha_15_04_15_Senado aprova marco legal da biodiversidade_Gabriela Guerreiro.docx - 17:3 ["Qual o produto principal da g..] (10:10) (Super)

Codes: [BS became an exception]

No memos

"Qual o produto principal da gravata? É o tecido. E o produto que dá o brilho? É outro, nosso, vindo da nossa biodiversidade. Mas não é o principal. E aí não paga? Não vai fazer a repartição? Então é uma biopirataria oficial

Code: BS will happen through public policies {3-0}

P20: Interview 54_com_transcricao.docx - 20:5 [Então a idéia da repartição de..] (46:46) (Super)

Codes: [BS will happen through public policies]

No memos

Então a idéia da repartição de benefícios ela é muito mais via política pública de estímulo a conservação e a proteção de conhecimentos tradicionais do que o pagamento direto.

P31: Interview 6_com transcricao.docx - 31:3 [Mas e se eu não identificar, a..] (50:50) (Super)

Codes: [BS will happen through public policies]

No memos

Mas e se eu não identificar, aí falaram, não, realmente o fundo é o melhor caminho, e isso foi mais pra criar segurança jurídica, porque nesse caso, se alguma comunidade reclamar, o dinheiro foi destinado para um fundo, e aí o governo vai se virar com aquelas comunidades que estão reclamando esse direito porque a empresa declarou que era um conhecimento tradicional difuso.

P32: Interview 26_Com transcrição.docx - 32:3 [Então essa nova lei ela tem u..] (43:43) (Super)

Codes: [BS will happen through public policies]

No memos

Então essa nova lei ela tem uma estrutura de proteção aos interesses das comunidades tradicionais. Uma coisa muito importante é a fixação do valor de RB. A fixação desse valor permite que se elimine o processo negociador, que pode ser muito negativo pras comunidades. É 1%, sendo que 0.5% é pra um fundo que vai reunir recursos pra redistribuir pras comunidades. Esse fundo pode ser pra tudo, mas a parte de repartição de benefícios a metade é pro fundo.

Code: Bureaucratic hurdle shall be avoided {2-0}

P27: MENSAGEM de veto.docx - 27:3 [Além disso, da forma disposta,..] (13:13) (Super)

Codes: [Bureacratic hurdle shall be avoided]

No memos

Além disso, da forma disposta, tais procedimentos poderiam resultar em mero entrave burocrático, contrariamente à lógica da medida.”

P27: MENSAGEM de veto.docx - 27:4 [dificuldades operacionais.] (18:18) (Super)

Codes: [Bureacratic hurdle shall be avoided]

No memos

dificuldades operacionais.

Code: Criticism of the previous law {32-0}

P 8: Adriana Diaféria com transcricao.docx - 8:1 [Então assim, a 2.186, apesar d..] (18:18) (Super)

Codes: [Criticism of the previous law]

No memos

Então assim, a 2.186, apesar de ela ter tido a intenção na época de criar um marco regulatório ela veio cheia de subjetividades, ela veio com problemas jurídicos, porque tinha que ter saído uma PEC que estabelecia como bem da União o patrimônio genético e não saiu, então ela tinha previsões que davam o tratamento como bem da união e ficou uma coisa manca, tinha conceitos abertos que aí depois precisou ter intruções, orientações técnicas, um conjunto um emaranhado de medidas pra poder viabilizar, e como ela foi MP ela não podia ter previsões de sanções administrativas, porque era uma MP, então teve que ir via decreto, então pra vc operacionalizar ficou tudo... Então a proposta que tava na 2.186 ela realmente dificultou muito a operação prática, tanto pro estado quanto para os usuários da biodiversidade.

P10: Interview 2_com_transcrição.docx - 10:1 [Não, a lei é terrível. É uma d..] (10:10) (Super)

Codes: [Criticism of the previous law]

No memos

Não, a lei é terrível. É uma das leis mais complexas que eu já trabalhei em toda a minha vida. Principalmente entre as leis ambientais essa é muito complexa. Ela não é boa pra ninguém. Não é boa pras empresas, pras comunidades tradicionais, para o governo, né que não sabe como aplicar. E essa é uma lei que tem um impacto muito grande no setor industrial, ela tem uma expectativa grande das comunidades, de que aquilo vai ser a solução dos problemas e a receita de tudo que elas precisam vai derivar dessa lei e o governo ele nunca soube aplicar

P10: Inverview 2_com_transcrição.docx - 10:2 [a lei é muito confusa,] (12:12) (Super)

Codes: [Criticism of the previous law]

No memos

a lei é muito confusa,

P14: Editorial Folha_10_04_2015_apos_aprovacao no senado.docx - 14:1 [O debate sobre quem pode ter a..] (5:5) (Super)

Codes: [Criticism of the previous law]

No memos

O debate sobre quem pode ter acesso a tais recursos genéticos e sobre o justo princípio de repartição de benefícios deles oriundos, até aqui, produziu mais burocracia do que efetiva proteção de direitos.

P14: Editorial Folha_10_04_2015_apos_aprovacao no senado.docx - 14:2 [Com a paranoia disseminada da ..] (6:6) (Super)

Codes: [Criticism of the previous law]

No memos

Com a paranoia disseminada da biopirataria, medida provisória de 2000 criou tantas regras e obstáculos que seu principal resultado foi desestimular a investigação científica e empresarial para aproveitamento da biodiversidade.

P14: Editorial Folha_10_04_2015_apos_aprovacao no senado.docx - 14:3 [Exigia-se autorização prévia d..] (7:7) (Super)

Codes: [Criticism of the previous law]

No memos

Exigia-se autorização prévia das pesquisas pelo Conselho de Gestão do Patrimônio Genético (CGen), do Ministério do Meio Ambiente. A demora era da ordem de 18 meses. Na lei em exame, o requisito foi substituído por um cadastramento voluntário. É o principal avanço.

P15: Editorial_folha_30_04_2015.docx - 15:1 [A legislação em vigor, baixada..] (4:4) (Super)

Codes: [Criticism of the previous law]

No memos

A legislação em vigor, baixada por medida provisória há 15 anos, revelou-se por demais restritiva. O excesso de exigências desestimulava o acesso a recursos genéticos e saberes tradicionais associados –como os de povos indígenas– com potencial para originar fármacos e cosméticos, por exemplo.

P16: Folha_10_03_15_Cara_Da_Natura_faladacartaempresarial.docx - 16:1 [Ainda que a intenção fosse boa..] (4:4) (Super)

Codes: [Criticism of the previous law]

No memos

Ainda que a intenção fosse boa, a lei causou graves transtornos para a inovação no país.

P16: Folha_10_03_15_Cara_Da_Natura_faladacartaempresarial.docx - 16:2 [a lei causou graves transtorno..] (4:4) (Super)

Codes: [Criticism of the previous law]

No memos

a lei causou graves transtornos para a inovação

P16: Folha_10_03_15_Cara_Da_Natura_faladacartaempresarial.docx - 16:4 [Nesse contexto, a "soberania n..] (6:6) (Super)

Codes: [Criticism of the previous law]

No memos

Nesse contexto, a "soberania nacional" falou mais alto que a racionalidade científica e econômica

P16: Folha_10_03_15_Cara_Da_Natura_faladacartaempresarial.docx - 16:3 [Nesse contexto, a "soberania n..] (6:6) (Super)

Codes: [Criticism of the previous law]

No memos

Nesse contexto, a "soberania nacional" falou mais alto que a racionalidade científica e econômica.

P16: Folha_10_03_15_Cara_Da_Natura_faladacartaempresarial.docx - 16:5 [Até o final de 2013, a respost..] (7:7) (Super)

Codes: [Criticism of the previous law]

No memos

Até o final de 2013, a resposta do CGEN demorava, em média, um ano e meio.

P16: Folha_10_03_15_Cara_Da_Natura_faladacartaempresarial.docx - 16:6 [Esse cenário criou um ambiente..] (8:8) (Super)

Codes: [Criticism of the previous law]

No memos

Esse cenário criou um ambiente de insegurança institucional, inibindo a investigação sobre a biodiversidade brasileira –tanto no meio acadêmico quanto no ambiente empresarial.

P16: Folha_10_03_15_Cara_Da_Natura_faladacartaempresarial.docx - 16:8 [. O texto aprovado pela Câmara..] (11:11) (Super)

Codes: [Criticism of the previous law]

No memos

. O texto aprovado pela Câmara, ainda que não tenha obtido consenso no plenário, promove um grande avanço em relação à lei vigente.

P16: Folha_10_03_15_Cara_Da_Natura_faladacartaempresarial.docx - 16:7 [que, por vícios de origem e de..] (12:12) (Super)

Codes: [Criticism of the previous law]

No memos

que, por vícios de origem e desvios ideológicos, paralisou a pesquisa sobre a nossa diversa biodiversidade

P17: Folha_15_04_15_Senado aprova marco legal da biodiversidade_Gabriela Guerreiro.docx - 17:1 [redução de exigências burocrát..] (5:5) (Super)

Codes: [Criticism of the previous law]

No memos

redução de exigências burocráticas previstas atualmente pela legislação.

P17: Folha_15_04_15_Senado aprova marco legal da biodiversidade_Gabriela Guerreiro.docx - 17:4 [Para o governo, no entanto, as..] (15:15) (Super)

Codes: [Criticism of the previous law]

No memos

Para o governo, no entanto, as normas atuais são restritivas à pesquisa e à atividade econômica

P18: Folha_20_06_2014_Governo envia ao Congresso projeto.docx - 18:1 ["Saímos de um marco legal que ..] (8:8) (Super)

Codes: [Criticism of the previous law]

No memos

"Saímos de um marco legal que só foca em biopirataria e vamos para um marco que estimula a pesquisa, a tecnologia",

P18: Folha_20_06_2014_Governo envia ao Congresso projeto.docx - 18:7 ["Saímos de um marco legal que ..] (8:8) (Super)

Codes: [Criticism of the previous law]

No memos

"Saímos de um marco legal que só foca em biopirataria

P18: Folha_20_06_2014_Governo envia ao Congresso projeto.docx - 18:2 [Teixeira disse ainda que o tex..] (9:9) (Super)

Codes: [Criticism of the previous law]

No memos

Teixeira disse ainda que o texto prevê regras mais claras para a repartição de benefícios sobre o produto final (o parâmetro definido é de até 1% da receita líquida) e a aplicação mais efetiva de penalidades, que hoje se perdem em brigas judiciais.

P18: Folha_20_06_2014_Governo envia ao Congresso projeto.docx - 18:3 [extremamente confusas e comple..] (10:10) (Super)

Codes: [Criticism of the previous law]

No memos

extremamente confusas e complexas".

P18: Folha_20_06_2014_Governo envia ao Congresso projeto.docx - 18:4 [A proposta responde à demanda ..] (13:13) (Super)

Codes: [Criticism of the previous law]

No memos

A proposta responde à demanda de setores farmacêuticos e de cosméticos, que cobram mais segurança jurídica para uso desses recursos.

P18: Folha_20_06_2014_Governo envia ao Congresso projeto.docx - 18:6 [segurança jurídica para uso des..] (13:13) (Super)

Codes: [Criticism of the previous law]

No memos

segurança jurídica para uso desses recursos.

P18: Folha_20_06_2014_Governo envia ao Congresso projeto.docx - 18:5 [A lei vai facilitar a pesquisa..] (15:15) (Super)

Codes: [Criticism of the previous law]

No memos

A lei vai facilitar a pesquisa, vai evitar a biopirataria (...) e permite aproveitar melhor o patrimônio genético de interesses econômico, social, estratégico, político e geopolítico"

P19: MMA leader_com transcrição.docx - 19:1 [Não adianta vc ter uma legisla..] (80:80) (Super)

Codes: [Criticism of the previous law]

No memos

Não adianta vc ter uma legislação inaplicável.

P20: Interview 54_com_transcricao.docx - 20:1 [Mas questões estruturais que s..] (30:30) (Super)

Codes: [Criticism of the previous law]

No memos

Mas questões estruturais que se referem a regime brasileiro de ABS mandam uma nova legislação, que vai dar um novo enfoque, e moderna, no sentido que não tenha esse excesso de comando e controle, o nosso foco agora é exatamente rastreabilidade e monitoramento ex post

P21: CARTA EMPRESARIAL PELA CONSERVAÇÃO E USO SUSTENTÁVEL DA BIODIVERSIDADE.docx - 21:1 [para aperfeiçoamento do marco ..] (110:111) (Super)

Codes: [Criticism of the previous law]

No memos

para aperfeiçoamento do marco legal e regulatório para conservação e uso sustentável da biodiversidade

P31: Interview 6_com transcricao.docx - 31:1 [Não só as multas mas a MP fala..] (50:50) (Super)

Codes: [Criticism of the previous law]

No memos

Não só as multas mas a MP fala no artigo 26 dela de uma indenização. E na verdade, pra gente pior do que a multa era o valor da indenização. Porque ele não colocava um prazo, então era assim, se eu desenvolvi um produto com biodiversidade em 2001 e eu fui multado agora em 2014, eu ia ter que pagar a indenização em cima de todo esse período e 20% do faturamento bruto do meu produto. E aí quando a gente começou a falar, olha, prestem atenção no que é o faturamento bruto, porque vc teria muitas empresas que iriam fechar por conta disso. Aí entra toda a soma de impostos e tudo...e essa foi uma das coisas que a gente colocou, a gente conseguiu a revogação desse artigo, então mesmo com o PL não revogando a 2.186 por inteiro, esse artigo a gente conseguiu que fosse revogado

P31: Interview 6_com transcricao.docx - 31:2 [E outro ponto era como a indús..] (50:50) (Super)

Codes: [Criticism of the previous law]

No memos

E outro ponto era como a indústria de produto final vai localizar uma comunidade pra dizer que acessou a biodiversidade daquele lugar entendeu. Então, porque a gente compra de um fornecedor, e é muito difícil você localizar um fornecedor seu

P32: Interview 26

_Com transcrição.docx - 32:2 [Vc conhece a legislação atual?..] (18:18) (Super)

Codes: [Criticism of the previous law]

No memos

Vc conhece a legislação atual? É uma legislação muito de comando e controle.

P32: Interview 26_Com transcrição.docx - 32:7 [A gente quer que isso seja vot..] (63:63) (Super)

Codes: [Criticism of the previous law]

No memos

A gente quer que isso seja votado logo (o ministério do meio ambiente). Porque a legislação atual não funciona. Entra no sistema quem quer.

P32: Interview 26_Com transcrição.docx - 32:8 [A legislação atual ela exige u..] (66:66) (Super)

Codes: [Criticism of the previous law]

No memos

A legislação atual ela exige um monte de documentos, ela exige um mapa do laboratório de pesquisa dele, o equipamento que eles tem no laboratório, quantos pesquisadores tem lá...quer dizer, manda o CV Lattes do pesquisador...então é algo absurdo. Se for uma universidade pede declaração do reitor.

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:20 [Com relação ao parágrafo único..] (9:1617-9:1915) (Super)

Codes: [Criticism of the previous law]

No memos

Com relação ao parágrafo único, tem-se que a possibilidade e não a obrigatoriedade de oitiva de órgãos de defesa dos direitos dos detentores é um retrocesso em relação à Medida Provisória, e merece ser objeto de veto em obediência ao princípio da vedação constitucional ao retrocesso social.

Code: Criticisms are due to ideological fundamentalism {1-0}

P26: Agencia Camara de Noticias.docx - 26:7 [Já para o relator do projeto d..] (16:16) (Super)

Codes: [Criticisms are due to ideological fundamentalism]

No memos

Já para o relator do projeto de lei na Câmara, as críticas ao texto são "infundadas" e decorrem de "preconceito ideológico"

Code: Economic use favours conservation {1-0}

P21: CARTA EMPRESARIAL PELA CONSERVAÇÃO E USO SUSTENTÁVEL DA BIODIVERSIDADE.docx - 21:2 [Legitimamos a necessidade de m..] (30:34) (Super)

Codes: [Economic use favours conservation]

No memos

Legitimamos a necessidade de mensurar o valor econômico dessa conservação por meio da valoração dos bens e serviços provenientes da biodiversidade. Entendemos que processos produtivos de menor impacto ambiental e soluções inovadoras para a conservação da biodiversidade geram valor positivo para a sociedade e para nossas empresas.

Code: Foreign institutions cannot be precluded from associating themselves with national institutions for access to national genetic resources {2-0}

P24: SPBC_Ressalvas ao PL.docx - 24:3 [<http://amazonia.org.br/2015/02..>] (3:3) (Super)

Codes: [Foreign Institutions cannot be precluded from associating themselves with national institutions for access to national genetic resources]

No memos

<http://amazonia.org.br/2015/02/nota-sbpc-manifesta-ressalvas-ao-pl-77352014/>

P24: SPBC_Ressalvas ao PL.docx - 24:2 [Defende que toda pessoa jurídica..] (19:19) (Super)
Codes: [Foreign Institutions cannot be precluded from associating themselves with national institutions for access to national genetic resources]
No memos

Defende que toda pessoa jurídica estrangeira que quiser acessar componente do patrimônio genético ou conhecimento tradicional associado, deve se associar a uma ICT nacional e assinar o Acordo de Repartição de Benefícios como condição para obter uma autorização de acesso ao patrimônio genético brasileiro.

Code: Illegality of the bill {22-0}

P 2: ISA_06_05_15.docx - 2:2 [A desconsideração do direito à..] (9:9) (Super)
Codes: [Illegality of the bill]
No memos

A desconsideração do direito à consulta livre, prévia e informada fere tratados internacionais ratificados pelo Brasil, como a Convenção 169 da Organização Internacional do Trabalho (OIT).

P 2: ISA_06_05_15.docx - 2:3 [“Ocorre que sem as emendas der..] (10:10) (Super)
Codes: [Illegality of the bill]
No memos

“Ocorre que sem as emendas derrubadas pela Câmara dos Deputados o Projeto de Lei padece de inconstitucionalidades e

P 2: ISA_06_05_15.docx - 2:5 [A aprovação do projeto também ..] (13:13) (Super)
Codes: [Illegality of the bill]
No memos

A aprovação do projeto também fere o Protocolo de Nagoya.

P 3: ISA_11_02_15.docx - 3:7 [Por outro lado, o texto aprova..] (22:22) (Super)
Codes: [Illegality of the bill]
No memos

Por outro lado, o texto aprovado ontem falha em atender diversos dispositivos do tratado. Por exemplo, dificulta o estabelecimento de sistemas internacionais de monitoramento do acesso aos recursos genéticos que assegurariam sua legalidade em escala mundial.

P 7: ISA_29_04_15.docx - 7:3 [O texto original da Câmara pre..] (17:17) (Super)
Codes: [Illegality of the bill]
No memos

O texto original da Câmara previa uma isenção para todo tipo de produto, o que fere a Convenção da Diversidade Biológica ([veja aqui](#)) (*leia mais no box abaixo*).

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:2 [em paralelo e em conflito com ..] (1:1785-1:1902) (Super)

Codes: [Illegality of the bill]

No memos

em paralelo e em conflito com o Protocolo de Nagoya
sobre acesso a recursos genéticos e repartição justa e equitativa

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:4 [perda dos nossos direitos hist..] (2:879-2:932) (Super)

Codes: [Illegality of the bill]

No memos

perda dos nossos direitos historicamente conquistados,

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:6 [Ocorre que sem as emendas derr..] (2:2278-2:2391) (Super)

Codes: [Illegality of the bill]

No memos

Ocorre que sem as emendas derrubadas pela Câmara dos
Deputados o Projeto de Lei padece de inconstitucionalidades

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:8 [registramos que a exclusão del..] (3:65-3:387) (Super)

Codes: [Illegality of the bill]

No memos

registramos que a exclusão deliberada dos detentores de conhecimentos tradicionais representa violação direta dos artigos 1.º, parágrafo único, e 231 da Constituição Federal, do artigos 6.º, “1”, e 15, “1” da Convenção 169 da OIT e do artigo 31 da Declaração das Nações Unidas sobre os Direitos dos Povos Indígenas.

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:11 [Este parágrafo merece ser veta..] (5:1-5:416) (Super)

Codes: [Illegality of the bill]

No memos

Este parágrafo merece ser vetado por inconstitucionalidade na medida em que ofende diretamente os artigos 215, §1º, e 216 da Constituição Federal, pois ignora que diversos povos indígenas, comunidades quilombolas e demais populações, que exercem atividade agrícola, desenvolvem permanentemente e ao longo de gerações, diferentes modos de criar e fazer relacionados ao patrimônio genético agricultável.

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:12 [de Lei sob análise é diferente..] (5:1481-5:1613) (Super)

Codes: [Illegality of the bill]

No memos

de Lei sob análise é diferente do conceito existente na Lei 10.711/2003, o que cria uma incompatibilidade lógica entre as duas leis

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:14 [Este dispositivo fere a isonomia..] (6:1234-6:1564) (Super)

Codes: [Illegality of the bill]

No memos

Este dispositivo fere a isonomia, pois estabelece uma regra diferenciada para dois usuários que estão realizando a mesma atividade. Mesmo que ambos estejam explorando economicamente produto resultante de acesso, aquele que disser que o acesso foi realizado antes de 29 de junho de 2000 poderá deixar de repartir benefícios

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:16 [Além disso, esse dispositivo p..] (7:344-7:561) (Super)

Codes: [Illegality of the bill]

No memos

Além disso, esse dispositivo pode representar entrave à aprovação do Protocolo de Nagoya, pois confunde o acesso com a efetiva exploração econômica do patrimônio genético na definição de um marco legal de isenção

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:17 [Ressalte-se, ademais, que o re..] (7:565-7:830) (Super)

Codes: [Illegality of the bill]

No memos

Ressalte-se, ademais, que o referido dispositivo ainda viola o princípio constitucional da irretroatividade da lei, uma vez que considera a data do acesso, e não a data da exploração econômica, como parâmetro para a referida isenção à repartição de benefícios.

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:18 [e isso também viola frontalmente..] (8:640-8:779) (Super)

Codes: [Illegality of the bill]

No memos

e isso também viola frontalmente as disposições do Protocolo de Nagoya, especialmente no que se refere aos termos mutuamente acordados.

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:19 [Garantir a possibilidade de re..] (9:1088-9:1415) (Super)

Codes: [Illegality of the bill]

No memos

Garantir a possibilidade de reduzir o percentual da repartição de benefícios para 0,1% da receita líquida anual representa grave violação à Convenção da Diversidade Biológica, pois impõe excessivo ônus a uma das partes da relação, violando os princípios de justiça e equidade que devem nortear a repartição de benefícios

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:22 [Em especial, tal dispositivo a..] (10:1295-10:1656) (Super)

Codes: [Illegality of the bill]

No memos

Em especial, tal dispositivo acaba por retirar a competência do IBAMA para exercer o poder de polícia em matéria ambiental, o que afronta o artigo 225, § 1.º, II, da Constituição Federal, além da Política Nacional de Meio Ambiente e a Lei n.º 7.735/1989, que preveem a referida autarquia federal como órgão executor das políticas ambientais no Brasil.

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:23 [Está-se, novamente, diante de ..] (11:354-11:1359) (Super)

Codes: [Illegality of the bill]

No memos

Está-se, novamente, diante de dispositivo que viola os princípios da justiça e equidade na repartição de benefícios, pois garante ao usuário a opção pelo regime de repartição de benefícios, além de criar obstáculo, desnecessário, à ratificação do Protocolo de Nagoya, especialmente no que se refere aos termos mutuamente acordados. Na prática esse dispositivo cria uma quebra de isonomia e coloca em contraposição os interesses do usuário e do provedor, e dá ao usuário a possibilidade de escolher o melhor regime, condenando o provedor invariavelmente ao pior regime. Não se poderia permitir a aplicação de norma já revogada; mais ainda por se tratar de benefício destinado apenas ao usuário, e não ao detentor do conhecimento tradicional, o que afronta o princípio constitucional da igualdade. Ademais a Medida Provisória não contém previsão relacionada aos Conhecimentos Tradicionais de origem não identificável, logo a regularização deve se dar sempre com base na nova lei.

P14: Editorial Folha_10_04_2015_apos_aprovacao no senado.docx - 14:4 [Há quem diga que a lei, se apr..] (9:9) (Super)

Codes: [Illegality of the bill]

No memos

Há quem diga que a lei, se aprovada, entrará em conflito com a Convenção da Diversidade Biológica. Não é improvável que venha a ser questionada na Justiça,

P24: SPBC_Ressalvas ao PL.docx - 24:1 [A SBPC também não concorda com..] (21:21) (Super)

Codes: [Illegality of the bill]

No memos

A SBPC também não concorda com diversos dispositivos relacionados aos conhecimentos tradicionais associados e aos direitos dos povos indígenas e conhecimentos tradicionais, detentores de tais conhecimentos, pois ferem direitos assegurados pela Convenção sobre Diversidade Biológica (CDB) e pela Convenção 169 da Organização Internacional do Trabalho (OIT), convenções essas ratificadas pelo Brasil, e reconhecidos pela Declaração das Nações Unidas sobre os Direitos dos Povos Indígenas.

P26: Agencia Camara de Noticias.docx - 26:1 [O argumento é que o texto é in..] (9:9) (Super)

Codes: [Illegality of the bill]

No memos

O argumento é que o texto é inconstitucional por falta de consulta prévia aos povos tradicionais, como indígenas, quilombolas e ribeirinhos, conforme determina a Convenção 169 da Organização Internacional do Trabalho.

P27: MENSAGEM de veto.docx - 27:2 [inconstitucionalidade] (3:3) (Super)

Codes: [Illegality of the bill]

No memos

inconstitucionalidade

Code: Managerialist argument (Public consultation ossifies the process/no technical contribution could come from traditional communities in a short time) {7-0}

P26: Agencia Camara de Noticias.docx - 26:9 [O que eles estão querendo, na ..] (18:18) (Super)

Codes: [Managerialist argument (Public consultation ossifies the process/ no technical contribution could come from traditional communities in a short time)]

No memos

O que eles estão querendo, na verdade, é transformar o projeto em impraticável: se, em cada decisão a ser tomada, todas essas instituições tiverem de ser chamadas para ser ouvidas, teremos uma lei que não será instrumento de acesso ao patrimônio genético em lugar nenhum.

P30: Henrique Dolabella e Eliana Fontes.docx - 30:1 [e também não foi capaz de nos prov..] (14:14) (Super)

Codes: [Managerialist argument (Public consultation ossifies the process/ no technical contribution could come from traditional communities in a short time)]

No memos

e também não foi capaz de nos prover com informações.

P30: Henrique Dolabella e Eliana Fontes.docx - 30:2 [Foi o que deu pra ser feito.] (14:14) (Super)

Codes: [Managerialist argument (Public consultation ossifies the process/ no technical contribution could come from traditional communities in a short time)]

No memos

Foi o que deu pra ser feito.

P30: Henrique Dolabella e Eliana Fontes.docx - 30:3 [A sociedade civil não estava s..] (15:15) (Super)

Codes: [Managerialist argument (Public consultation ossifies the process/ no technical contribution could come from traditional communities in a short time)]

No memos

A sociedade civil não estava suficientemente articulada

P31: Interview 6_com transcricao.docx - 31:4 [Teve um momento que a CNI tent..] (52:52) (Super)

Codes: [Managerialist argument (Public consultation ossifies the process/ no technical contribution could come from traditional communities in a short time)]

No memos

Teve um momento que a CNI tentou trazer as comunidades para a discussão, a gente como coalizão apresentou qual era a proposta de texto, as comunidades não se sentiram representadas e aí o que a gente falou, ah, vocês têm que procurar o MMA porque são eles que estão construindo. A gente tá só dando quais são os inputs do setor privado, mas aí realmente tem que ser uma conversa entre ministério e comunidades. Mas o Ministério não abriu, pelo que a gente sabe eles não abriram a conversa porque eles sabiam que ia demorar muito mais pra sair.

P32: Interview 26_Com transcrição.docx - 32:9 [O Henrique era aquele cara que..] (28:28) (Super)

Codes: [Managerialist argument (Public consultation ossifies the process/ no technical contribution could come from traditional communities in a short time)]

No memos

O H. era aquele cara que não permitia que a legislação fosse progressista, saísse progressista. O G. tem uma posição muito próxima das empresas, ele não tem sensibilidade pras comunidades

P32: Interview 26_Com transcrição.docx - 32:5 [Mas não pode ser considerado c..] (60:60) (Super)

Codes: [Managerialist argument (Public consultation ossifies the process/ no technical contribution could come from traditional communities in a short time)]

No memos

Mas não pode ser considerado consulta, não pode. Consulta seria algo que seria caríssimo, nós não teríamos condição de fazer, seria algo que ia durar o que? 10 anos? 5 anos? 3 anos? Não sei. Seria algo caríssimo, teria que se ir pra cada região, e eu não digo estado, mas uma região, um conjunto de municípios para trabalhar comunidades tradicionais, lideranças, representantes delas, para discutir e fazer uma deliberação sobre uma pauta extremamente técnica.

Code: More BS would make the law once again impossible to implement {1-0}

P15: Editorial_folha_30_04_2015.docx - 15:2 [Faz sentido que assim seja, po..] (9:9) (Super)

Codes: [More BS would make the law once again impossible to implement]

No memos

Faz sentido que assim seja, pois aí se localiza a geração do valor que se pretende redistribuir aos detentores do conhecimento original, como é justo. Caso contrário, a nova norma incorreria no pecado maior da anterior, o de pretender tudo regular e onerar, apenas para terminar impedindo a própria geração de benefícios.

Code: National development {3-0}

P19: MMA Leader_com transcrição.docx - 19:2 [Agora, nenhum país renuncia as..] (80:80) (Super)

Codes: [National development]

No memos

Agora, nenhum país renuncia as suas possibilidades de crescimento.

P20: Interview 54_com_transcricao.docx - 20:6 [no lugar de eu ter que levanta..] (50:50) (Super)

Codes: [National development]

No memos

no lugar de eu ter que levantar toda uma papelada pra pedir uma autorização pra ter lá o conselho aprovando, se eu simplesmente registro num cadastro minhas pesquisas, o que eu tô fazendo, o mínimo que vai ser exigido, isso vai dar muito mais segurança e celeridade ao processo de desenvolvimento.

P26: Agencia Camara de Noticias.docx - 26:10 [viabilização de investimentos ..] (19:19) (Super)

Codes: [National development]

No memos

viabilização de investimentos em pesquisa com capacidade de gerar mais emprego, renda e oportunidades para o País.

Code: new law officialised biopiracy {2-0}

P17: Folha_15_04_15_Senado aprova marco legal da biodiversidade_Gabriela Guerreiro.docx - 17:2 ["Qual o produto principal da g..] (10:10) (Super)

Codes: [new law officialised biopiracy]

No memos

"Qual o produto principal da gravata? É o tecido. E o produto que dá o brilho? É outro, nosso, vindo da nossa biodiversidade. Mas não é o principal. E aí não paga? Não vai fazer a repartição? Então é uma biopirataria oficial"

P26: Agencia Camara de Noticias.docx - 26:5 ["legalizam a biopirataria".] (14:14) (Super)

Codes: [new law officialised biopiracy]

No memos

"legalizam a biopirataria".

Code: Procedural criticism {20-0}

P 2: ISA_06_05_15.docx - 2:1 [uma vez que os principais ator..] (9:9) (Super)

Codes: [Procedural criticism]

No memos

uma vez que os principais atores envolvidos – camponeses, pequenos agricultores, povos e comunidades tradicionais – foram impedidos de participar da elaboração do PL

P 3: ISA_11_02_15.docx - 3:5 [Povos indígenas e tradicionais..] (16:16) (Super)

Codes: [Procedural criticism]

No memos

Povos indígenas e tradicionais manifestaram-se contra o regime de urgência, que não permitiu ampla discussão do projeto, e não participaram das tratativas – o que governo e representantes de empresários admitem.

P 3: ISA_11_02_15.docx - 3:6 [“Ou o Governo altera sua postu..] (18:18) (Super)

Codes: [Procedural criticism]

No memos

“Ou o Governo altera sua postura adotada desde o início do processo legislativo de defender interesses empresariais e negar-se a atender às demandas das comunidades tradicionais

P 3: ISA_11_02_15.docx - 3:8 [regulamentação apressada, equi..] (23:23) (Super)

Codes: [Procedural criticism]

No memos

regulamentação apressada, equivocada

P 4: ISA_12_05_15_Nurit.docx - 4:1 [O que se viu, então, foi uma t..] (13:13) (Super)

Codes: [Procedural criticism]

No memos

O que se viu, então, foi uma tramitação apressada, e nada democrática, de um assunto complexo

P 4: ISA_12_05_15_Nurit.docx - 4:2 [Os detentores do conhecimento ..] (13:13) (Super)

Codes: [Procedural criticism]

No memos

Os detentores do conhecimento tradicional, povos indígenas e comunidades locais, os pesquisadores e os ambientalistas foram aliados do debate e o texto refletiu apenas os interesses das empresas que usam componentes da nossa biodiversidade e conhecimentos tradicionais a ela associados.

P 4: ISA_12_05_15_Nurit.docx - 4:7 [Depois de quase 20 anos de deb..] (15:15) (Super)

Codes: [Procedural criticism]

No memos

Depois de quase 20 anos de debates sobre esse assunto, como podemos acabar com uma lei, aprovada apressadamente

P 5: ISA_19_03_15.docx - 5:1 [O manifesto afirma que a exclu..] (10:10) (Super)

Codes: [Procedural criticism]

No memos

O manifesto afirma que a exclusão dessas populações do debate sobre o projeto foi uma “decisão consciente e deliberada” do governo federal e dos representantes das empresas e classifica-a como um “rompimento na relação de confiança” entre essas mesmas populações e empresas ([leia o manifesto](#)).

P 5: ISA_19_03_15.docx - 5:2 [“Há um acordo entre Legislativo..] (15:15) (Super)

Codes: [Procedural criticism]

No memos

“Há um acordo entre Legislativo e Executivo para aprovar o texto como está. Infelizmente, esse acordo se deu com pressão do setor empresarial”

P 5: ISA_19_03_15.docx - 5:3 [“É claro que há consenso sobre..] (17:17) (Super)

Codes: [Procedural criticism]

No memos

“É claro que há consenso sobre o PL entre o governo e o setor empresarial. O projeto foi debatido e elaborado por eles, com a exclusão de povos e comunidades tradicionais”

P 7: ISA_29_04_15.docx - 7:2 [Ele voltou a negar que povos i..] (16:16) (Super)

Codes: [Procedural criticism]

No memos

Ele voltou a negar que povos indígenas e tradicionais foram excluídos do debate sobre o processo, como denunciam organizações da sociedade civil e movimentos sociais e já foi reconhecido pelo governo.

P 7: ISA_29_04_15.docx - 7:6 [Representantes das grandes ind..] (21:21) (Super)

Codes: [Procedural criticism]

No memos

Representantes das grandes indústrias e do agronegócio conduziram diretamente as negociações que resultaram no parecer de Alceu Moreira.

P 7: ISA_29_04_15.docx - 7:7 [Mais uma vez, lobistas da indú..] (23:23) (Super)

Codes: [Procedural criticism]

No memos

Mais uma vez, lobistas da indústria tiveram acesso privilegiado ao plenário

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:1 [reiteramos nosso repúdio com a..] (1:1395-1:1703) (Super)

Codes: [Procedural criticism]

No memos

reiteramos

nosso repúdio com a forma ilegal e antidemocrática que um assunto tão importante para a sociedade brasileira, que regerá, daqui para as futuras gerações, a sistemática de exploração da agro e da biodiversidade nacionais, foi tratado tanto pelo Poder Executivo quanto pelo Poder Legislativo

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:3 [Reiteramos nosso repúdio acerc..] (2:304-2:744) (Super)

Codes: [Procedural criticism]

No memos

Reiteramos nosso repúdio acerca da assimetria na amplitude das discussões realizadas com os setores privados interessados, especialmente, na exploração econômica do patrimônio genético nacional, com os quais foi noticiada a realização de mais de trezentas reuniões, em detrimento dos poucos espaços que tiveram que ser conquistados por nós, guardiões da agro e biodiversidade e detentores dos saberes (conhecimentos) tradicionais

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:5 [Em nenhum momento nos negamos ..] (2:1271-2:1357) (Super)

Codes: [Procedural criticism]

No memos

Em nenhum momento nos negamos a dialogar e a propor melhorias no Projeto apresentado,

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:10 [Importa destacar que o antepro..] (4:837-4:1164) (Super)

Codes: [Procedural criticism]

No memos

Importa destacar que o anteprojeto encaminhado pelo Executivo não continha qualquer disposição referente ao patrimônio genético relacionado à alimentação e agricultura, e que referidas disposições foram incluídas a partir do substitutivo apresentado pelo Relator na Câmara dos Deputados, onde o projeto não foi debatido

P26: Agencia Camara de Noticias.docx - 26:2 ["Neste caso, o projeto foi ela..] (12:12) (Super)

Codes: [Procedural criticism]

No memos

"Neste caso, o projeto foi elaborado pela coalizão empresarial interessada neste assunto. Não houve qualquer participação dos detentores de conhecimento tradicional, o que gerou um grande desequilíbrio no projeto",

P31: Interview 6_com transcricao.docx - 31:5 [Não teve uma participação muit..] (52:52) (Super)

Codes: [Procedural criticism]

No memos

Não teve uma participação muito ativa das comunidades nesse processo, porque em nenhum momento eles foram convidados, a gente montou uma negociação nossa, a gente tava defendendo o nosso interesse. Até chegou o MMA a ter uma ou duas negociações com as comunidades mas não que eles tenham construído da mesma maneira que a gente construiu dentro do ministério. Foi mais pra dizer o que eles já tinham

P32: Interview 26_Com transcrição.docx - 32:1 [As comunidades tradicionais fo..] (15:16) (Super)

Codes: [Procedural criticism]

No memos

Question - As comunidades tradicionais foram envolvidas nesse processo de discussão da nova lei?

Answer - Muito pouco e de forma atrasada.

Code: The bill is more favourable to scientists {2-0}

P25: Presidente da SBPC elogia avanços do PL 7735 para CT.docx - 25:1 [Helena Nader, o texto enviado ..] (7:7) (Super)

Codes: [The bill is more favourable to scientists]

No memos

Helena Nader, o texto enviado à sanção da presidente Dilma Rousseff é bastante satisfatório para cientistas e pesquisadores e pode abrir um novo panorama para este tipo de atividade.

P27: MENSAGEM de veto.docx - 27:6 [A atribuição de competências i..] (31:31) (Super)

Codes: [The bill is more favourable to scientists]

No memos

A atribuição de competências internas ao Poder Executivo é matéria de iniciativa privativa do Presidente da República, nos termos do art. 61, § 1º, inciso II, da Constituição, não podendo ser alterada por medida de iniciativa do Legislativo, em respeito ainda ao disposto no art. 63, inciso I.”

Code: The law is a result of capture (often associated with electoral interests) {12-0}

P 2: ISA_06_05_15.docx - 2:4 [colide com o interesse social] (10:10) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

colide com o interesse social

P 3: ISA_11_02_15.docx - 3:2 [O presidente da Câmara, Eduard..] (12:12) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

O presidente da Câmara, Eduardo Cunha (PMDB-RJ), começou a cumprir o acordo para facilitar a aprovação de projetos de interesse dos ruralistas em troca do apoio à sua eleição.

P 7: ISA_29_04_15.docx - 7:1 [acordo fechado entre líderes r..] (10:10) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

acordo fechado entre líderes ruralistas, o *lobby* do agronegócio e das indústrias de cosméticos, medicamentos, higiene e alimentação

P 7: ISA_29_04_15.docx - 7:4 [“O que está sendo discutido ne..] (18:18) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

“O que está sendo discutido nesta casa é como ganhar mais dinheiro e abrir o país ao capital estrangeiro. O que o projeto pretende é abrir as áreas indígenas e de agricultores familiares aos interesses do agronegócio. O projeto é para grandes negócios, não para defender direitos”

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:7 [e colide com o interesse socia..] (2:2393-2:2426) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

e colide
com o interesse social,

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:13 [Portanto a razão de veto tem c..] (6:1-6:325) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

Portanto a razão de veto tem como escopo manter a harmonia do sistema jurídico nacional, e também o interesse público, pois o direito de usar e vender livremente seus produtos já é garantido aos seus detentores naturalmente e é regulamentado não só pelas duas leis citadas, mas por todo o ordenamento jurídico nacional

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:15 [Essa previsão fere o interesse..] (7:1-7:162) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

Essa previsão fere o interesse público, pois deixa mais onerosa a exploração econômica de produtos resultantes de inovações a partir de 29 de junho de 2000.

P13: Carta_veta_dilma_-_pl_7735.pdf - 13:21 [Atribuir ao Ministério da Agri..] (10:763-10:1291) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

Atribuir ao Ministério da Agricultura, Pecuária e Abastecimento a competência para fiscalizar o acesso aos conhecimentos tradicionais associados às atividades agrícolas, fere o interesse público na medida em que o coloca em rota de colisão com as competências do Ministério do Meio Ambiente entre outros, especialmente no que se refere à fiscalização sobre questões que podem envolver povos indígenas e comunidades tradicionais que exercem atividades agrícolas, possibilitando a ocorrência de conflito de competência

P25: Presidente da SBPC elogia avanços do PL 7735 para CT.docx - 25:2 [“Para mim, que sou biomédica, ..] (10:10) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

“Para mim, que sou biomédica, [a proposta] é excelente. Mas, como presidente de uma sociedade de todas as áreas do conhecimento, me preocupo com as questões das comunidades tradicionais”, disse Nader.

P27: MENSAGEM de veto.docx - 27:1 [por contrariedade ao interesse..] (3:3) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

por contrariedade ao interesse público

P31: Interview 6_com transcricao.docx - 31:6 [Mas tem umas questões política..] (54:54) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

Mas tem umas questões políticas super interessantes. Se vc pensar a Dilma nesse último ano ficou péssima com o setor privado porque as indústrias começaram a ter muito prejuízo. Então se vc pegar os relatórios da CNI de crescimento da indústria foram muito ruins. Então foi uma maneira que ela encontrou de apoiar o setor privado. E mandou inclusive com regime de urgência.

P32: Interview 26_Com transcrição.docx - 32:6 [Por que mandaram lá em regime ..] (61:62) (Super)

Codes: [The law is a result of capture (often associated with electoral interests)]

No memos

Por que mandaram lá em regime de urgência? Porque que teve que ser tudo feito de maneira tão rápida?

Eu acho que por conta da eleição, isso foi uma indicação de posicionamento do governo, para o setor da indústria, relevante.

Code: The new bill provides no legal security {5-0}

P 3: ISA_11_02_15.docx - 3:9 [não trará segurança jurídica p..] (23:23) (Super)

Codes: [The new bill provides no legal security]

No memos

não trará segurança jurídica para o tema

P 4: ISA_12_05_15_Nurit.docx - 4:6 [que não trará nenhuma segurança..] (15:15) (Super)

Codes: [The new bill provides no legal security]

No memos

que não trará nenhuma segurança jurídica

P 7: ISA_29_04_15.docx - 7:5 [segurança jurídica para esse t..] (19:19) (Super)

Codes: [The new bill provides no legal security]

No memos

segurança jurídica para esse tema no país, e agora concebem e apoiam uma nova lei que trará muito mais insegurança jurídica e que já traz em seu bojo, por causa do seu processo de aprovação, um enorme potencial de conflito com os detentores de conhecimento tradicional”, comenta.

P14: Editorial Folha_10_04_2015_apos_aprovacao no senado.docx - 14:5 [prolongando a insegurança.] (9:9) (Super)

Codes: [The new bill provides no legal security]

No memos

prolongando a insegurança.

P26: Agencia Camara de Noticias.docx - 26:3 [“Se o projeto visa trazer segu..] (13:13) (Super)

Codes: [The new bill provides no legal security]

No memos

“Se o projeto visa trazer segurança jurídica, a gente entende que a presidente tem que vetar alguns dispositivos principais, porque de nada vai adiantar uma nova lei acabar na Justiça, com ações judiciais longas, de 10 ou 20 anos”

Code: The potential benefits of biodiversity use are wasted {1-0}

P 4: ISA_12_05_15_Nurit.docx - 4:4 [Nessa nova lei, a União, guard..] (15:15) (Super)

Codes: [The potential benefits of biodiversity use are wasted]

No memos

Nessa nova lei, a União, guardiã – ao menos teoricamente – da nossa biodiversidade, abre mão de quase todas as possibilidades de aferir benefícios com a exploração do nosso patrimônio genético.

Code: Too much power to the user {2-0}

P 2: ISA_06_05_15.docx - 2:9 [Outro ponto dúbio do projeto, ..] (23:23) (Super)

Codes: [Too much power to the user]

No memos

Outro ponto dúbio do projeto, no qual a carta indica a necessidade de veto, é também a possibilidade de o usuário explorador escolher quem será beneficiário da repartição de benefícios.

P26: Agencia Camara de Noticias.docx - 26:6 [conhecimento tradicional e da ..] (14:14) (Super)

Codes: [Too much power to the user]

No memos

conhecimento tradicional e da divisão dos lucros decorrentes da exploração da biodiversidade, além de outros pontos que, segundo os movimentos sociais,

Code: Traditional and indigenous communities are represented in the CGEN {1-0}

P26: Agencia Camara de Noticias.docx - 26:8 [Além disso, Moreira argumenta ..] (17:17) (Super)

Codes: [Traditional and indigenous communities are represented in the CGEN]

No memos

Além disso, Moreira argumenta que essas comunidades estão devidamente representadas no Conselho de Gestão do Patrimônio Genético (CGEN), responsável pela coordenação, elaboração e implementação das políticas do setor.

Code: Union as provider is better for conservation {2-0}

P20: Interview 54_com_transcricao.docx - 20:3 [agora se pressupõe que como o ..] (42:42) (Super)

Codes: [Union as provider is better for conservation]

No memos

agora se pressupõe que como o patrimônio genético é um bem comum do uso do povo e que a sua gestão cabe à União, a União fará o papel de provedor do recurso genético é com ela que se fará o contrato de repartição de benefícios e a lei já pressupões que todos os benefícios devem ser dirigidos para a conservação e uso sustentável.

P20: Interview 54_com_transcricao.docx - 20:4 [nunca foi assegurado que o ben..] (42:42) (Super)

Codes: [Union as provider is better for conservation]

No memos

nunca foi assegurado que o benefício gerado e repartido iria para a conservação da biodiversidade

Code: we opened space for the bioindustry {1-0}

P23: Interview Izabella Teixeira_com transcrição.docx - 23:1 [vc abriu o caminho pra bioindú..] (48:48) (Super)

Codes: [we opened space for the bioindustry]

No memos

vc abriu o caminho pra bioindústria no país

APPENDIX II

Actor	Appearances in Lower Chamber news	Affiliation/party/role	Coalition
1. Alceu Moreira	46	Federal Deputy / PMDB-RS	Neo-developmental
2. Dilma Rousseff	14	President	Administrative economic rationalist
3. Luciana Santos	13	Federal Deputy / PCdoB-PE	Socio-environmentalist
4. Henrique Fontana	10	Federal Deputy / PT-RS	Administrative economic rationalist
5. Alessandro Molon	7	Federal Deputy / PT-RJ	Socio-environmentalist
6. Sibá Machado	7	Federal Deputy / PT-AC	Administrative economic rationalist
7. Sarney Filho	7	Federal Deputy / PV-MA	Socio-environmentalist
8. Ivan Valente	5	Federal Deputy / Psol-SP	Socio-environmentalist
9. Jandira Feghali	4	Federal Deputy / PCdoB-RJ	Socio-environmentalist
10. Luis Carlos Heinze	4	Federal Deputy / PP-RS	Neo-developmental
11. Chico Alencar	4	Federal Deputy / Psol-RJ	Socio-environmentalist
12. Nurit Rachel Bensusan	3	Socio-environmental Institute (ISA) - NGO	Socio-environmentalist
13. Mauricio Guetta	2	Socio-environmental Institute (ISA) - NGO	Socio-environmentalist
14. Zé Silva	2	Federal Deputy / SD-MG	Socio-environmentalist
15. Neri Geller	2	Minister of Agriculture	Neo-developmental
16. Roberto Cavalcanti	2	Ministry of the Environment - Secretary of Biodiversity and Forests	Administrative economic rationalist
17. Helena Nader	2	Brazilian Society for Scientific Progress (SBPC)	Socio-environmentalist
18. Luiz Carlos Heinze	2	Federal Deputy / PP-RS	Neo-developmental
19. Bohn Gass	2	Federal Deputy / PT-RS	Socio-environmentalist
20. Valdir Colatto	2	Federal Deputy / PMDB-SC	Neo-developmental
21. José Carlos Aleluia	1	Federal Deputy / DEM-BA	Neo-developmental
22. Juliana Santilli	1	Public Attorney / DF	Socio-environmentalist
23. Joaquim Belo	1	National Council of Extractivist Population (CNS)	Socio-environmentalist
24. Jose Guimarães	1	Federal Deputy / PT-CE	Administrative economic rationalist
25. Paulo Sérgio Beirão	1	National Council of Scientific and Technologic Development (CNPq),	Administrative economic rationalist
26. Erika Kokay	1	Federal Deputy / PT-DF	Socio-environmentalist
27. Emilson Rodrigues	1	Federal Deputy / Psol-PA	Socio-environmentalist
28. Padre João	1	Federal Deputy/ PT-MG	Socio-environmentalist

Source: Produced by the author

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