

Governing the beef supply chain in the Brazilian Amazon: progress and limits in shaping the transition towards a sustainable development

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Scope and purpose of the research

During the last 40 years, the beef sector has by large been the main driver of deforestation in the Brazilian Amazon. The States of Mato Grosso, Pará and Rondônia constitute the three largest producers of beef in this region. These states comprise 58 million cattle heads (28% of the total national herd) spread over 32.1 million hectares of pasture (53% of the total pastureland in the Amazon Biome). There is an extensive and growing body of work assessing the factors driving the expansion of cattle ranching in this region (Pocard Chapuis, 2004; Veiga *and al.*, 2004; Barreto, Pereira and Arima, 2005; Pacheco and Pocard, 2011). The beef chain has been increasingly acknowledged by NGOs as the major source of deforestation (Friends of the Earth, 2009; Greenpeace, 2009). In the past, public regulations alone were insufficient to halt the expansion of cattle ranching over forests, and the major meatpacking companies did refuse to control their suppliers. Such situation, however, began to reverse. Shifting from a “shaming the corporation name” to a “building new agreements” situation, private and public actors have then engaged in a negotiation process around mechanisms for enhancing the governance of beef supply chain while explicitly embracing some sustainability goals. Scholars stress the role of state actors in this process. All kinds of private regulation must, in some way, relate to existing regulatory frameworks, in particular, national legislation. Thus, the development of a state regulatory framework can pave the way for private regulation or reinforce it (Bartley, 2007; Gulbrandsen, 2005; Rametsteiner, 2002). We analyse the private and public drivers that lead the meatpacking companies’ decisions to control their suppliers in the Amazon, the main governance mechanisms emerged, and their limits from observation on current practices.

Methodology

Our work is based on a historical review of the process and on qualitative interviews with 61 key private and public stakeholders located in the three main beef producing Amazon States (Mato Grosso, Pará, Rondônia) and Sao Paulo and Brasilia, which were conducted between 2011 and 2015. A data display matrix for qualitative analysis was elaborated to organize and analyse patterns of response. The respondents were classified into six types: cattle ranchers, industry sector, retailers, NGO’s members, public officials and other informants (*e.g.* academics, agrochemical sector, technicians, and private and public banks representatives). The responses were analyzed with regards to understanding around three main themes: i) main drivers of change shaping beef supply chain; ii) existing governance systems and mechanisms, iii) the limits and challenges for an effective governance of the beef supply chain in the Amazon.

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Results

What drove the meatpacking companies to control their suppliers?

We have identified two main drivers: i) a higher sensibility of the chain's stakeholders to pressures aimed at shaming their reputation and ii) innovative ways to enforce public regulations.

Since the end of the 90's, major Brazilian beef companies began to acquire national and multinational owned meatpacking plants in Brazil and abroad. Their goal was to increase participation in global beef trade. Two national companies stand out, Bertin Group and JBS/Friboi. In 2004, Brazil produced 80% of corned beef consumed in the world, half of it been produced by Bertin Group. The company JBS/Friboi became the main fresh beef export in the same year. In 2009, these companies merged their bovine meat operations. As a result, Bertin Group bovine meat division vanished, and JBS/Friboi became the leader in processed and fresh meat sales.

Between 2002 and 2015, the Brazilian beef exports underwent a notable expansion (245% in the period), and the country started to dispute the leadership in the world beef market with India and Australia. Beef exports originated in the Amazon (*i.e.* Rondonia, Mato Grosso and Para) also increased reaching about 2.6 thousand tons in 2015. While the share of the Amazon states in total Brazilian beef exports accounts for a small percent, this is growing over time (Abrafrigo, 2015 and Abiec, 2015). Thus, the context has become to change. Brazilian meat packing companies have started to establish a relationship with international stakeholders.

In this context, the pressure made by environmentalists NGOs was more effective. They could threaten the reputation of meatpacking companies in foreign markets. The initial action of Friends of the Earth and Greenpeace was to target international investors and international beef buyers such as the International Finance Corporation and the British supermarket chain Tesco (Harvey, 2012). Environmentalists NGOs attack the reputation of Bertin and JBS/Friboi mainly through the "shaming the corporation name" strategy. Two international reports, extensively divulged, have proven the fact that Bertin and JBS/Friboi were supplied by farmers performing illegal deforestation (Amigos da terra Amazônia Brasileira, 2009, Greenpeace, 2009).

Beyond the environmentalist threats to companies' reputation, public actors also put in place innovative strategies to force changes in the beef supply chain. In 2009, the public prosecutors decided to initiate 21 public civil suits against ranchers in the state of Pará. A public civil suit can be applied if the federal government sues a company for violations of federal law. But, the institutional innovation was that they also implicated the meatpacking companies that had acquired cattle from these ranches. Public prosecutors decided to use the concept of "shared responsibility" to hold accountable to the beef industry. The juridical concept of shared responsibility is embedded in the Brazilian Environmental Crimes Law approved in 1998. Briefly, this concept entails the responsibility of the buyers over their suppliers in the chain regarding environmental damages. Thus, if a cattle rancher perpetrates an environmental crime (such as deforestation), the slaughterhouse buying his animals can also be implicated in the crime. The public prosecutors perceived that it was more effective to prosecute the industry than several hundred cattle ranchers spread over a huge territory.

Which governance mechanisms have emerged?

Meatpacking companies were finally forced to sign the so-called Agreement for the Adjustment of Conduct (from the Portuguese, TAC-Termo de Ajustamento de Conduta) to stop the civil actions. This legal instrument establishes responsibilities and obligations of meatpacking companies, cattle ranchers and even of the public authorities regarding the enforcement of the environmental law in cattle farms. For instance, meatpacking companies shall monitor deforestation of their supplier farms through satellite data and the screening of legal documentation such as the Environmental Rural Registry (Cadastro Ambiental Rural, CAR in Portuguese).

Beyond the official agreement with the public prosecutors, the three largest meatpacking companies operating in Brazilian Amazon also signed a private agreement with Greenpeace. The following agreement has similar terms as the TAC, yet it also demands from the industry the control of their indirect suppliers. These indirect suppliers are in general medium and small-scale cattle ranchers selling calves to large-scale ranchers. In spite of this, Greenpeace and the beef companies have agreed to postpone the control to indirect suppliers given the difficulty involved in tracing the animals spread out over millions of properties that can be very distant from the final buyer.

What is the progress made through these mechanisms and their limits?

Some progress has been made particularly regarding deforestation mitigation and law enforcement. Both agreements demand meatpacking companies monitor deforestation of their supplier farms through satellite data. If buyers detect a non-authorized deforestation after June 2008, they cannot buy from this supplier. According to the Brazilian Forestry Code (Brazil, 2012), legal deforestation is allowed in Amazon region at the limit of 20% of the property area. But, legal deforestation has to be authorized previously. Both agreements demand the screening of legal documentation. Meatpacking companies have to verify that their suppliers hold an Environmental Rural Registry (Cadastro Ambiental Rural, CAR in Portuguese) along with an environmental license to operate. Meatpacking companies are obliged to consult two official “black lists” before buying cattle (the list of slave labor and the federal list of environmental crimes) and must refuse the produce from cattle ranchers whose names are not in those lists.

However, this system for verifying compliance with environmental regulations is not necessarily well suited to address sustainability issues more broadly. There are still significant limits. For instance, the Environmental Rural Registry is a mandatory digital registry, which aims to integrate environmental information and actual land uses in cattle ranchers’ landholdings. This information allows verifying the existence of the Forest Legal Reserve and the conservation of riparian forests. However, once the registry has been delivered, there are no additional obligations to change management decisions at the farm level. For instance, cattle ranchers are not obliged to restore the environmental passive. Besides, there are any monitoring obligations by public authorities. Only the environmental license to operate can attest that management decisions are changed toward responsible land use. But, the efforts to obtain the environmental license are still very limited because even without an environmental license cattle ranchers can access the market.

Moreover, the value chain actors and government agencies have not yet implemented a trustful system of traceability of the animals. So there is no guarantee that illegal suppliers do not launder the cattle to legal suppliers (Gibbs *et al.*, 2015). The monitoring of the compliance of the cattle agreements is also limited. For instance, in the case of the TAC one of the clauses foresee that meatpacking companies shall participate and finance an annual audit system to verify compliance with the agreement. However, public prosecutors did not announce any progress in this step until the end of 2015. Regarding the private agreement signed between Greenpeace and the largest meatpacking companies, there is an obligation to report on an annual basis the results of the controls over direct suppliers. But, the annual reports made by the meatpacking companies do not disclose any information about the proportion of illegal meat that could be or not in the market yet.

The situation of the indirect suppliers is also problematic: indirect suppliers of calves are mostly medium and small farmers spread over a huge territory that is very costly to monitor. Moreover, some of them, particularly smallholders, are settlers living in precarious areas where the government agencies did not succeed yet to perform CAR and where deforestation still occurs (Godar *and al.*, 2014, Piketty *and al.*, 2015).

Conclusion

Scholars tend to agree governance arrangements emerge as a result of negotiations between actors in uneven social and policy arenas. Companies may have a preference toward more flexible symbolic commitments over which they have control, under the so-called *producer dominated governance mechanisms*. In contrast, social and environmental activists tend to advocate for stronger regulations with accountabilities shared by multiple parties under the so-called *multi-stakeholder dominated governance model*.

Our results show that in the Brazilian beef supply chain, the meatpacking companies are actually leading the implementation of the governance mechanism negotiated, the public and the private one. The implementation phase of the existing governance mechanisms includes the investment in some tools and procedures to make possible the verification of the compliance with laws. As mentioned above, it includes acquiring satellite images to monitor the farms of the direct suppliers and to perform the document controls. Meatpacking companies have also created specific “sustainability departments” to handle the cattle ranchers documents and analyse the satellite data at the farm level.

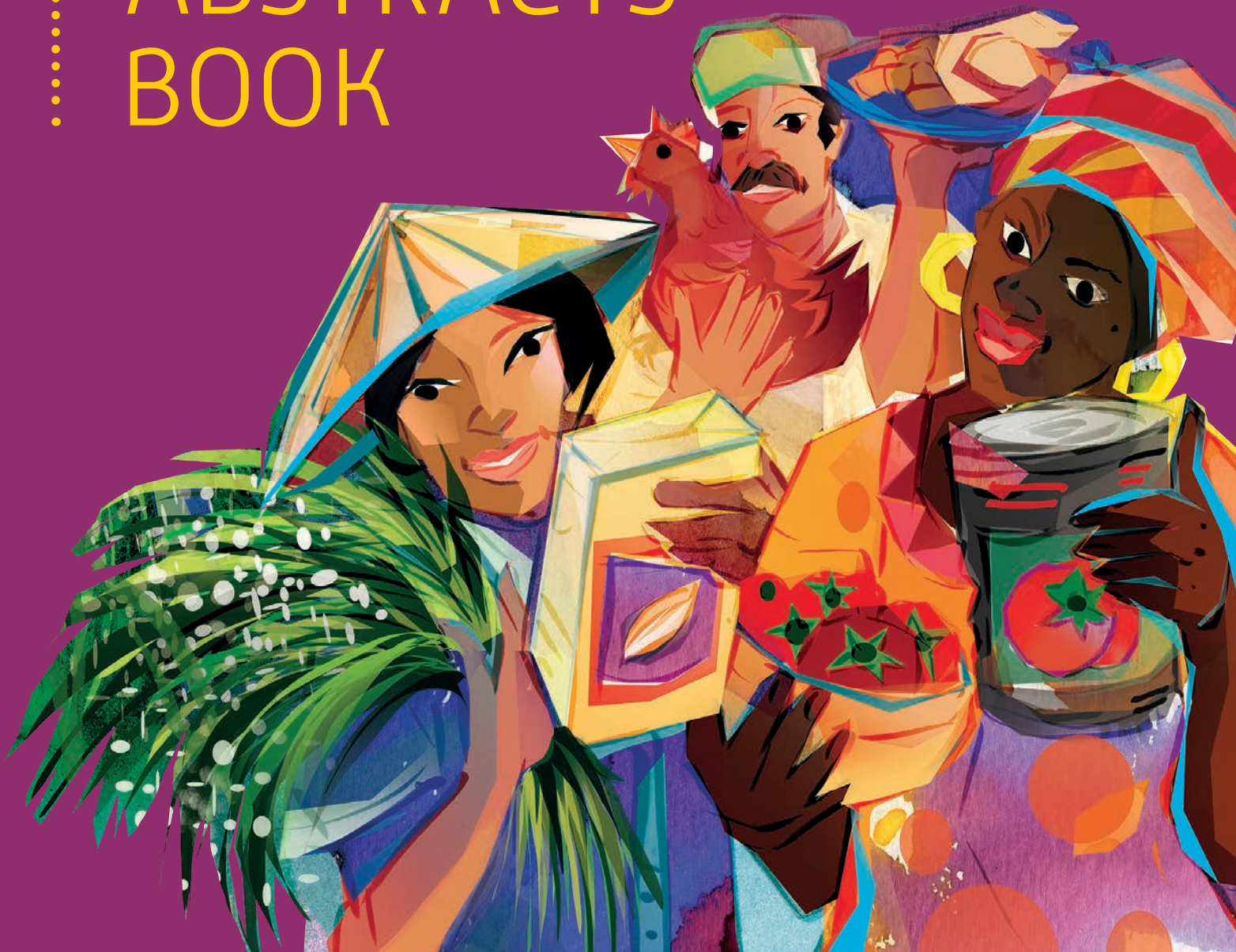
Nevertheless, these governance mechanisms and tools are still very limited in their scope and objectives toward sustainability goals. It is true they have included the national legislation, and its aim is the law enforcing. Further controls were established, but they do not reach the indirect cattle suppliers. Moreover, only the enforcement of legal instruments such as the Environmental Rural Registry does not lead to a better environmental management at the farm level. More efforts and investments to restore the environmental passive will be required. Finally, the most of the responsibilities still relies only on private hands. There are no public investments in monitoring system nor a trustful system of traceability of the animals. In fact, it is problematic to expect that governance mechanisms built at the level of the supply chain can tackle broader sustainability objectives beyond the zero deforestation goal.

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ABSTRACTS BOOK



WELCOME ADDRESS



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Welcome to **AC&SD 2016**

On behalf of the Scientific and Organizing Committees, it is a great pleasure to welcome you to the International Conference on Agri-chains and Sustainable Development (**AC&SD 2016**). This conference aspires to widen the debate about the role of agricultural value chains towards sustainable development. Year 2015 was a critical political and diplomatic milestone: the member states of the United Nations signed a new agenda for development, with the 17 Sustainable Development Goals (SDGs) placing sustainability at the core of international efforts. Development and academic actors are since then exploring new avenues for translating the SDGs into reality and implementing global and local frameworks and partnerships. Our conference aims at joining these efforts, with the consideration that agricultural value chains form spaces where local and global challenges to sustainability connect and within which local and global actors experiment and negotiate innovative solutions.

The scientific committee has assembled a very attractive program for **AC&SD 2016** that seeks to cover and confront the diversity of realities behind agri-chains, from localized chains, embedded in specific places, to global value chains. In the parallel sessions, transformations of these agri-chains and their connections to sustainable development will be discussed by speakers from the academia, the civil society, the private sector and decision makers. This multi-stakeholder perspective will also be brought about in the plenary sessions. Here, world renowned keynotes and panelists to three high level round tables will discuss about the role and importance of evaluation, public and private institutions and innovations at different scales for transforming agri-chains towards sustainability transitions.

This edition gathers about 250 participants from 39 countries. **AC&SD 2016** owes a lot to the scientific and organizing committees for preparing the program, and particularly to Brigitte Cabantous, Chantal Carrasco and Nathalie Curiallet for all the logistics, as well as to our support team of Alpha Visa that we warmly thank for their help.

We wish us all a fascinating, successful, inspiring and enjoyable **AC&SD 2016** and we very much look forward to its result and to the strengthening of both a scientific community and a community of practice to implement the outcome!!

Estelle Biénabe, Patrick Caron and Flavia Fabiano,
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