

Brazil

Cabotage Navigation in Brazil: An Analysis of the Legislative Process of Statute No. 14,301/2022 ("BR do Mar") Using Kingdon's Multiple Streams Framework



About this study

Project

Strengthen National Climate Policy Implementation:

Comparative Empirical Learning & Creating Linkage to Climate Finance

The project explores how international climate finance can support the implementation of NDCs in emerging economies and EU countries through comparative analyses and by providing a better understanding of the interface between finance and policy implementation.

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List of acronyms and abbreviations

Abac	Brazilian Association of Cabotage Shipowners
ABTP	Brazilian Association of Port Terminals
AFRMM	Additional Tax on Freight for the Renovation of the Merchant Marine
Antaq	National Waterways Transport Agency
ANTT	National Terrestrial Transport Agency
Anut	National Association of Cargo Transport Users
Anvisa	National Health Surveillance Agency
Aprosoja	Association of Soy and Corn Producers of Mato Grosso
BMU	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
BNDES	National Economic and Social Development Bank
CADE	Administrative Council for Economic Defense
CAL	Council for Legislative Affairs
CII	Carbon Intensity Indicator
CNA	National Agriculture Confederation
CNI	National Industry Confederation
CNT	National Transport Confederation
COP	Conference of the Parties
DNIT	National Transport Infrastructure Department
EEA	European Economic Area
EEXI	Energy Efficiency Existing Ship Index
EPL	Logistics and Planning Company
EU	European Union
FAEPA	Federation of Agriculture and Livestock of Pará
Fenavega	National Federation of Waterway Navigation Companies
FENOP	National Federation of Ports Operations

FGV	Fundação Getulio Vargas
Fiesp	Federação das Indústrias do Estado de São Paulo
FMM	Merchant Marine Fund
FPA	Agro and Livestock Parliamentary Caucus
GDP	gross domestic product
GHG	greenhouse gases
GT	gross tonnage
ICMS	tax on goods and services
Ilos	Institute of Logistics and Supply Chain
IMO	International Maritime Organisation
IPI	tax on manufactured products
LSMPAs	large-scale marine protected areas
MSF	Multiple Streams Framework
NDCs	Nationally Determined Contributions
OECD	Organisation for Economic Co-operation and Development
Reporto	Tax System for the Incentive to the Modernisation and Expansion of the Port Structure
Sinaval	National Union of the Naval and Offshore Construction and Repair Industry
Sindiporto	Port Traffic Navigation Companies Union
Sindmar	National Merchant Marine Officials Union
SNAPFI	Strengthen National Climate Policy Implementation: Comparative Empirical Learning & Creating Linkage to Climate Finance
Sobena	Brazilian Society of Naval Engineering
TCU	Federal Court of Accounts
tkm	tonne kilometre
UK	United Kingdom
US	United States
VLSFO	very low sulphur fuel oil

Executive summary / Policy brief

In Brazil's first NDC, in 2015, the country committed to reduce greenhouse gas (GHG) emissions by 37% for the entire economy by 2025, compared to 2005 levels. It also indicated a subsequent commitment to reduce emissions by 43% (2005 levels) by 2030. To attain these goals, Brazil listed sectoral measures and objectives, consistent with a two-degree-Celsius warming goal – such as achieving zero illegal deforestation in the Brazilian Amazon, and restoring and reforesting 12 million hectares of forests. For the transportation sector, there were no explicit indicators and sectoral targets, but a more general goal of promoting efficiency measures and improving infrastructure for transport and public transportation in urban areas.

In the updated NDC from 2020, the country reinforced its commitment to reduce GHG emissions by 37% in 2025 and by 43% in 2030, and added a carbon neutrality goal to be achieved by 2060 (Government of Brazil, 2020). In April 2021, President Jair Bolsonaro furthered this ambition, announcing an anticipation of the target to 2050, a goal which was formally communicated to the UNFCCC in October of that year (UN Affairs, 2021; Watanabe, 2021).

Presented at COP-26, the government's Guidelines for a National Climate Neutrality Strategy state that the country intends to take the following sector-specific measures to reach carbon neutrality:

- Forestry: eliminate illegal deforestation by 2028, and restore and reforest 18 million hectares of forests.
- Energy: increase the share of renewable energy in the energy matrix by 45%-50% by 2030, including an increase in the share of sustainable biofuels.
- Agriculture and livestock: fully implement the Low-Carbon Agriculture Plan 2020-2030 (ABC+ Plan).
- Industry: set policies to stimulate measures for removing hinderences to the creation of new green businesses.
- Cargo transportation: transition to low-carbon infrastructure, favouring the use of railways and waterways (Ministério do Meio Ambiente, 2021).

The transport sector corresponds to approximately 62% of the GHG emissions in Brazil's energy sector, which, in turn, is responsible for 18% of the country's total emissions (SEEG, 2021). Such high level of emissions in the national freight transportation matrix is explained by the overreliance on roads (65%) (Ministério dos Transportes, 2018), as well as the fact that trucks belonging to autonomous truck drivers are an average 18.4 years old, while those belonging to transport companies are an average 8.6 years old (CNT, 2019b) – in general, older trucks are more polluting and fuel-intensive (CNT, 2019a). In view of the country's climate change commitments, it is interesting to note that Draft Bill 3,199 (later Statute No. 14,301/2022), presented by the executive branch to Congress in August 2020, which seeks to create a program to stimulate cabotage transportation in Brazil, does not mention the potential that this mode of transport has to contribute to climate change mitigation.

In this sense, and in order to learn from the policy process of the statute, as well as gather insights into how climate change could be incorporated into low-carbon sectoral policies, we have applied Kingdon's multiple streams framework (MSF) (Kingdon, 2014) to analyse the forces at work before and during this legislative process. Kingdon's MSF was chosen as the theoretical framework for being widely accepted by academic scholars as useful for understanding public policy processes, particularly in the stages prior to implementation (Jones et al., 2016; Rawat & Morris, 2016). Applying Kingdon's MSF offered us a better comprehension of how climate issues could have been integrated into the problem, policy and political streams of this policy process, and provided insights that could be valuable for future sectorally-driven and climate-related policy processes.

Application of Kingdon's multiple streams framework

Based on an analysis of 259 newspaper articles citing "BR do Mar", six official federal government documents showing the modifications to which the original draft bill has been subjected, and ten semistructured interviews with sector stakeholders, the research findings indicate that there are several factors which have contributed to raising the importance of cabotage navigation as an issue worthy of attention and the development of this statute until it was sanctioned by the president.

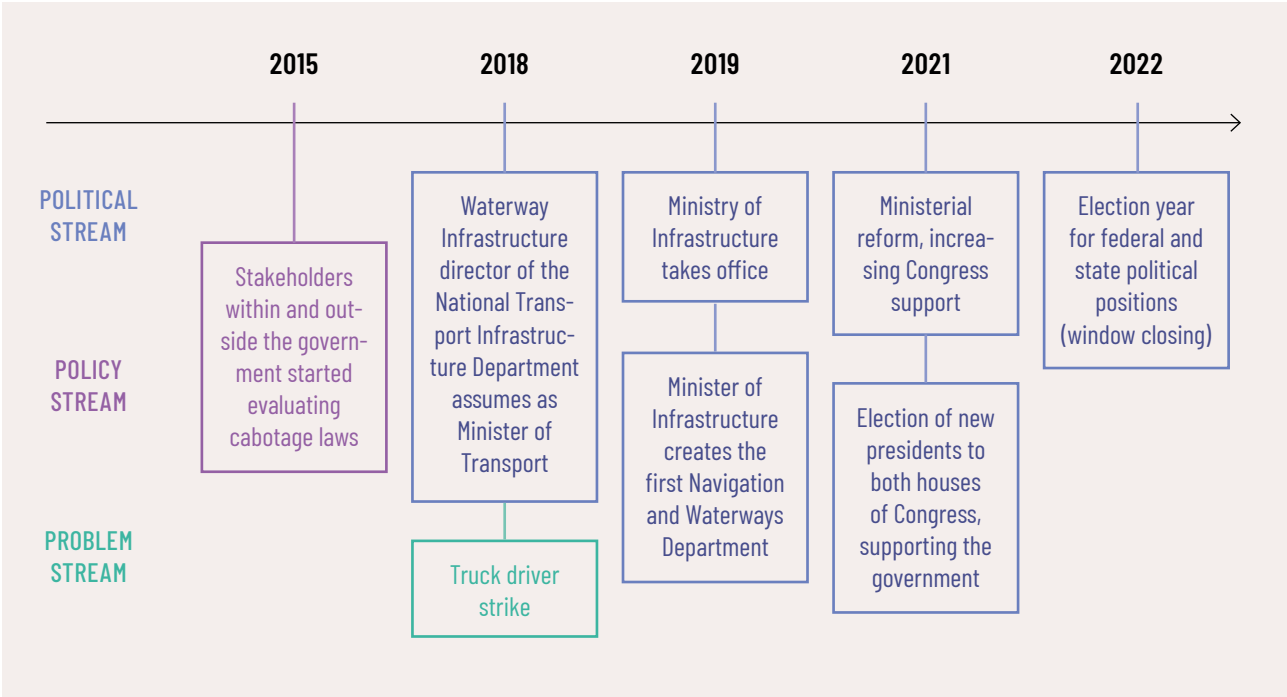
Once a clear problem emerged (overreliance on road transport), a policy developed inside the government, that facilitated the chartering of foreign vessels, within the values that underpin the administration (e.g. liberal economic views) and the fiscal constraints of the Brazilian context, was indeed attached to this problem.

Changes in cabotage policy were also made possible due to repercussions brought on by the manifestations of an interest group (truck drivers, who went on a strike in 2018) trying to call for changes in another area of transportation policy (high fuel costs and low road freight prices). By drawing more attention to the vulnerability of the country's transport matrix, due to the economic impacts of the strike, the issue was elevated to a national concern, raising the status of the overreliance on road transport to a problem worthy of action. On this point, the events surrounding the proposal and approval of Statute No. 14,301/2022 seem to confirm Kingdon's (2014) suggestion that focusing events, crises and disasters are particularly relevant in transport policy because the field tends to be less visible to the general public.

The opening of a window of opportunity by compelling events and indicators in the problem stream, as well as by changes in the configuration of the executive power (new Ministers of Transport and later Infrastructure making navigation a priority to address), thrust cabotage policy onto the decision agenda. Once at this stage, relevant actors bargained for a solution, first within the federal administration (with disputes between the Ministries of Infrastructure and Economy) and later in Congress.

Although affected by external events, such as the COVID-19 pandemic, the window of opportunity remained open for long enough to allow for the necessary adjustments to be made, and the statute was eventually approved in the Chamber of Deputies and Senate before 2022 electoral concerns could close the window.

Figure 1 – Timeline of relevant events in the problem, policy and political streams



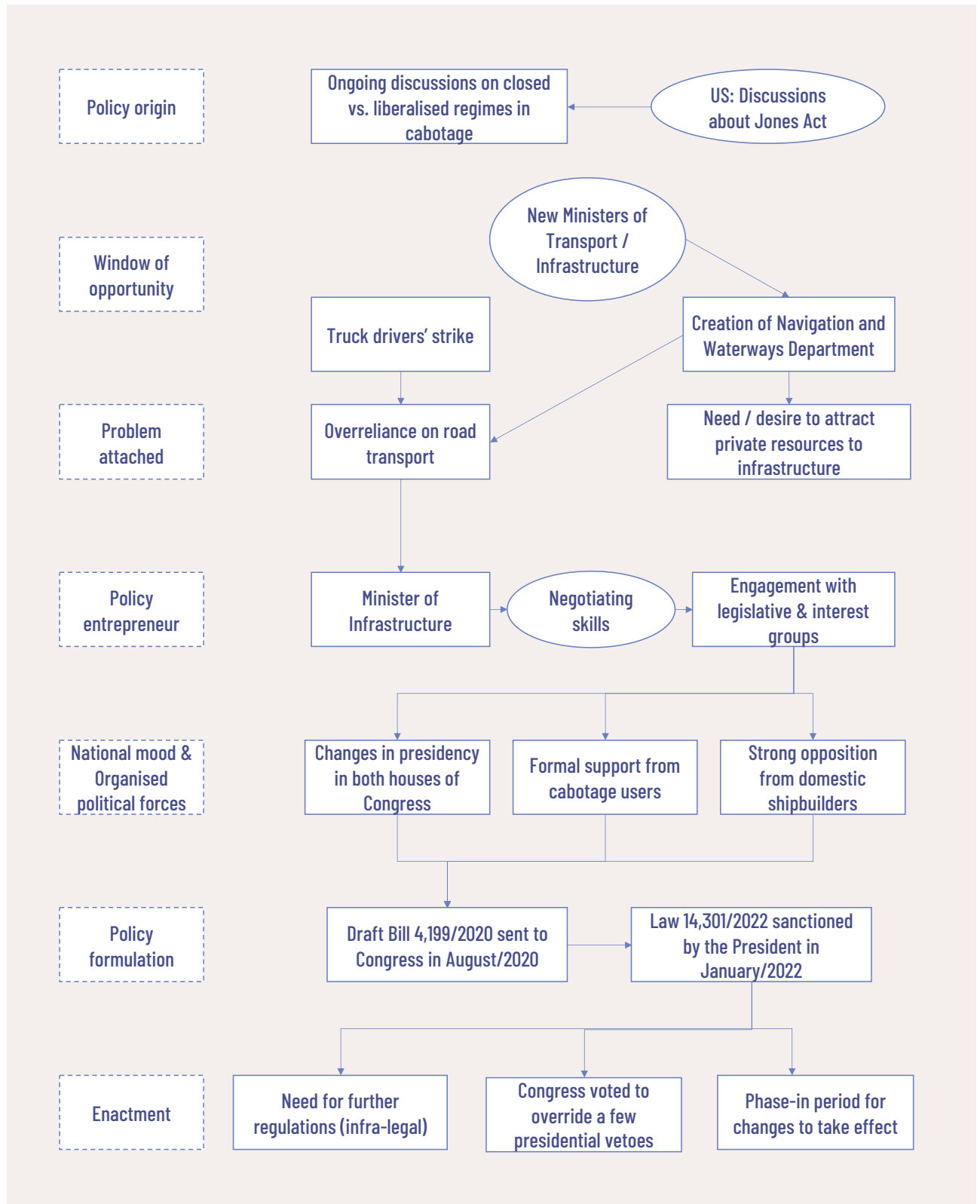
Source: the authors

The persistence and negotiation skills of the Minister of Infrastructure and his technical staff likely helped maintain the issue high on the decision agenda. As suggested by Kingdon (2014), the high level of fragmentation in the transport sector makes it more conducive for abrupt changes on the agenda. In this sense, the authoritative position of the policy entrepreneur within the government may be an additional factor helping to sustain the priority of the statute (and cabotage policy) through the years.

Nonetheless, the proposed changes could have faced smaller opposition from interest groups (e.g. the naval building industry) if they excluded the oil and gas sector, as initially intended by the Ministry of Infrastructure.

Figure 2 below summarises the main underlying events and processes, from the statute's inception until enactment.

Figure 2 – Flowchart of the policy process for Statute No 14,301/2022




Source: the authors, inspired by Flores (2017).

Cabotage and climate

Climate change has not played a large part in the statute's legislative process, with only a few mentions in the newspapers, mostly in opinion pieces, of the role of cabotage in the reduction of GHG emissions in transportation. The climate policy community was not involved in discussions on the development of the draft bill, and the inclusion of the oil and gas sector not only enhanced political opposition to the draft bill (from the domestic shipbuilding industry), but also diminished the environmental appeal of the proposal given its role in transporting fossil fuels. Therefore, we reflect on some of the implications of this research to actors involved in public policy processes and interested in advancing the low-carbon transition:

- **Problem stream:** It is difficult to predict when a window of opportunity will open in the problem stream, requiring that policy entrepreneurs be attentive when these moments occur to couple the streams. On this point, the frequent and appropriate monitoring of indicators is necessary to understand the need to develop new policies for low-carbon sectors in the country.
- **Policy stream:** Although it is not always possible to foresee when a window of opportunity will open, those that are willing to improve the country's policy and regulatory framework (e.g. career civil servants, academics) could initiate the development of policy proposals in conjunction with interested parties, so that a solution may be ready and available when a window of opportunity opens – for example, when there is a more favourable political atmosphere or when a problem that this proposal could help solve rises on the agenda (through a significant event or crisis).
 - For example, international cooperation agencies have an opportunity to contribute to low-carbon policy development in emerging markets (see FGVces et al., 2021 for selected examples), helping to build ready-made policy solutions that will be available once a window of opportunity opens.
- **Political stream:** Certain political events – in particular presidential and legislative elections (which coincide in Brazil) – are fairly easy to predict; however, turnover of key personnel within government during an administration may also happen and, consequently, open a window of opportunity for policy change. Questions of jurisdictions are likely to be a feature of any discussions related to climate change, for instance, given the responsibilities of the Ministry of the Environment within this topic, but also other ministries (such as the Ministry of the Economy) and regulatory agencies.
 - It is vital that climate policy entrepreneurs be attentive to the political movements in relevant ministries, ministry departments and agencies, and that they engage with them and map their interests and openness for receiving low-carbon policy briefs and policy recommendations, especially during favourable moments such as prior to international climate-related events (e.g. Conference of the Parties – COP) as entry points to discuss low-carbon policies.
- **Policy entrepreneur:** for discussions in fragmented and niche sectors such as transport, a prospective policy entrepreneur must display great persistence and willingness to invest time and resources, but could also benefit from building a larger coalition, gathering support from a wider range of actors. This could include involving actors and companies concerned with and publicly committed to addressing climate change and that would directly benefit from the implementation of policy proposals, e.g. through reaching their voluntary climate change targets. Similarly, an entrepreneur could:

- Attach a given policy proposal to additional problems such as rising GHG emissions, thus contributing to giving prominence to these proposals and gathering further societal support (coupling the streams).
- Apply a climate lens to all public policies under development to help anticipate the opposition of emission-intensive sectors, build a wider coalition by attracting interest groups with climate concerns and/or identify opportunities for attracting international climate finance for policy implementation. Indeed, there may also be opportunities to influence government officials and Congress members and introduce climate-related topics in ongoing, sectorally-driven, policy processes.
- Attach policy proposals to environmental or social problems to potentially help attract public attention to activities and sectors that are relatively insulated from emotional content as is the case of transport.



Chapter one

Introduction

1. Introduction

This report is part of the project “Strengthen National Climate Policy Implementation: Comparative Empirical Learning & Creating Linkage to Climate Finance”, which aims at developing studies that contribute to implementation of Nationally Determined Contributions (NDCs) in Brazil, Germany/ EU, India, Indonesia and South Africa. Coordinated by DIW Berlin and financially supported by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), this project began in July 2019 and has a duration of four years. Each year the country partners produce a national study on a topic of relevance to the NDC of their respective countries. In Brazil, the Center for Sustainability Studies at Fundação Getulio Vargas (FGV) investigates private investments in low-carbon infrastructure.

In Year 1, the research team at FGV looked at the drivers of and barriers to private direct investments in cargo railway infrastructure in Brazil, based on semi-structured interviews with 11 stakeholders from the national railway sector. At the time, one of the most cited factors mentioned by interviewees was the need to change the country’s regulatory framework to allow the proposition of new (greenfield) projects by private companies, instead of relying on concessions proposed by the federal government. Since this study was published, the legal framework for railways in Brazil was altered (through Statute No. 14,273/2021) and, by January 2022, 80 new projects, totalling more than 20,000 kilometres and US\$ 48 billion in investments, were submitted for approval to the Ministry of Infrastructure (Bitencourt, 2022).

In Year 2, drawing on interviews with 14 stakeholders from the Brazilian capital market, the research team identified the drivers of and barriers to capital market investments in low-carbon infrastructure, concluding that incentives vary according to the type of investors. Representing one of the main infrastructure investors in the country, retail investors are attracted by the tax exemption granted by Statute No. 12,431/2011 for infrastructure debentures. Domestic pension funds are not driven by this tax exemption as they consider that the spread paid by these debentures above Treasury bonds to be low in relation to the risk of the debenture issuers. Local structural barriers represent substantial challenges for foreign investors who might be interested in investing in Brazil, especially since they could find more favourable conditions (e.g., investment grade countries with less volatile currencies) in other emerging markets. Still, the appeal of low-carbon, “green-labelled” infrastructure assets and bonds in Brazil were mentioned as attractive to foreign investors, helping to mitigate these barriers (Yamahaki & Breviglieri, 2022).

In Year 3, the research team focused on the cabotage transportation sector in Brazil.

Rationale for selecting the cabotage transportation sector as the focus of National Study Year 3

In Brazil’s first NDC, from 2015, the country committed to reducing greenhouse gas (GHG) emissions by 37% for the entire economy by 2025, compared to 2005 levels. It also indicated a subsequent commitment of reducing emissions by 43% (2005 levels) by 2030. In order to attain these goals, Brazil

listed sectoral measures and objectives, consistent with a two-degree-Celsius warming goal, such as achieving zero illegal deforestation in the Brazilian Amazon, and restoring and reforesting 12 million hectares of forests. For the transportation sector, there were no explicit indicators and sectoral targets, but a more general goal of promoting efficiency measures, and improving infrastructure for transport and public transportation in urban areas.

In its updated NDC, in 2020, the country reinforced its commitment to reducing GHG emissions by 37% in 2025 and by 43% in 2030, and added a carbon neutrality goal to be achieved by 2060 (Government of Brazil, 2020). In April 2021, President Jair Bolsonaro furthered this ambition, announcing the anticipation of the target to 2050, a goal which was formally communicated to the UNFCCC in October of that year (UN Affairs, 2021; Watanabe, 2021).

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- Agriculture and livestock: fully implement the Low-Carbon Agriculture Plan 2020-2030 (ABC+ Plan),
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- (Cargo) transportation: transition to low-carbon infrastructure, favouring the use of railways and waterways (Ministério do Meio Ambiente, 2021).

The transport sector corresponds to approximately 62% of the GHG emissions of Brazil's energy sector, which, in turn, is responsible for 18% of the country's total emissions (SEEG, 2021). Such high level of emissions in the national freight transportation matrix is explained by the overreliance on roads (65%) (Ministério dos Transportes, 2018), as well as the fact that trucks belonging to autonomous truck drivers are an average 18.4 years old, while those belonging to transport companies are an average 8.6 years old (CNT, 2019b) – in general, older trucks are more polluting and fuel-intensive (CNT, 2019a).

Moreover, the relationship between maritime cabotage and climate change in the academic literature is rarely explored; yet, paradoxically, there are multiple entry points for these discussions, such as carbon-neutral fuels for maritime transport (Carvalho et al., 2021), the capacity of ships to be adapted and used in emergency contexts (Pettersen et al., 2020), and even the increasing feasibility of new routes as a result of decreased ice coverage in cold regions (Nong, Countryman, Warziniack, & Grey, 2018). Most of these topics are also relevant for – and often driven by – international shipping.

Inquiries or case studies regarding the reduction in GHG emissions due to increased use of cabotage (inland and maritime) tend to be part of broader explorations on how to shift cargo from road to other means of transportation (Jonkeren, Francke, & Visser, 2019), with greater emphasis on rail (Nelldal & Andersson, 2012), as a positive consequence (externality) of logistic decisions made for other purposes, for instance, to reduce costs and increase cargo security (i.e., to avoid theft) (Barbosa, 2018), or even within a broader context of low-carbon supply chain management (Das & Jharkharia, 2018).

Internationally, the United Nations' International Maritime Organisation (IMO) is committed to cutting the shipping industry's GHG emissions by half by 2050 and to reduce carbon intensity by at least 40 % by 2030 (compared to 2008 levels). Moreover, since 2020, the IMO requires the use of oil fuel with a 0.5 % sulphur limit, and, from 2023, will require that ships measure their energy efficiency levels and develop action plans for a carbon intensity reduction trajectory (IMO, 2021a, 2021b).

In view of the country's and industry's commitments to climate change, it is interesting to note that Draft Bill 3,199, presented to Congress by the executive branch in August of 2020 and seeking to create a program to stimulate cabotage transportation in Brazil, has not mentioned the potential that this mode of transport has in contributing to climate change mitigation.

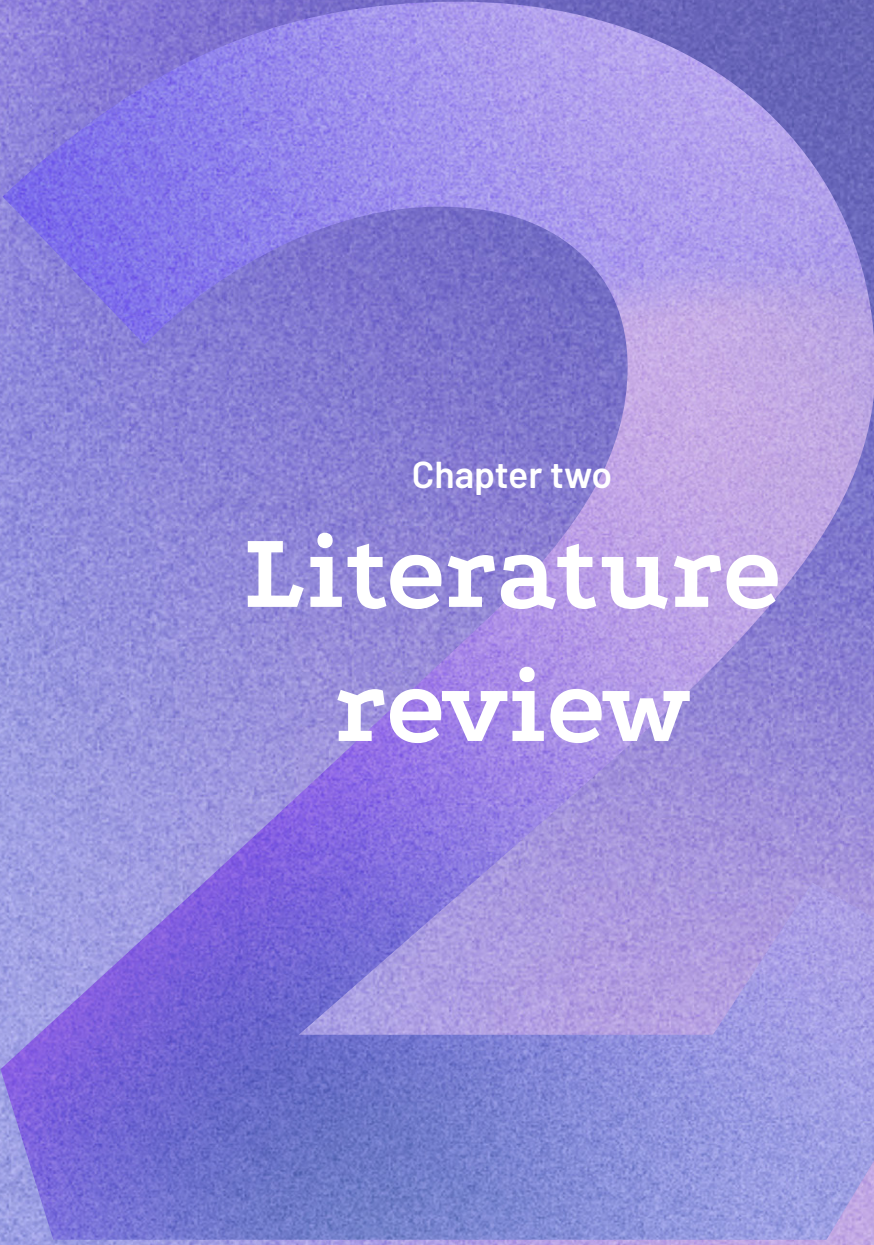
In this sense, and in order to learn from the policy process of the statute, as well as gather insights into how climate change could be incorporated into low-carbon sectoral policies, we have applied Kingdon's multiple streams framework (MSF) (Kingdon, 2014) to analyse the forces at work before and during this legislative process. Kingdon's MSF was chosen as the theoretical framework as it is widely accepted by academic scholars as useful for understanding public policy processes, particularly in the stages prior to implementation (Jones et al., 2016; Rawat & Morris, 2016). Applying Kingdon's MSF offered us a better comprehension on how climate issues could have been integrated into the problem, policy and political streams of this policy process, and provided insights that could be valuable for future sectorally-driven, and climate-related, policy processes.

The following research questions were investigated:

- **RQ1:** Drawing on Kingdon's multiple streams framework, what are the major forces at work during the legislative process of Statute No. 14,301/2022?
- **RQ2:** Is the Framework suitable for explaining policy change in developing countries?
- **RQ3:** Are there any climate-related opportunities that could be (or could have been) explored by the Ministry of Infrastructure (or other participants of public policy processes) to attract finance for navigation such as cabotage navigation?
- **RQ4:** What is the probability of a successful implementation of Statute No. 14,301/2022?

This report is structured as follows: The first section provides an overview of cabotage navigation in Brazil, and identifies the main advantages to its use and barriers to its development. It then discusses the degree of protectionism of cabotage policies in different countries. Next, it presents Kingdon's multiple streams framework (MSF) (Kingdon, 2014).

The second section describes the research methods, comprised of a sample of 259 newspaper articles, six official documents showing the modifications to which the original draft bill has been subjected in the process, and ten semistructured interviews as data collection methods, and data analysis using content analysis through software Atlas T.I.. The third section presents and discusses the research findings, analysing each of the forces at work during the legislative process of Statute No. 14,301/2022 and the role of the policy entrepreneur (Minister of Infrastructure). The final section concludes, discussing implications for climate policy entrepreneurs and avenues for future research.



Chapter two

Literature review

2. Literature review

Brazilian context

According to Brazilian Statute No. 9,432/1997, cabotage navigation is defined as transportation that takes place between ports or between points in the Brazilian territory through maritime waterways or through both maritime and inland waterways (Brasil, 1997).

Cabotage navigation has many advantages. Firstly, cabotage has higher cargo capacity than other modes of transportation: transporting the same quantity of cargo in a 6,000-tonne-capacity vessel would require 172 lorries with a 35-tonne capacity each or 86 wagons with a 70-tonne capacity each (Teixeira, Rocio, Mendes, & D’Oliveira, 2018).

Fuel consumption per tonne-kilometre is also lower for cabotage than for road and railway transportation. To transport a tonne of cargo along 1,000 km, a cabotage ship consumes 4.1 litres of fuel per tonne, versus 5.7 L/tonne by rail and 15.4 L/tonne on roads. As a result, CO₂ emissions are also lower: 20 g of CO₂ per net tonne kilometre for cabotage, 23.3 g CO₂ for rail and 101.2 g CO₂ on roads (Teixeira et al., 2018).

Table 1 – Comparison of transport modes according to efficiency indicators

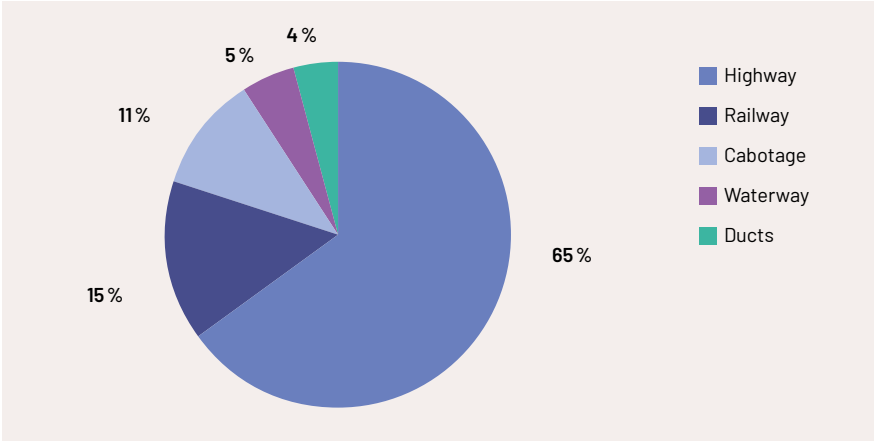
Indicator	Cabotage	Railway	Roads
Equivalent unit	Vessel with a 6,000 tonne capacity	86 wagons with a 70-tonne capacity each	172 lorries with a 35-tonne capacity each
Average fuel consumption to transport a tonne per 1,000 km	4.1L	5.7L	15.4L
gCO ₂ /net tonne kilometre	20.0	23.3	101.2
Average cost each 1,000 km (R\$/t)	R\$ 50.74	R\$ 67.54	R\$ 239.74

Source: (Teixeira et al., 2018)

Other advantages of cabotage include a lower risk of thefts and accidents when compared to road transport, and the longer life cycle of ships when compared to lorries (Cavalheiro, 2018; Soares, 2019; Teixeira et al., 2018).

Despite these many advantages, there is an overreliance on road transportation in the country’s freight transport matrix. In 2015, only 11% of all cargo transport was on cabotage in Brazil, while road transport accounted for 65% (Ministério dos Transportes, 2018)(Graph 1).

Graph 1 – Freight transport in Brazil (in tkm), in 2015

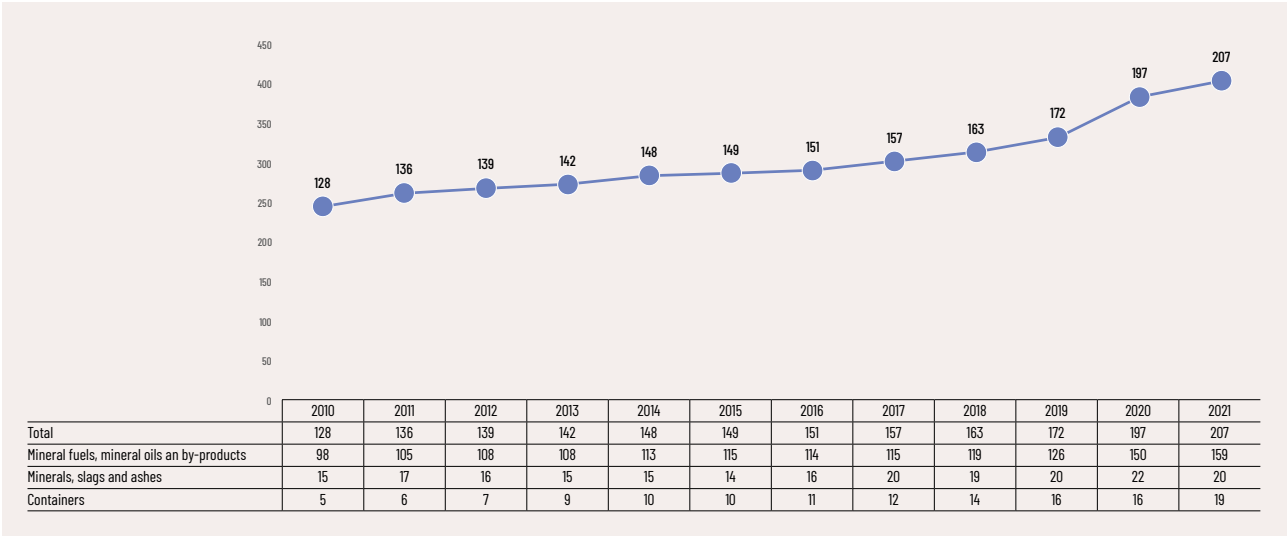


Source: the authors based on Ministério dos Transportes (2018a)

As shown in Graph 2, between 2010 and 2020, there was a 54% increase in the volume of cargo transported by cabotage in Brazil, largely driven by the offshore oil industry. The following routes are the main cabotage routes in the country:

- Transport of fuels and mineral oils, supporting the offshore oil industry;
- Transport of bauxite: Terminal Trombetas (Pará) – Vila do Conde (Pará), Terminal Omnia (Pará) – Terminal Alumar (Maranhão) and Terminal Trombetas (Pará) – Terminal Alumar (Maranhão);
- Transport of wood and pulp: Fibria (Bahia) – Portocel (Espírito Santo) and Terminal Belmonte (Bahia) – Terminal Portocel (Espírito Santo);
- Transport of coil: Port of Vitória (Espírito Santo) – Port of São Francisco do Sul (Santa Catarina) and Terminal Praia Mole (Espírito Santo) – Port of São Francisco do Sul (Santa Catarina);
- Transport of products from Manaus duty-free zone: Chibatão (Amazonas) – Santos (São Paulo) and Superterminais (Amazonas) – Santos (São Paulo);
- Transport of salt: Areia Branca (Rio Grande do Norte) – Port of Santos (São Paulo) (Martins, 2019).

Graph 2 – Main types of transported products (in million tonnes), 2010-2021



Source: (ANTAQ, 2022a)

Today, cabotage transports a limited variety of products. In 2021, 77% of all cargo transported by cabotage was oil (Graph 2). Martins (2019) estimates that 27% of the general cargo currently transported by lorries, equivalent to 232 million tonnes, could be transported by cabotage instead. However, many challenges must still be overcome to develop the cabotage sector, including:

- Bunker fuel is expensive in Brazil, and Brazilian vessels pay more for fuel than foreign ships operating long distance navigation because of the ICMS tax (tax on goods and services) that is levied on fuel used domestically, increasing its price by 12% to 17% (TCU, 2019).
- There is a reduced fleet in the country. As of 17 May 2022, there were 189 vessels used in cabotage, of which 27 ships (14%) belonged to state-controlled oil company Petrobras (ANTAQ, 2022b).
- There is excessive bureaucracy in the ports, with docking ships being inspected by the Federal Revenue, the Federal Police and the National Health Surveillance Agency (Anvisa). Moreover, cargo that is transported domestically must undergo nearly the same procedures as cargo that is shipped abroad or that arrives from abroad, increasing the period of ship mooring (Soares, 2019; Teixeira et al., 2018).
- Each port administration is responsible for setting its own tariffs and tariff structure, which compromises price comparison and the competitiveness of the sector (Soares, 2019). Nevertheless, the National Waterways Transport Agency (Antaq) is now standardising measurement units of tariff structures and requesting port administrations to present proposals for tariff structures. The ports of Paranaguá (PR), Antonina (PR), São Francisco (SC), Itaqui (MA) and São Sebastião (SP) have already had their tariff proposals accepted by Antaq (Brembatti, 2021).
- Many ports still need to improve their infrastructure and increase the depth of their mooring berths so that larger, fully loaded ships are able to disembark their cargo (Soares, 2019).

As for entry barriers, up until the issuance of Statute No. 14,301/2022, to receive authorisation by Antaq to operate in the country, a company must have:

- Owned at least one national vessel, suitable to its navigation purposes and in commercially operating conditions, that was not chartered to third parties; or
- Had a contract to charter a vessel, suitable to its navigation purposes and in commercially operating conditions, owned by an individual domiciled in the country or by a Brazilian legal entity.¹

In addition, chartering a foreign vessel to operate in the country could only be authorised:

- When there was no national vessel of the type and size needed for the required transport service;
- When it was a matter of public interest;
- To replace a vessel that was being built in a Brazilian shipyard, during the construction of the vessel, up to 36 months² (Soares, 2019).

Moreover, Brazilian navigation companies were allowed to charter foreign bareboats (with no crew, called “embarcação a casco nu”) limited to twice the deadweight tonnage³ of the vessel that was commissioned by them to a Brazilian shipyard, plus half of the deadweight tonnage of their own vessels⁴.

1 according to ANTAQ's Normative Resolution No. 5/2016

2 according to Statute No. 9,432/1997

3 Deadweight tonnage indicates the carrying capacity of a ship in tonnes (World Ocean Review, 2022).

4 according to Statute No. 9,432/1997 and Decree No. 2,256/1997

Enacted in 2022, Statute No. 14,301 (known as “Road of the Sea”) seeks to overcome some of the barriers to entry by allowing Brazilian navigation companies to time charter foreign crewed vessels (called “embarcação por tempo”) from their foreign subsidiaries or from foreign subsidiaries of other Brazilian navigation companies in other circumstances, such as:

- To increase the deadweight tonnage of operating vessels, as long as they are registered by the economic group to which the chartering company belongs;
- To replace similar vessels under construction in Brazil, with a limit of up to 200% of the deadweight tonnage of the vessel under construction, for up to 36 months;
- To replace similar vessels under construction abroad, with a limit of up to 100% of the deadweight tonnage of the vessel under construction, for up to 36 months;
- To comply with exclusive long-term transport contracts;
- For special cabotage operations, serving new routes, cargo or markets which are not existent or not yet consolidated in Brazilian cabotage, for up to 48 months.

The law will also allow new entrants that do not own vessels to charter any number of foreign bareboats four years after the enactment of the legislation (Ministério da Infraestrutura, 2021). Thomas (2021) argues that the ability to charter vessels allows Brazilian navigation companies to test potential markets and routes, and attract new clients before investing capital in a new ship. Also, the ability to charter vessels allows companies to adjust their fleet according to market fluctuations.

Merchant Marine Fund

Created in 1958, the Merchant Marine Fund (FMM, in Portuguese) aims to provide funds for the development of the Brazilian Merchant Marine and the national shipbuilding and repair industry. Currently managed by the Ministry of Infrastructure, the resources from the FMM originate from a tax (Additional Tax on Freight for the Renovation of the Merchant Marine – AFRMM) imposed on freight that disembark in Brazilian ports, since the enactment of Statute No. 14,301/2022, according to the following rates:

- 8% over long-distance shipment;
- 8% over cabotage shipment;
- 40% over lake and river shipment for the transport of liquid bulk in the North and Northeast regions;
- 8% over lake and river shipment for the transport of solid bulk and general cargo in the North and Northeast regions.

Those responsible for paying the AFRMM freight tax are the recipients of the cargo transported, not cabotage navigation companies.⁵ In cabotage, all revenues collected are transferred to an account linked to the cabotage company, which can then spend the resources (in three years at most, after which the funds are returned to the FMM) to buy, convert, maintain or repair Brazilian vessels or to refund loans from the FMM.

⁵ The impacts of the tax may, however, be shifted/shared throughout the supply chain. An economic analysis of where the actual tax burden of AFRMM lies is beyond the scope of the present study.

Additionally, the FMM may fund, through loans, up to 90% of naval projects approved by the FMM managing board (Ministério da Infraestrutura, 2020)(Box 1). According to art. 21 of Statute No. 14,301/2022, funds from the FMM are now available for additional purposes, including to build ports and waterways (up to 90% of the project value) and for foreign companies to build, increase, convert, modernise, dock, maintain or repair own or chartered vessels, in Brazilian shipbuilders or in Brazilian specialised companies (up to 80% of the project value). The agents responsible for transferring funds are the Brazilian Development Bank (BNDES)⁶ and government-controlled commercial banks Banco do Brasil and Caixa Econômica Federal (Teixeira et al., 2018).

Graph 3 – AFRMM tax collection vs. transfers from FMM to the naval industry (R\$ billion)



Source: (dados.gov.br, 2021a, 2021b, 2022b, 2022a)

6 BNDES also analyses project feasibility studies and oversees those projects supported by the Bank (Brasil, 2005).

Box 1 – FMM Managing Board

FMM managing board is responsible for: i) overseeing the collection and distribution of the taxes levied upon the companies that disembark in Brazilian ports; ii) decide on the application of FMM resources; iii) decide on the priorities for financial support by FMM; and iv) stipulate criteria for the release of resources from the linked accounts.

The board is composed of 30 members, including surrogate members, from: i) the federal government (such as the Ministry of Infrastructure and oil and gas company Petrobras), ii) civil society (such as the Union of Brazilian Shipowners and the National Confederation of Workers in Waterway and Air Transport); and iii) financial intermediaries (such as BNDES and Caixa Econômica Federal). Meetings take place three times a year with minutes made available on the Ministry of Infrastructure website.

Source: (Brasil, 2005)

International context

Generally, policy discussions around maritime cabotage services revolve around the adoption of protectionist or liberalised regimes. Paixão Casaca & Lyridis (2018, p. 210) report that most countries “favour protectionist cabotage policies, whose governments can control the number of foreign vessels participating in these trades”.

For instance, in the European Economic Area (EEA) cabotage rules represent a source of dispute between southern member states, which prefer that cargo and passengers be moved by ships carrying their own national flags, and northern members (such as Ireland, Denmark, Netherlands and Belgium), which have liberalised markets. Although there is a European Union (EU) legislative framework for cabotage, it coexists with the policies of each member state (Paixão Casaca & Lyridis, 2018).

Despite exceptions, such as the United Kingdom (UK) and northern European countries,⁷ even economically free countries, such as the United States of America (US), have protectionist regimes with market reserves for local companies and ships (Mordoj, Agostini, & Briones, 2018). Indeed, America’s Jones Act,⁸ which seeks to strengthen national security, is one of the most limiting cabotage regimes, with cargo transportation between US ports being restricted to ships owned, crewed, registered and built in the US (Grabow, Manak, & Ikenson, 2018; Grennes, 2017). Canada, in similar fashion to its neighbour, also applies taxes on foreign-built vessels and requires the use of local crew for domestic trades (Md Arof, 2015).

⁷ Other exceptions are Australia, China, the Philippines and New Zealand (Mordoj et al., 2018).

⁸ Merchant Marine Act of 1920.

In Chile, due to national security and industrial policy concerns, there is a restriction as well as a surcharge on the use of foreign vessels for cabotage services. As a result, in 2010, only 0.3% of cabotage cargo was transported by ships with foreign flags which obtained a waiver for existing restrictions. It is interesting to note that the transportation of goods by air and Chilean skies are open to foreign companies, without the need for reciprocity rules between countries (Mordoj et al., 2018). Other Latin American countries also adopt protectionist policies, as presented in Table 2

Table 2 – Cabotage policies in Latin America

Country	National flag/register	National crew	Nationally owned	Nationally built
Cuba	×	×		
Honduras	×	× (at least 90 %)	×	
Nicaragua	×		× (at least 51%)	
Costa Rica	×		× (at least 60 %)	
Panama		× (at least 90 %)	× (at least 75 %)	
Venezuela	×	× (at least 50 %)		
Uruguay	×	× (at least 75 %)	× (at least 51%)	
Argentina	×	× (at least 25 %)		
Peru	×	× (at least 85 %)	× (at least 51%)	×
Colombia	×		× (at least 60 %)	
Ecuador	×	×	×	

Source: the authors based on Paixão Casaca & Lyridis (2018)

Elsewhere:

- In India, foreign companies must apply for licenses to operate in the country;
- In South Africa, foreign vessels are allowed to transport cabotage cargo since all local companies were bought by international players; and
- In Indonesia, foreign companies are required to establish joint ventures with local partners and cannot account for more than 49% of the ventures’ capital (Paixão Casaca & Lyridis, 2018).

In summary, Brazil’s cabotage policies prior to Statute No. 14,301/2022 were aligned with international practice. However, as alluded by Brooks et al. (2006), regulations, such as shipbuilding requirements and duties on the importation of vessels, can impede and hinder even the best coastal shipping efforts, rendering cabotage a niche service with a diminished role in most countries’ transport matrix (Brooks, 2015).



Chapter three

Theory of change and analytical framework

3. Theory of change and analytical framework

The deployment of transport infrastructure and the overall logistical outlook and attractiveness of different means of transportation within a given country are highly dependent on existing public policies (and opportunities for new policies)(as seen in the Literature Review as well as National Studies from Years 1 and 2).

In general, public policies can often be seen as resulting from a series of decisions, actions (or inactions) stemming from political processes. Put differently, public policies emerge as the outcome of recurring processes through which individuals create or modify the rules that govern them (Heywood, 2007).

On this point, it is often useful to go through the public policy process as if it were divided in sequential stages, for example, describing this process as starting with the agenda-setting stage, moving to the policy formulation, decision-making (choosing between alternatives), implementation, evaluation and eventually termination stages (Jann & Wegrich, 2007)⁹.

Advancing through the stages, the range of actors involved in this process tends to diminish, with the agenda-setting stage usually encompassing a larger number of participants, from inside and outside of the government (Heywood, 2007).

Given the focus of the present study, it is particularly relevant to understand the reasons why certain topics receive more or less attention, rise on the governmental agenda, reach the decision agenda and, ultimately, result in a new policy.

For that purpose, one of the most used analytical tools is John Kingdon's Multiple Streams Framework (MSF), which has received over 12,000 citations since its first publication in 1984, due to its elevated "intuitive appeal", flexibility and employment of concepts that are universally easy to use, in order to understand the development of public policies (Cairney & Jones, 2016).

Indeed, the framework appears to be growing in popularity, with an increasing number of applications. Jones et al. (2016) conducted a meta-analysis of peer-reviewed journal articles from 2000 to 2013, and found 311 articles applying MSF in 65 different countries, adopting one or more of its five major concepts (i.e., the three streams, policy entrepreneur and policy window).

Moreover, the MSF manages to account for and explain the (apparent) randomness of decision-making when the boundaries of the State become blurred, and several actors move fast (between problems and solutions) whilst only having limited information (Flores, 2017b).

⁹ Kingdon (2014) identifies four stages in the public policy process: i) agenda-setting; ii) alternatives specification; iii) the choice of an alternative; and iv) implementation.

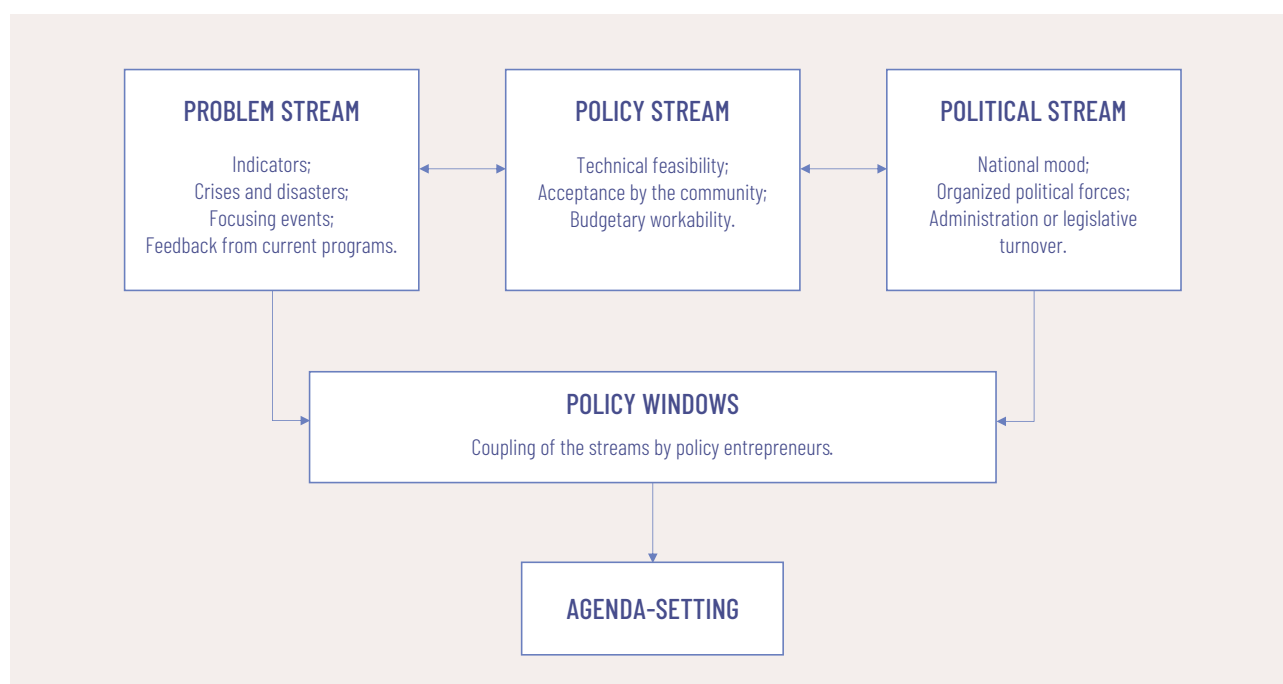
Multiple Streams Framework

In the MSF, changes on the governmental agenda emerge from the joining of three distinct streams:

- **Problem stream:** stream in which issues begin to be seen by policymakers as worthy of action, and hence considered as problems to be solved. Crises (caused by discrete events, such as disasters), indicators (such as price indices and mortality rates), and the monitoring and feedback of governmental problems are some of the factors that contribute to turning an issue into a problem;
- **Policy stream:** stream in which several public policy proposals (alternatives) are presented, reviewed and combined until a select group of feasible solutions rises to serious consideration, according to technical, budgetary and political aspects as well as the national mood. Events in this stream tend to be led by experts who seek to persuade others about the merits of their preferred policies; and
- **Political stream:** composed by factors such as shifts in the national mood,¹⁰ campaigns carried out by interest groups, electoral outcomes and other modifications in the configuration of the executive and legislative branches of government. Changes in this stream emerge from bargaining processes destined to form winning coalitions (Kingdon, 2014).

For analytical reasons, at least, the streams can be considered as independent amongst themselves, but occasionally converge during critical moments, thereby opening a “window of opportunity” for certain actors (“policy entrepreneurs”) to push their preferred solutions or shift the general attention towards the problems they care the most about, as summarised in Figure 3.

Figure 3 – The Multiple Streams Framework and windows of opportunity



Source: Capella (2006).

¹⁰ Understood as “the notion that a rather large number of people out in the country are thinking along certain common lines” (Kingdon, 2014, p. 146).

The governmental agenda is mostly influenced by the events in the problem and political streams, while alternatives (solutions) are mostly affected by happenings in the policy stream and can be attached to existing problems or introduced when the agenda shifts. Once a window of opportunity opens, the participants in the public policy process adjust their behaviours accordingly; however, the window may close if no viable alternatives are available (Farah, 2018).

The opening of a window of opportunity affects the decision agenda, for instance, by thrusting a proposal for legal enactment, legislative approval or presidential decision. When an item reaches the decision agenda, relevant actors usually display greater flexibility and willingness to bargain for a solution, whereas in other moments they generally remain firm in their positions and behind their preferred policies (Kingdon, 2014).

Finally, “policy entrepreneurs” play an important role in joining the different streams, attaching solutions to problems, minimising and overcoming restrictions, rewriting proposals and seizing favourable events (Capella, 2006). They can be seen as champions of specific proposals or of the importance of a given idea (Kingdon, 2014) and are usually experts on a given issue, occasionally occupying a position within the government. They can aptly represent the ideas of different groups, and thus manage to create an environment in which their ideas are well received by other participants in the public policy process (Almeida & Gomes, 2018).

Although certain limitations may be found in the framework – like its inability to account for the influence of multi-level governance structures (such as the European Union), and the role of competition between and within parties in parliamentary systems, as well as its insufficient explanation for the relevance of ideas in the promotion of institutional changes (Hernandez & Bolwig, 2021) – for the purposes of the present study, these drawbacks are less relevant given the focus on a domestic policy within a presidential system.

In addition, although the MSF focuses on the agenda-setting stage of the public policy process, even if an item rises on the agenda and a decision is made, it can still suffer from implementation failure (Zahariadis & Exadaktylos, 2016). On this point, Flores (2017) proposes that not only is the “ripeness” of the streams necessary, but wide support from several actors may be necessary to increase the probability of the policy being enacted as well as implemented.

In Appendix 1, the MSF and its streams are further detailed and a few examples from the applied literature are provided to illustrate instances in which the framework was employed in policy analysis.

The background is a vertical gradient from light blue at the top to dark blue at the bottom. Overlaid on this are several semi-transparent geometric shapes: a large purple-to-blue gradient triangle on the left, a vertical purple rectangle in the center, a horizontal purple rectangle below it, and a dark blue horizontal rectangle at the bottom center.

Chapter four

Data and methods

4. Data and methods

As previously discussed, there is a significant body of work employing Kingdon's MSF as it is widely accepted by academic scholars as useful for understanding public policy processes. However, despite its wide adoption, the number of studies using it in the transportation sector (Rawat & Morris, 2016) and analysing the South American context (Jones et al., 2016) is still small, gaps in the literature which this study hopes to help fill.

As in the majority of the studies reviewed, the employment of MSF's concepts will follow a qualitative approach. Nonetheless, the use of content analysis, as pursued in this research, is less frequent, accounting for only 4% of all qualitative studies (Jones et al., 2016). Hence, this study also offers a contribution regarding the methods employed within MSF applications.

Data collection

Data was collected from secondary sources and through semi-structured interviews.

From secondary sources, the research team first collected six official federal government documents which show the modifications to which the original draft bill was subjected in the different stages of the legislation process before becoming law. These are:

- (i) Technical note from the Ministry of Infrastructure contextualising the measures proposed by the draft bill, from 17 March 2020;
- (ii) Original draft bill sent to Congress on 11 August 2020, signed by the Minister of Infrastructure, the Minister of the Economy and the former Minister of the President's General Secretariat.
- (iii) Amended draft bill including changes proposed by the Chamber of Deputies, signed by the rapporteur of the draft bill, from 8 December 2020;
- (iv) Document containing amendments proposed by the Senate, signed by the Senate's president, from 1 December 2021;
- (v) Opinion note assessing the amendments proposed by the Senate, signed by the Chamber of Deputies' rapporteur of the draft bill (draft bill approved by the Chamber of Deputies on 15 December 2021);
- (vi) Statute No. 14,301/2022, sanctioned by the President of the Republic Jair Bolsonaro on 7 January 2022.

Secondly, articles from four Brazilian newspapers/newsletters that contain the expression "BR do Mar" ("Road of the Sea", in Portuguese, referring to the Draft Bill) were collected, dated between 1 January 2019 (when the President of the Republic and the Minister of Infrastructure took office) and 18 March 2022 (the day after Congress assessed the President of the Republic's vetoes to the draft bill) so as to analyse the main forces at play during the policy process, according to Kingdon's MSF.

The four newspapers selected were Folha de São Paulo, Estado de São Paulo, Valor Econômico and Agência iNFRA. Folha de São Paulo was selected because it was rated number one in newspaper

sales in 2020, with a monthly average of 343,522 newspapers (print and digital) sold in the country. In this ranking, Estado de São Paulo had the largest print circulation of all newspapers in the country in the middle of 2021 (75,322). Valor Econômico was in sixth position, and number one among business-focused newspapers (poder360, 2021).

Agência iNFRA is a specialised news service focused on delivering information to relevant players within the infrastructure sector in Brazil and thus it is a key source of information for the transport sector (Agencialnfra.com). In total, 259 newspaper articles were analysed, as shown in Table 3.

Table 3 – Number of articles analysed – 2019 to March 2022

Newspapers	2019	2020	2021	2022 (until March 18)	Total
Folha de São Paulo	1	19	17	4	41
Estado de São Paulo	1	15	25	12	53
Valor Econômico	8	36	39	16	99
Agência iNFRA	23	21	17	5	66
Total	33	91	98	37	259

Source: the authors based on newspaper articles

We chose to analyse newspaper articles since they capture a wider variety of policy actors compared to other alternative sources (Nam, Weible, & Park, 2022). To overcome some of the limitations of this method of data collection, such as the influence of editors in the choice of content, we have selected different newspapers to increase coverage. In addition, to triangulate data, we complemented the newspaper analysis with in-depth interviews with ten stakeholders, representing the government (1), cabotage and transport user associations (3), cabotage shipowning companies (3), consultants (1), shipbuilders (1) and the Merchant Marine Fund’s Board (1). Conducted online between 10 March and 17 May 2022, these interviews gathered sectoral perceptions about Statute No. 14,301/2022, the Merchant Marine Fund and about the extent to which the cabotage sector has been acting towards climate change objectives.

The interview guide is presented in Appendix 2. The stakeholders were interviewed and recorded, except in two cases when the interviewees preferred to answer the questions in writing. All references to interview results are presented anonymously in the Research Findings section.

Data analysis

Documents were coded by two researchers familiar with MSF, using software Atlas T.I. The primary codes used were the main concepts from MSF (problem, policy, politics and policy entrepreneur). The texts were then classified according to the framework's elements as subcodes (Table 4).

Table 4 – Coding scheme for analysis (elements of the framework)

Elements of the framework	
Problems	Focusing events
	Indicators
	Policy feedback
Political	National mood
	Organised political forces
	Events within government
Policy	Technical feasibility
	Value acceptability
	Anticipation of future constraints
Policy Entrepreneurs	Claim to a hearing
	Political connections and negotiating skills
	Persistency

Source: Kingdon (2014), adapted by the authors.

The documents were also coded according to the participants involved in the events portrayed (Table 5). In addition, given the scope of this research and the SNAPFI project, articles were coded for any mention of climate-related issues. The terms searched were: green; climate; environment; pollution; emission; carbon; clean; sustainable; and mitigation.

Table 5 – Coding scheme for analysis (participants of the public policy process)

Participants of the public policy process	
Inside the government	President
	Public servants
	Congress
Outside of the government	Interest groups
	Researchers, academics and consultants
	Political parties and elections-related actors
	Media
	Mass public

Source: (Kingdon, 2014)

Finally, in order to answer Research Question RQ4 and assess the probability of successful implementation of this policy, the team replicated the checklist developed by Flores (2017) (checklist in Table 6). Each item on the list was assigned as true (correct) or false (incorrect), albeit subjectively and as a reflection of the researchers' perceptions.

Table 6 – Checklist to assess probability of successful implementation, based on the MSF

#	Item
1	WINDOW OF OPPORTUNITY
1.1	The window opened in political stream (E.g. elections)
1.2	There was no reason for a sudden close of the window (ex. accident of political upheaval)
1.3	The government was fast in policy approval (no more than 1 year since policy first emerged)
2	POLITICS STREAM
2.1	The government was predominantly in favour of free market/liberal ideas
2.2	The main opposition party did not oppose policy
3	NATIONAL MOOD AND INSTITUTIONAL BALANCE
3.1	General public was mostly in favour or not opposed
3.2	Interest groups were generally in favour or not opposed
3.3	Interest groups did not organise major strikes or demonstrations
3.4	Local/Regional authorities were favourable or not opposed
3.5	No major opposition in the press
3.6	Opposition surged mainly from marginal actors (intellectuals, small pressure groups)
4	PROBLEM STREAM
4.1	There was more than one problem attached to the policy
4.2	There was an event calling attention to the problem
4.3	The problem was quantified and well defined
4.4	The problem affected several interest groups
4.5	There was an urgent problem to be solved

#	Item
5	POLICY STREAM
5.1	A similar policy had never been tested inside the country
5.2	Policy represented a major change in previous regulatory framework
5.3	Policy did not imply a major investment from the government / tax payer
5.4	Legislative act was just the beginning, without major enactment consequences
5.5	Transport service providers are aware of their role
6	ENTREPRENEUR STREAM
6.1	The entrepreneur was in a decision-making position
6.2	The entrepreneur had direct access to decision makers (political connection)
6.3	There is evidence that the entrepreneur coupled the streams
6.4	The entrepreneur showed persistency
6.5	The entrepreneur is an expert in the field under discussion
6.6	There was evidence that the entrepreneur was investing time and/or money in promoting the policy
6.7	There was evidence of the entrepreneur producing reports and studies supporting the policy
6.8	Speech framing was produced based on entrepreneur's ideas and reports
6.9	Media attention to the policy was vast and set attention to the policy/problem
6.10	Policy was presented in "chunks" that would increase with time

Source: adapted from Flores (2017). Changes were made to make the checklist more general in character, since Flores (2017) applies it in the context of school reform in the UK.

Data description

The majority of the articles were retrieved from Valor Econômico (99 out of 259 articles), which suggests that the outcomes of this regulation are more relevant to the business community, such as waterway transport companies and industry sectors that charter freight transport, whereas the topic of the draft bill (freight transport) is not of particular interest to the wider audience that Folha de São Paulo and Estado de São Paulo target.

On average, in nearly half of the articles (46%), the draft bill was the main topic.

Table 7 – Is the draft bill the main issue discussed in the article?

	Valor Econômico		Folha de São Paulo		Estado de São Paulo		Agência iNFRA		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	42	42 %	13	32 %	25	47 %	40	61 %	120	46 %
No	57	58 %	28	68 %	28	53 %	26	40 %	139	54 %
Total	99	100 %	41	100 %	53	100 %	66	100 %	259	100 %

Source: the authors based on newspaper articles.

Another evidence that the topic is business-focused comes from the newspaper sections where the majority of the articles were found. At Folha de São Paulo, 76% of the articles were found in the “Market” section; at Estado de São Paulo, 60% of the articles were found in the “Economy & Business” section.

Table 8 – Newspaper section of the article

	Valor Econômico		Folha de São Paulo		Estado de São Paulo		Agência iNFRA	
	N	%	N	%	N	%	N	%
Brazil	34	34 %						
Agribusiness	2	2 %						
Companies	20	20 %						
Politics	36	36 %			17	32 %		
Large groups	1	1 %						
Market			31	76 %				
Panel			5	12 %				
Power			3	7 %				
Opinion / Debate			2	5 %	2	4 %	14	21 %
Economy & Business					32	60 %		
Transport							43	65 %
None/other	5	6 %			2	4 %	9	14 %
Total	99	100 %	41	100 %	53	100 %	66	100 %

Source: the authors based on newspaper articles.

A total of 536 passages were coded.

With regard to the elements of the MSF, we note a greater degree of coverage of the processes within the problem stream (in particular with the prominent use of indicators, with 56 out of 97 citations in this stream) and political stream (especially the events within the government, with 53 out of 56 citations in this stream)(Table 9).

Concerning the role of the policy entrepreneur (Minister of Infrastructure), since his actions focused on softening-up the system and preparing the environment for the submission and approval of the Draft Bill, his negotiating skills appear as more relevant (44 out of 53 citations related to the policy entrepreneur)(Table 9).

Table 9 – Number of citations per element of the MSF

Elements of the framework		Number of citations
Problems	Focusing events	13
	Indicators	56
	Policy feedback	28
Political	National mood	3
	Organised political forces	N/A
	Events within government	52
Policy	Technical feasibility	37
	Value acceptability	19
	Anticipation of future constraints	18
Policy Entrepreneurs	Claim to a hearing	5
	Political connections and negotiating skills	44
	Persistency	4

Source: the authors
 Obs.: citations often received more than one code.

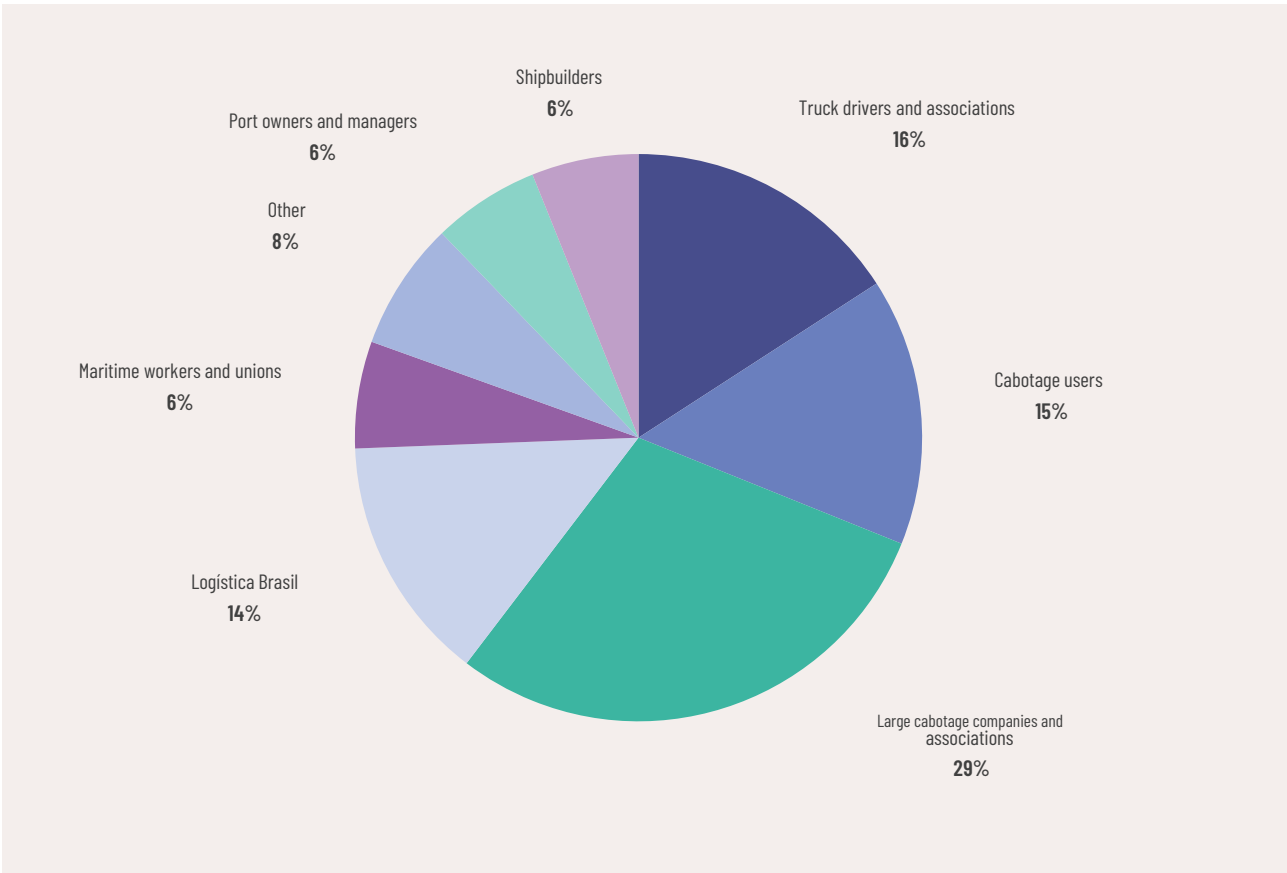
The participants most frequently mentioned within our sample were the public servants in the Ministries of Infrastructure (119 citations) and the Economy (76 citations), co-authors of the draft bill, and the various interest groups directly affected by the proposal (Table 10). Among these, the associations representing large cabotage companies represent 29% of all citations (with 48 citations), with truck drivers and their associations (26) and cabotage users (25) also involved in the public policy process (Graph 4).

Table 10 – Number of citations per participant of the public policy process

Participants of the public policy process		Number of citations
Inside the government	President	24
	Public servants – Ministry of Infrastructure	119
	Public servants – Ministry of the Economy	76
	Public servants – Other ⁱ	26
	Congress – Senate	48
	Congress – Chamber of Deputies	34
Outside of the government	Interest groups	164 (see Graph 4)
	Researchers, academics and consultants	7
	Political parties and elections-related actors	0
	Media	1
	Mass public	0

i: Antaq; Federal Court of Accounts (TCU); Administrative Council for Economic Defense (CADE); Ministry of Agriculture and others.

Graph 4 – Interest groups involved in discussions about the draft bill



Source: the authors based on newspaper articles

Table 11 displays the number of citations for climate-related topics for each source and year, with 46.5% of all mentions stemming from official documents (12 of which from the technical note written by the Ministry of Infrastructure in order to present the Draft Bill). Among the newspapers, although Agência iNFRA offers the highest number of citations, over 50% (7 out of 13) are found in opinion pieces. Similarly in Estado, six out of eight citations also appear in opinion pieces.

Mentions to the environmental laws applied to the crew onboard the ships were not included in the sample. Similarly, mentions to the possibility of environmental damage due to accidents (in the sea or at the ports) were also not included in the sample given its lack of direct connection with climate change. However, broad references to environmental issues, in general, were coded.

Table 11 – Number of climate-related citations per source and year

Newspapers	2019	2020	2021	2022 (until March 18)	Total
Folha de São Paulo	0	0	1	0	1
Estado de São Paulo	0	3	5	0	8
Valor Econômico	0	1	1	0	2
Agência iNFRA	1	6	6	0	13
Official documentsⁱ	0	12	6	2	20
Total	1	22	19	2	44

i: Includes the technical note justifying the need for Draft Bill 4,199/2020 and the legislative proceedings as well as final wording of the law.

A large, stylized number '5' is the central graphic element. It is composed of several overlapping shapes in shades of blue and purple. The top horizontal bar is a solid dark blue rectangle. The vertical stem is a lighter blue shape that curves slightly to the left. The bottom curve is a large, light purple semi-circle. The text is centered within the negative space of the '5'.

Chapter five

**Research
findings**

5. Research findings

Below we present the evolution of Draft Bill 4,199/2020 through the stages of the public policy process as well as the factors pertaining to the policy process that are applicable to each stream of the MSF.

Stages of the public policy process

Headed by the Ministry of Infrastructure and sanctioned in January 2022 by the President of the Republic as Statute No. 14,301/2022, Draft Bill 4,199/2020 sought to create a program to stimulate cabotage transportation. More specifically, Statute No. 14,301/2022 highlights the following objectives:

- Increase the supply and improve the quality of cabotage transportation;
- Encourage competition and competitiveness in service provision of cabotage transportation;
- Increase fleet availability in the national territory;
- Encourage the development, capacity and qualification of national maritime workers;
- Stimulate the development of the Brazilian cabotage naval industry;
- Reevaluate the association between cabotage navigation policies and naval construction policies;
- Encourage special cabotage operations and related investments in ports to serve routes or markets which are not yet existent or fully established in Brazilian cabotage; and
- Optimise the use of funds collected from the Additional Tax on Freight for the Renovation of the Merchant Marine (AFRMM¹¹, in Portuguese).

This draft bill was considered a priority draft bill by both the Ministry of Infrastructure and the Ministry of the Economy (Valor, 23/07/2020). Initially, the federal government planned to submit it as a provisional measure,¹² but the idea was later abandoned, and the document was converted into a draft bill (Valor, 24/06/2020) and presented to Congress on 11 August 2020 as urgent (Valor, 11/08/2020). The character of urgency is often adopted to accelerate voting proceedings in Congress as urgent draft bills take precedence over non-urgent ones.¹³

On 8 December 2020, the Chamber of Deputies approved the draft bill (with 324 votes in favour and 114 against) with a few amendments (to be discussed later) and presented it to the Senate for a vote (Valor, 08/12/2020; Folha, 07/11/2020). In the appraisal process, a few senators from parties opposed to the administration defended that the document should be assessed by the Senate's Permanent Commissions before being voted. This caused the executive branch to remove the urgency character of this draft bill so that non-urgent draft bills could be voted by the Senate in the interim (Valor, 22/04/2021). The document was then forwarded to the Senate's Commission for Economic Affairs for appraisal (Valor, 12/09/2021) and finally approved symbolically¹⁴ by the senators on 25 November 2021 (Valor, 25/11/2021; Folha, 25/11/2021).

11 As previously discussed, AFRMM is a tax levied on freight transport to the recipient of the goods transported and is the main source of funding for the Merchant Marine Fund (FazComex, 2022).

12 Provisional measures are rules enacted by the President of the Republic "in situations of relevance and urgency". Despite its immediate effect, the Congress of Deputies and the Senate must approve it within 60 days for it to be enacted into law (<https://www.congressonacional.leg.br/materias/medidas-provisorias/entenda-a-tramitacao-da-medida-provisoria>)

13 Available at: <https://www12.senado.leg.br/noticias/glossario-legislativo/regime-de-urgencia>

14 When votes are not counted, usually when there is a previous agreement for the approval of the matter (<https://www12.senado.leg.br/noticias/glossario-legislativo/votacao-simbolica>).

Because the Senate proposed a few amendments to the document, it was forwarded back to the Chamber of Deputies, which approved it on 15 December 2021 (Valor, 15/12/2021). On 7 January 2022, the President of the Republic sanctioned the Draft Bill, vetoing a few of the items and converting it into Statute No. 14,301/2022 (Valor, 11/01/2022).

On 17 March 2022, the Congress assessed the President's 14 vetoes, voting to override nine of them (377 votes for overriding and 6 against in the Chamber of Deputies, and 59 votes for overriding and no one against in the Senate)(Agência Senado, 2022). More information can be found in Table 13.

Subject matters of Statute No. 14,301/2022

Statute No. 14,301/2022 encompasses several measures. The most relevant refers to the possibility of chartering foreign vessels, under two modalities:

- i) Time chartering foreign crewed vessels (known as "afretamento a tempo", in Portuguese); and
- ii) Chartering foreign bareboats (known as "afretamento a casco nu", to charter vessels with no crew).

Navigation companies may time charter crewed vessels from their foreign subsidiaries or from foreign subsidiaries of other Brazilian navigation companies to operate cabotage navigation in the following cases:

- To increase the deadweight tonnage of operating vessels, as long as they are registered by the economic group to which the chartering company belongs;
- To replace similar vessels under construction in Brazil, with a limit of up to 200% of the deadweight tonnage of the vessel under construction, for up to 36 months;
- To replace similar vessels under construction abroad, with a limit of up to 100% of the deadweight tonnage of the vessel under construction, for up to 36 months;
- To comply with exclusive long-term transport contracts;
- For special cabotage operations, serving new routes, cargo or markets which are not existent or not yet consolidated in Brazilian cabotage, for up to 48 months.

Maritime officers (foreign and national) working in time chartered vessels will be subject to the Federal Constitution and to international rules, set by internationally recognised bodies, relating to the protection of working conditions, safety and the environment. According to an interviewee, since the requirement to have a minimum quantity of Brazilian maritime workers was vetoed by the President of the Republic, what becomes valid is Resolution No. 6 from the National Migration Council, which states that time chartered vessels that remain in the country for up to 90 days do not need to employ Brazilian workers; vessels remaining in the country for over 90 days must hire 1/5 of Brazilians; and vessels staying in Brazil for over 180 days must hire 1/3 of Brazilians.¹⁵

¹⁵ Art. 4 of Resolution No. 6: https://portaldeimigracao.mj.gov.br/images/resolucoes_normativas/RESOLU%C3%87%C3%830_NORMATIVA_N%C2%BA_06.pdf

Navigation companies which do not own vessels will be allowed to charter bareboats – maximum of one bareboat in the first year, two boats after 12 months (2023), three after 24 months (2024) and four vessels after 36 months (2025). As of 2026, not owning a fleet will no longer be a constraint to chartering any number of foreign bareboats.

Additionally, loans from the FMM are now available for additional purposes, able to finance:

- up to 100 % of projects from public companies associated with the Ministry of Defence, to build and repair vessels in Brazilian shipbuilders;
- up to 90 % of projects from Brazilian companies, to build, increase, convert, modernise, dock, maintain or repair own or chartered vessels, in Brazilian shipbuilders or Brazilian specialised companies;
- up to 90 % of projects for port and waterway building works;
- up to 80 % of projects from foreign companies, to build, increase, convert, modernise, dock, maintain or repair own or chartered vessels, in Brazilian shipbuilders or Brazilian specialised companies (amendments to art. 26 of Statute No. 10,893/2004¹⁶).

During the legislative process, the Congress proposed the inclusion of two other items. The first was the extension of the Reporto tax exemption, which the Congress proposed to extend until the end of 2023. Reporto is the Tax System for the Incentive to the Modernisation and Expansion of the Port Structure, which, between 2004 and 2020, was exempt from IPI (tax on manufactured products), PIS/ Cofins (contributions to finance social security), ICMS (tax on goods and services) and the Import Tax (for items not found in Brazil) on the purchase of equipment such as locomotives and container cranes, contributing, according to the sector, to a decrease in the cost of the equipment in over 40 % (Valor, 14/09/2021).

The second proposal was a change in freight tax (AFRMM), reducing from 10% to 8 % the tax for cabotage navigation, from 25 % to 8 % the tax for long-distance navigation, and increasing from 0 to 8 % the tax for lake and river transportation of dry bulk and other cargo in the North and Northeast regions. Both proposed changes were vetoed by the President, but, on 17 March 2022, the Congress voted to override these vetoes. Hence, tax incentive Reporto will be valid until December of 2023 (Vinhai, 2022) and the Congress' proposal to change the AFRMM freight tax will be sustained (Estado, 17/03/2022).

A summary of the legislative process and of the main proposals discussed in it are summarised in Table 12:

¹⁶ Available at: http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2004/lei/L10.893compilado.htm

A summary of the legislative process and of the main proposals discussed in it are summarised in Table 12:

Table 12 – Legislative process and proposed amendments to Draft Bill 4,199/2020

Stage of the legislation process	Date	Proposed amendments - chartering foreign bareboats	Proposed amendments - time chartering foreign crewed vessels	Proposed amendments - Reporto	Proposed amendments - AFRMM
Executive branch sends draft bill to Congress	11/08/2020	Navigation companies that do not own vessels are allowed to charter bareboats after three years (as of 2023)	<ul style="list-style-type: none"> Navigation companies can charter vessels from their foreign subsidiaries under certain conditions (e.g., to replace vessels under construction). Time chartered crewed vessels must hire, at least, 2/3 of Brazilian workers 	No changes (Reporto ends in December 2020)	No changes, maintaining: <ul style="list-style-type: none"> 25 % for long distance navigation 10 % cabotage navigation 40 % lake and river transportation of liquid bulk in the North and Northeast regions
Chamber of Deputies approves the Draft Bill	08/12/2020	Increases transition period to four years	No changes	Includes extension of Reporto until the end of 2021	8 % for: <ul style="list-style-type: none"> Long distance Cabotage navigation Lake and river transportation in the North and Northeast regions
Senate approves the Draft Bill	25/11/2021	Increases transition period to six years (from 2027)	<ul style="list-style-type: none"> Adds that vessels can be chartered either from the company's foreign subsidiaries "or from foreign subsidiaries of other Brazilian navigation companies" Reduces from 2/3 to 1/3 the minimum percentage of Brazilian workers Adds that Brazilian maritime worker contracts should be governed by Brazilian laws 	Includes extension of Reporto from 2022 until the end of 2023	<ul style="list-style-type: none"> 8% for long distance navigation 8% cabotage navigation 40% lake and river transportation of liquid bulk in the North and Northeast regions 8% lake and river transportation of dry bulk and other cargo in the North and Northeast regions
Chamber of Deputies assesses Senate's amendments and approves the Draft Bill	17/12/2021	Rejects increase in the transition period proposed by the Senate (i.e., maintains four years)	<ul style="list-style-type: none"> Rejects reduction proposed by the Senate (maintains 2/3 minimum percentage of Brazilian workers) Rejects application of Brazilian labour laws to Brazilian maritime workers. 	Agrees with abovementioned changes from the Senate	Agrees with abovementioned changes from the Senate
President of the Republic sanctions the Draft Bill	07/01/2022	No changes (four year-transition period)	Vetoes minimum percentage of Brazilian workers	Vetoes extension of Reporto	Vetoes changes to AFRMM (current percentages are maintained)
Congress voted on the President's vetoes	17/03/2022		No changes	Votes to override the President's veto, extending Reporto until December 2023	Votes to override the President's veto, changing freight tax: <ul style="list-style-type: none"> 8 % for long distance navigation 8 % cabotage navigation 40 % lake and river transportation of liquid bulk in the North and Northeast regions 8 % lake and river transportation of dry bulk and other cargo in the North and Northeast regions

Source: the authors based on government's official documents

Problem stream

In the documents analysed, numerous problems are highlighted as being connected to the need to develop a policy encouraging cabotage transportation.

Indicators

Some of these problems are stressed by indicators, monitored by governmental entities and non-governmental organisations, or by data from special studies, surveys and reports that give visibility to these problems. For example, there is evidence that an overreliance on roads to transport cargo in the country affects transportation costs negatively. In freight transport, roads are responsible for 65 % of transportation, railways 15 % and cabotage 11 % (Estado, 19/12/2020).

Moreover, cabotage transportation is largely used by the oil and gas sector (Estado, 11/08/2020), with over 70% of all cargo moved by this sector and one particular operation by Transpetro (shipping arm of state-owned oil & gas company Petrobras) responsible for nearly two-thirds of the total volume transported between Brazilian ports (Agência INFRA, 04/10/2019).

The dependence on roads is detrimental to transportation costs as, according to a study from public entity Planning and Logistics Company (EPL), the use of multimodal systems to transport agricultural cargo over long distances in Brazil could promote a cost reduction of nearly 60 %, depending on the routes and transport modes employed (Valor, 29/09/2020).

Reliance on road transportation is also associated with more accidents and deaths. Data from the Statistical Yearbook on Road Safety, from the Ministry of Infrastructure, shows that highways BR-116 and BR-101 registered, respectively, 4,966 and 3,849 accidents in 2017. They also registered 1,607 deaths, 516 of which were caused by trucks (Technical Note, 2020).

According to the Ministry of Infrastructure, an operation with a vessel carrying the Brazilian flag is 70 % more expensive than an operation carried out by a chartered foreign vessel (carrying a foreign flag) (Valor, 09/12/2020; Folha, 07/12/2020). Indeed, it appears to be cheaper to ship commodities from Brazil to China than to move the same goods domestically (Folha, 11/08/2020). These high costs are often explained by higher local labour costs – given that Brazilian maritime workers can only legally work for six months a year, for instance – and more expensive fuel due to taxation (Agência INFRA, 17/05/2019). An interviewee explained that, due to domestic labour laws and a trade union agreement, Brazilian maritime workers have to be remunerated both for days worked and days off. Moreover, during the COVID-19 pandemic, the National Sanitation Surveillance Agency (Anvisa) required that maritime workers quarantine for seven days before and after the trip, further increasing operational costs.

In relation to the AFRMM freight tax, there is reluctance that the tax collected is being fully employed for its purposes (Estado, 31/03/2021). As observed by the Ministry of Infrastructure, only four vessels (excluding vessels built for the oil and gas sector) were built in the country in the last ten years (Estado, 25/11/2021). As a result, Brazil had only 18 container ships in operation in 2020 (Agência INFRA, 28/01/2020).

The interviewees observed that Brazilian cabotage companies hardly make use of Merchant Marine Fund resources to contract Brazilian shipbuilders and build vessels domestically because it is economically more advantageous to hire Chinese manpower. An interviewee explained that Chinese shipbuilders generally make higher quality vessels and deliver them quicker than their Brazilian peers for the same cost. The interviewee noted that Chinese builders also offer equipment guarantee and long-term credit financing from the Chinese Development Bank.

“Why do the associates [from the Brazilian Association of Cabotage Shipowners – Abac] import [vessels] from China? Because China makes a better product, has long-term financing and the only thing that the shipowner has to do is pay the import tax.” “A vessel costs US\$ 30 million in China, here [in Brazil] it must be US\$ 50-60 [million]. Then you pay the import tax, it is the same cost [as in Brazil] and the product is better. [Better] delivery, equipment guarantee.” (from the interviews)

With regard to delivery uncertainty, an interviewee noted that, when navigation companies decide to commission a new vessel, they already have cargo to transport, and hence they cannot wait too long to receive the new ship, three years (at most) being the international norm.

To illustrate the lack of reliability of the Brazilian shipping industry, interviewees recounted that, as part of the business plan of navigation company Log-In to use the AFRMM freight tax to build vessels domestically, the company commissioned, in 2007, five container ships and two bulk carriers; by 2017, the company had only received two container ships and two bulk carriers. This deal with shipbuilder EISA put the company in a very fragile economic position and, after the shipbuilder went bankrupt and did not deliver all vessels commissioned, Log-In incurred a loss of approximately R\$ 600 million. Although the company is now financially recovered, with a share value of R\$ 27.40 (on 8 April 2022, compared to R\$ 3.37 on 23 Sept 2016), Log-In is still paying off its debt for the financed ships to the Brazilian Development Bank, using the resources from the AFRMM freight tax to help cover that debt.

Interviewees also mentioned that cabotage company Mercosul Line had a similar experience. Between 2008 and 2011, the company hired a national shipbuilder to build four container ships, having received only two before the shipbuilder went bankrupt. At the time, the shipbuilding industry was in full demand by the oil industry and the company was required to pay a large initial investment, causing it to incur significant loss when the shipbuilder collapsed. More recently, Mercosul Line has conducted an assessment to analyse whether it would be feasible to hire Brazilian shipbuilders to build new container ships, concluding that the risks would outweigh the benefits in comparison to acquiring a foreign ship, since the national naval industry has no container ship expertise (the last one was built in 2010 by a national shipbuilder that no longer exists) and would be more expensive.

Another interviewee observed that, today, cabotage companies employ the funds from their linked accounts¹⁷ for vessel repair, not for shipbuilding, whereas Brazilian shipbuilders build vessels largely for the oil industry and interior navigation, such as small vessels of up to 5,000 deadweight tonnes, offshore platforms, barges and pushers.

¹⁷ As mentioned earlier, cabotage companies have linked accounts (“contas vinculadas”) funded by the AFRMM freight tax, paid by transport users, which they can spend to build and repair vessels.

Yet another interviewee remembered that, since the enactment of Statute No. 14,301/2022, cabotage companies can now use the funds from their linked accounts to do maintenance work on their vessels. Up until the new law, the interviewee claimed that it was more advantageous for cabotage companies to wait until the vessel needed to be repaired rather than hiring regular maintenance services. The modification of the law, according to the interviewee, seeks to encourage cabotage companies to employ the funds to other uses besides shipbuilding. Additionally, foreign navigation companies are also allowed by the new law to employ FMM funds to repair their vessels, an effort to increase service demand for the Brazilian shipbuilding industry. An interviewee highlighted that the possibility of using the funds from companies' linked accounts for regular maintenance and for purchasing foreign pieces of equipment (now allowed by Statute No. 14,301/2022 and Decree CDFMM No. 185/2022¹⁸) were demands from the cabotage navigation companies, given that the country does not produce ship equipment and navigation holdings often buy them in large quantities for their global fleet to negotiate lower prices.

Finally, another feature of the Brazilian cabotage market is its high degree of concentration due to the high entry barriers, with only three companies transporting the majority of cargo (at least 80% of it), and six or seven companies moving at least 95% of the total volume shipped between Brazilian ports (Agência INFRA, 24/09/2021). As noted by an interviewee, the three largest cabotage companies in Brazil are Aliança, Log-In and Mercosul Line, all of which have international navigation companies as controlling shareholders.

The use of indicators is also occasionally employed by certain speakers to highlight the expected positive consequences of the proposal once implemented, with mentions of lower costs for staple food baskets and higher GDP growth (Valor, 19/01/2022) as well as reduced logistical costs and reduced pollution (Estado, 08/10/2020). In a similar fashion, occasional mentions to the environmental advantages of cabotage transportation (in comparison with other modes of transportation) are also voiced in the media:

- “Recent studies show that cabotage generates a four-fold reduction in the volume of polluting gases in the atmosphere compared to other alternatives (Estado, 08/10/2020);
- “A ship emits four times less carbon per ton transported than a truck” (Agência INFRA, 04/10/2019); and
- “Regarding the emission of greenhouse gases, EPL also estimates that cabotage [transport] releases six times less pollutants than road transport, when considering the volume transported and the distance travelled” (Agência INFRA, 21/12/2021).

18 Available at: https://www.gov.br/infraestrutura/pt-br/assuntos/incentivos/incentivos-fiscais/resolucoes-cdfmm/copy2_of_ResolucaoCDFMMn185de-4deabril.pdf

Table 13 – Indicators found in the problem stream

Indicator	# of citations	Example
Low participation in the transport matrix	17	“Despite the advantages, cabotage is equivalent to only 11% of cargo movement in the country, behind rail transport (15%) and road transport (65%). It was precisely to change this scenario that the government spearheaded the ‘BR do Mar’ project.” (Agência INFRA, 21/12/2021)
High operating costs	13	“According to data from the Ministry of Infrastructure, a Brazilian-flagged vessel operation can cost 70% more than a foreign vessel in the charter modality in which the Brazilian company hires a third party.” (Valor, 08/12/2020)
High degree of market concentration	7	“Firstly, it created a significant barrier to entry for new companies, given the requirement to form a fleet of Brazilian vessels in order for the company to be authorised to operate. No wonder the cabotage market is so concentrated. According to a study by Antaq, in 2018, the cabotage container transport market was dominated by three companies, Aliança with 56%, Mercosul Line with 23% and Log-In with 22%.” (Agência INFRA, 12/08/2020)
Reduced fleet size	6	‘The current scenario, in which there is strong protection for this industry, is discouraging,’ said Senator [Trad]. “The fact is that the Brazilian naval industry has delivered few vessels for Brazilian cabotage. According to the Ministry of Infrastructure, in the last ten years, only four ships were built, excluding vessels in the oil and gas sector” (Estado, 25/11/2021)
Focus on oil and gas transport	5	“‘Currently (cabotage navigation) has a participation of only 11% in the total of goods moved in the country. Of this total, more than 70% are fuels and derivatives’, said, in a note, the president of the Council for Legislative Affairs (CAL) of the National Industry Confederation (CNI), Paulo Afonso Ferreira”. (Estado, 18/11/2021)
High cost of fuels	3	“The fuel cost of a trip, depending on the price of freight and fuel at the time, can vary from 40% to 60% of the total costs. By international agreements, foreign ships that navigate here do not pay taxes on fuel. Ships operating off the Brazilian coast do pay (taxes).” (Agência INFRA, 17/05/2019)
Price volatility in foreign markets	3	“The current increase in international maritime freight due to the coronavirus [pandemic] illustrates how prices vary: according to an analysis by the CNI, the freight price of a Brazilian container bound for the United States increased by up to 433% between January 2020 and September 2021.” (Agência INFRA, 21/12/2021).

Source: the authors

Obs.: Extensive bureaucracy and ships’ idleness were also mentioned (one time each).

Focusing events, crises and symbols

In addition to indicators, problems can also be highlighted by events, crises and disasters. As noted earlier, this is especially relevant in the case of freight transportation since it is not a particularly visible field (Kingdon, 2014).

A truck driver strike which occurred in May 2018 contributed to making the issue of cargo transportation evident. This strike lasted over a week, causing a large impact on the country's GDP, and igniting discussions about the need to diversify freight transport options and develop cabotage navigation to minimise the impact of future strikes (Folha, 17/08/2019; Folha, 26/10/2020). Since then, the demand for cabotage transportation increased, and many companies began using cabotage for the first time (Estado, 19/08/2019; Estado, 18/09/2020). An interviewee also noted that, following the strike, a few transport users decided to acquire their own trucks in order to reduce logistical risks, although they later acknowledged that logistics was not their core business and that it was not feasible to internalise activities such as the regular maintenance of trucks and truck driver training, causing some companies to eventually sell their trucks.

The strike event is mentioned in eight citations as a motivating factor for the proposal of new cabotage laws, as exemplified below:

“The idea of developing cabotage navigation gained momentum in the government after May 2018, still under [the administration of] President Michel Temer, when Brazil stopped because of a strike by truck drivers that lasted just over a week. The impact on GDP (Gross Domestic Product) generated discussions about the need to diversify cargo distribution options in the country and, with that, minimise the effects of future strikes.” (Folha, 26/10/2020)

Other events and crises also discussed (one time each) were a complaint leveled against Antaq for its alleged behaviour in favour of large cabotage companies (Agência INFRA, 17/05/2019) and the shortage of containers in the country as a consequence of the COVID-19 pandemic (Folha, 09/10/2021).

With regards to symbols, three citations make reference to the notion of “Custo Brasil” (Brazil Cost, i.e., the cost of doing business in Brazil), a term commonly employed to exemplify the country's lack of productivity, abundance of structural difficulties, and general development challenges.¹⁹ In particular, the AFRMM freight tax is listed as a component of this “cost”:

“It should be noted that this poor performance was not due to lack of resources, since, in addition to commercial protection, the sector relies on financing from the FMM (Merchant Marine Fund), which is continuously fed by the collection of the AFRMM [freight tax] – which, in 2019 alone, totaled around R\$ 4.3 billion and represented an important component of the ‘Brazil cost.’” (Agência INFRA, 12/08/2020).

¹⁹ <https://noticias.portaldaindustria.com.br/noticias/competitividade/ha-mais-de-25-anos-termo-custo-brasil-sintetiza-obstaculos-ao-desenvolvimento/>

Policy feedback

Feedback of existing programs, public policies or regulations also contribute to bringing attention to certain problems. In the technical note that contextualises the draft bill, the Ministry of Infrastructure mentions that cabotage users complained about the existence of barriers for new players to enter the cabotage market, arguing that current policies protect inefficient maritime transport and shipbuilding companies, and promote an oligopolistic market. They also criticised the AFRMM freight tax, claiming that it has not improved cabotage services. As for navigation companies, they complained about the high operating costs that national vessels incur, that there is excessive bureaucracy in obtaining financing from FMM, and about the existence of regulatory restrictions to charter foreign vessels (Technical Note, 2020, p. 55-58).

Another source of policy feedback was an audit conducted by the Federal Court of Accounts (TCU), which investigated whether the actions of the Ministry of Infrastructure, Antaq and the control procedures in ports helped (or hindered) the growth of cabotage transportation in the country, finding the following issues as relevant to the sector:

“1) There is no specific public policy to encourage cabotage navigation; 2) The governmental information systems do not provide sufficient information to allow for the monitoring of actions to promote container cabotage navigation; 3) The strategies foreseen in the PNT (National Transport Policy) and the actions of sectorial bodies do not solve the lack of equality in fuel prices between cabotage and long-distance navigation; 4) There is no incentive to competition between shipowners in container cabotage navigation; 5) The action of public bodies and entities does not promote the operation of multimodal cargo transport in cabotage” (Agência iNFRA, 19/06/2019).

In a similar fashion, a survey conducted by Antaq identified a “lack of reliability” as a justification for prospective users to refrain from employing cabotage to transport their products (Agência iNFRA, 13/09/2020).

Finally, as expected, in the newspaper articles, most program feedback was informal, via complaints of sector representatives and cabotage users, as well as from members of the Ministry of Infrastructure or other public bodies (18 out of 28 citations of policy feedback), as relayed by the media in their reports on the legislative process surrounding Statute No. 14,301/2022. For example:

- A member of the Ministry of Infrastructure recalls how the remodeling of FMM was unable to foster the construction of new ships (Agência iNFRA, 17/05/2019);
- A consultant from the Chamber of Deputies criticises Statute No. 9,432/1997 for favouring a high degree of concentration in the cabotage market (Agência iNFRA, 11/12/2021); and
- Navigation companies noted that hiring Brazilian maritime officers is more expensive than hiring foreign staff, given the requirements made by Brazilian laws with respect to remunerated breaks (Valor, 28/09/2020; Valor 28/09/2020b).

Policy stream

An interviewee assessed that, since 2015, there have been various movements of stakeholders both from within and outside the government starting to evaluate the existing cabotage public policies and to question the need for greater market opening in the sector. The interviewee attributed these movements partially to a reflection of what was taking place in the United States, where there were discussions about reducing the level of protectionism of the Jones Act. In Brazil, the interviewee cited the Institute of Logistics and Supply Chain (Illos) and the Subsecretary for Strategic Affairs from the Executive Office of the President as examples of actors who were assessing cabotage policies.

Technical feasibility

During the development of the Draft Bill, the Ministry of Infrastructure and the Ministry of the Economy had several discussions about their views on certain aspects.

One point of conflict between the two Ministries referred to which flag (Brazilian or foreign) foreign vessels should carry when operating in the country. The Ministry of the Economy preferred that vessels carry the Brazilian flag, claiming that it would be unfeasible to have vessels operating in Brazil with national workers under the laws of another country. On the other hand, the Ministry of Infrastructure preferred to apply international laws so that operating costs would be reduced (Valor, 24/10/2019).

Another topic of divergence was on the degree of market openness to the entry of foreign vessels. Whilst both argued that they expected to foster greater market openness with the proposed measures, the Ministry of the Economy preferred that foreign companies that did not own a fleet be allowed to freight bareboats and operate in Brazil under no restrictions. Instead, the Ministry of Infrastructure defended that companies own a minimum number of vessels to ensure that the supply of cabotage services in the country remain stable, thereby offering cabotage users the security to move away from road transportation (Valor, 23/10/2019). In the end, the two ministries reached an agreement (Valor, 12/03/2020), developing a schedule to gradually reduce the requirements for chartering foreign bareboats (Agência INFRA, 15/02/2020).

Refinement of the proposal also took place in exchanges between the Ministry of Infrastructure and other public bodies. For instance, discussions surrounding bureaucratic requirements and taxation of ships were held with the Special Department of Federal Revenue of Brazil (Agência INFRA, 03/06/2020) and with the Brazilian Navy (Agência INFRA, 18/07/2019).

As evaluated by one interviewee, the draft bill that was conceived and sent to Congress does not fully represent what the technical team of the Ministry of Infrastructure thought was the most suitable from a technical point of view, but rather what was appropriate and what would be possible to approve, considering the political context. This context includes the more liberal approach of the Ministry of the Economy – which favours adopting cross-cutting policies that benefit the whole economy rather than granting tax incentives for particular industry sectors – and hence would not likely accept any specific policies favouring the navigation sector (as further discussed below, under Value Acceptability).

Another example of the influence of the political context is that, initially, the Ministry of Infrastructure recommended that the oil industry not be included as beneficiary of the draft bill proposals for two reasons. First, since the main objective of the draft bill was to move cargo away from roads to cabotage transportation, it would not make sense to offer the oil industry the same flexibility in chartering foreign vessels, as the sector can only transport oil from the offshore platforms by cabotage navigation.

Second, as the Brazilian naval industry largely depends on the commissioning of vessels from the oil industry, shipbuilders would certainly oppose if the industry could more easily charter foreign vessels and depended less on the domestic naval industry. Despite the position from the Ministry of Infrastructure, other sections from the federal administration did not agree to exclude the oil industry from the Draft Bill. As predicted, the Brazilian naval industry, through the National Union of the Naval and Offshore Construction and Repair Industry (Sinaval), was one of the main adversaries of the Draft Bill, as discussed further below.

Another interviewee argued that Statute No. 14,301/2022 does not solve all problems in the cabotage sector, but it helps to create a more favourable logistics scenario for transport users by addressing one of the main problems in cabotage which is the limited supply of cabotage vessels:

“The law was passed. It may not be the best law, but it creates a better scenario than the existing one. Worse is to maintain the status quo. Evidently, it is not the law itself that is going to solve all of our problems.” “When I hear criticisms about the “Road of the Sea” saying that it has not addressed the main issues, for me, it has. Because [company X] tried to quadruple cargo shipment by cabotage and was not able to since there was no supply [of vessels].” (from the interviews)

An interviewee affirmed that the cabotage shipowner she represents will start chartering foreign bareboats as soon as the Statute is regulated in order to address a stronger demand during the second semester, thanks to Black Friday and the Christmas holiday, largely to and from the duty-free zone of Manaus.²⁰ The interviewee explained that cabotage is employed to transport foreign inputs arriving in the ports of Santos (SP), Itajaí (SC) and Paranaguá (PR) to the duty-free zone, and assembled products from Manaus to the other regions of the country.

Whilst increasing competition and opportunities for new players, a few interviewees believe that the risk for transport users will also increase. As one interviewee argued, if a new player decides that the Brazilian market is no longer financially attractive and that there are better prospects abroad, the company can more easily dismiss staff and move their assets to another country, leaving Brazilian transport users suddenly unattended. Another interviewee claimed that the new law also discourages companies from having their own fleet, and that the four-year transition is too abrupt to the detriment of the cabotage companies which have made large investments in the past that new players will not incur.

²⁰ The duty-free zone of Manaus is a tax-free area located in the Amazon region which hosts approximately 600 companies assembling products such as mobile phones, TVs, automotive vehicles and household appliances (Fazcomex, 2022).

Value acceptability

As explored in the Literature Review, one of the most relevant issues within discussions surrounding cabotage laws refer to the choice of protectionist or liberalised regimes and the degree of openness to foreign vessels and companies within a country. On this point, Statute No. 14,301/2022 was occasionally framed within these different preferences on the degree of protectionism. For example, in an event attended by the director-general of Antaq, an academic professor asserted that “stronger state regulation is needed to prevent unfair competition” (Agência INFRA, 04/10/2019).

More importantly, members of the Ministry of Infrastructure’s technical team recognised the need to find a balance between “the forces that want more and less market openness” before launching the draft bill (Agência INFRA, 18/07/2019). Indeed, once the proposal reached the Chamber of Deputies, amendments were proposed to protect the national shipbuilding industry (Agência INFRA, 06/10/2020), a concern shared even by cabotage users, such as representatives of the agricultural sector (Agência INFRA, 17/05/2019).

Similarly, in the Senate, members from the Logistics and Infrastructure caucus²¹ recognised that the biggest disputes around Statute No. 14,301/2022 would be on ending protectionism of the national industry (Agência INFRA, 22/08/2020). Nonetheless, Congress was deemed “reformist” and willing to approve the draft bills that were considered a priority for the Ministry of the Economy, passing 11 measures in the first seven months of 2021 (out of 24 priority draft bills listed by the federal government) (Folha, 15/09/2021).

Another value that underpins the draft bill is the more liberal approach of the current administration, particularly of the Ministry of the Economy, with the most liberal Minister of the Economy to date, according to one of the Ministry’s secretaries (Valor, 18/05/2021). The Ministry of the Economy defends that economic growth should be attained via market, private investments and improved business environment rather than through strong state intervention or favouring particular sectors and companies (Valor, 30/09/2020; Estado, 08/02/2022).

The findings of a study from the Ministry of the Economy supports its position, indicating that, by investing public funds in infrastructure, the country would grow 2.79% - 3.04% between 2021 and 2024, whereas, with private investments unlocked by regulatory changes, the rate would be 2.96% - 3.42% for the same period (Folha, 30/04/2020). As a result, this Ministry considers priority all draft bills that promote structural reforms in the economy, for example, “BR do Mar”, changes in the railway legal framework, and the tax and administrative reforms (Folha, 30/11/2020).

In a similar fashion, the Ministry of Infrastructure defends improvements in the transport regulatory framework so as to improve the business environment and attract potential investors to infrastructure in Brazil (Valor, 23/07/2020).

An interviewee highlighted that the liberal approach of the Ministry of the Economy and its unwillingness to develop distinct sectoral tax systems were the reasons why it would not be possible to adopt measures to reduce the operational cost of vessels carrying the Brazilian flag:

21 Frente Parlamentar Mista da Logística e da Infraestrutura (<https://frenlogi.org/quem-somos/>).

“... that [reducing the operational cost of Brazilian vessels] became impossible because [the Ministry of Infrastructure] would have to create a distinct tax system, like a single navigation tax, which the Ministry of the Economy is avoiding, has been for some time avoiding distinct tax systems for different sectors. They strive to create those cross-cutting or horizontal economic policies, never vertical ones”. (from the interviews)

As a result, the solution found was to facilitate the chartering of foreign vessels with the aim of reducing operational costs by avoiding the additional costs brought on by Brazilian labour and tax laws. Nonetheless, an interviewee representing a cabotage shipowner mentioned that the company has no plans to charter crewed vessels, only bareboats, due to the legal uncertainty associated with applying different labour regulations for foreign and Brazilian maritime workers. In the event that a foreign worker decides to sue the company for being treated unfairly, the interviewee asserted that the Brazilian judicial system will likely rule in favour of this worker, given that foreign and national workers will have the same attributions and work for the same Brazilian company.

Anticipation of future constraints

Linked to the previous element (“value acceptability”), the law seems to suit the current unfavourable fiscal situation in Brazil for not increasing public expenses, while also seeking to attract private funds. As stated by the Minister of Infrastructure, one of the pillars of the current infrastructure program is the transfer of public assets to the private sector, given that it is not feasible to fill the country’s infrastructure gap with limited public funds (Valor, 20/12/2021). The focus on the cabotage sector was also aligned with the reduced need for investments in general when compared with other means of transportation (Agência iNFRA, 17/05/2020).

As noted earlier, the Ministry of the Economy also favours a focus on private investments: one secretary of this Ministry added that this draft bill is part of a set of reforms that are crucial for restructuring the economy (Folha, 30/11/2020).

The items included by Congress with ability to impact the budget negatively – changes to the AFRMM freight tax and the extension of tax incentive Reporto – were vetoed by the President, as recommended by the Ministry of the Economy, although these vetoes were later overridden by Congress. Similarly, Statute No. 14,301/2022 did not attempt to reduce (or even remove) fuel taxes due to concerns surrounding the legality of making this modification via federal law, reducing state budgets²² (Agência iNFRA, 03/06/2020).

Interestingly, some measures initially proposed by the federal government, such as the requirement for employing 2/3 of Brazilian workers in time chartered foreign ships, targeted at reducing the opposition from maritime workers and respective unions, were also vetoed by the President (Agência iNFRA, 14/01/2022).

²² In Brazil, taxes on cabotage fuel (bunker) are collected at the state-level.

Another measure focused on reducing future constraints was the adoption of a transition period before fully liberalising the market for the chartering of foreign bareboats, with diminishing requirements, as a way to allow the local industry to adjust itself to the new rules (Agência INFRA, 12/08/2020); although, as noted by an interviewee, this adjustment period is too short if compared to the financing period of a vessel of 15 to 20 years.

Political stream

National mood

As observed by Kingdon (2014), transportation is relatively insulated from emotional content, especially freight transport, and business interests are often the most important interest group in transportation. Still, presented as part of a broader set of economic reforms, Draft Bill 4,199/2020 was considered to have popular support and contributed to improving the President's public approval ratings (Folha, 27/11/2021; Folha 12/12/2021). In particular, the Minister of Infrastructure highlighted that the proposal followed a more liberal approach as expected by the private sector (Agência INFRA, 26/09/2019).

Organised political forces

From the interviews, it was possible to identify two main adversaries to the draft bill during its legislative process.

The first was shipbuilding association Sinaval, who, as noted earlier, was fairly active in discussions with the government about the draft bill, mostly behind closed doors. The rationale behind Sinaval's engagement was that, once the law was enacted and loosened requirements for navigation companies (including for their main client, the oil industry) to charter foreign vessels, the need to build vessels would be reduced to the detriment of the local shipbuilding industry. Avoiding conflicts with the shipbuilding industry was one of the reasons why the Ministry of Infrastructure initially intended to exclude the oil industry as beneficiary of the draft bill proposals on foreign chartering.

The second adversarial actor was sector association Logística Brasil. In the cabotage sector, there are approximately 40 companies formally authorised to operate in cabotage transportation, but, in practice, there are only about 12 operating companies, three of which are small-sized. One of these companies is an associate of Logística Brasil, which often acts as an intermediary operator between international navigation companies and local transport users, providing feeder ("last mile") services. Through facilitating the chartering of foreign vessels, Statute No. 14,301/2022 may negatively affect the company's business, as navigation companies will be able to charter foreign vessels directly.

Other stakeholders involved in discussing the content of the draft bill during the legislative process were representatives of truck drivers and the Brazilian Association of Cabotage Shipowners (Abac). Abac suggested that the AFRMM freight tax could also be employed by cabotage companies for regular maintenance of vessels, the purchase of foreign pieces of equipment (items which were included in

the law) and to partially cover operational costs such as the additional expenditures associated with complying with the Brazilian law to hire national maritime workers (item not included).

As for stakeholders that were supportive of the draft bill, the ports sector and transport users were in favour, particularly the National Agriculture Confederation (CNA), the National Industry Confederation (CNI) and the National Transport Confederation (CNT).

The maritime professionals were also in favour, up to the point when they perceived that the requirement of hiring 2/3 of Brazilian maritime workers in time chartered vessels would not be kept in the law.

In the table below, we provide a more comprehensive account of the interest groups involved in the discussions leading up to the sanction of Statute No. 14,301/2022, according to the newspaper articles analysed.

Table 14 – Interest groups in the policy process

Stakeholder	Position/Stake
<p>Large navigation companies and associations</p>	<p>Overall, large navigation companies believed that the new legislation would accelerate the growth of the cabotage market in Brazil, and that the changes to the existing law should provide more competitiveness to maritime transport and stimulate a move away from roads to cabotage transportation (Valor, 29/07/2020).</p> <p>In particular, they were in favour of the requirement that only navigation companies with fleet should be allowed to time charter crewed vessels in order to ensure a level-playing field for market participants, given the substantial investments that the large companies had already made to acquire national vessels to operate (Estado, 19/11/2020; Valor, 29/07/2020; Valor, 29/10/2020).</p> <p>On the other hand, large companies defended that navigation companies that did not own a fleet should be allowed to charter foreign bareboats only after 15 years from the enactment of the law (the president sanctioned the law with a transition period of four years) (Valor, 25/11/2021). As observed by the executive director of the Brazilian Association of Cabotage Shipowners (Abac):</p> <p>“The second modality [of chartering foreign bareboats] is detrimental to the Brazilian companies that made investments in the past 25 years. Our concern is the speculation risk through the entry of companies that have not invested and do not know the market.” (Valor, 29/10/2020)</p> <p>Large companies were also against the requirement proposed by the original draft bill (which was later vetoed by the President of the Republic) that navigation companies that time charter crewed vessels should have a minimum of 2/3 of the crew composed of national workers. According to Statute No. 14,301/2022, all maritime staff can be foreign, which navigation companies prefer as labour costs are lower. They claimed that there could be issues related to cultural differences and also that national workers would not accept international contracts due to the disadvantageous working conditions, compromising workforce supply (Valor, 28/09/2020; Estado, 19/11/2020; Estado, 12/12/2020).</p> <p>Along with the vetoed requirement of hiring a portion of Brazilian workers, large companies were also concerned about the legal insecurity that would be generated from employing Brazilian maritime workers under labour laws from the country where the vessels come from. As observed by the executive director of Abac:</p> <p>“We want to increase jobs for Brazilian maritime workers, but that will only be feasible through relaxing the requirements of the labour legislation, something that is not under discussion at the moment. Besides, we fear that there will be judicial uncertainty if these workers are employed under the labour laws of the ship’s nationality. We also question whether maritime workers will agree to work under foreign rules. And how will we overcome this [staff] shortage?” (Estado, 19/11/2020)</p> <p>Finally, Abac also complained that the measures in Draft Bill 4,199/2020 did not seek to reduce the operational costs of cabotage companies, particularly fuel costs (Agência iNFRA, 16/09/2020).</p>

Stakeholder	Position/Stake
Logística Brasil	<p>Logística Brasil argued that the authorisation to charter foreign vessels “from foreign subsidiaries” will favour the six largest foreign navigation companies that already operate in Brazil with foreign vessels, to the detriment of the smaller navigation companies (Folha, 26/10/2020).</p> <p>It also showed concern regarding the requirements that the draft bill (and now Law) contained for time chartered crewed vessels with regard to the need to have a minimum quantity of vessels to operate (for instance, companies are allowed to charter foreign vessels when they have vessels under construction in Brazil or abroad) since the majority of small companies do not own fleet and often charter crewed vessels. As noted by Abrahão Salomão, director of association Logística Brasil:</p> <p>“As for new incoming players, they will need to disburse, at least, US\$ 60 million to be on par with those [large companies] in order to comply with the [proposed] requirements, an extraordinary amount in any situation, and an absurd one for a program which, as a premise, seeks to lower entry barriers in the sector” (Estado, 21/08/2021).</p> <p>According to previous regulations, when national vessels were not available for new contracts, crewed vessels could be chartered abroad for a specific transportation service or in case the navigation company had vessels under construction in the country (Valor, 28/09/2020).</p> <p>The director also claimed that the structure proposed by the draft bill was being used by the large companies to evade tax (Estado, 21/08/2021). Due to these concerns, throughout the legislative process, Logística Brasil opposed the speed and urgency with which the government initially vowed to submit and approve the draft bill (Agência INFRA, 28/01/2020).</p>
Maritime workers and unions	<p>Unions representing Brazilian maritime professionals criticised the demands from large navigation companies to exclude the requirement that a minimum quantity of Brazilian professionals be hired when time chartering foreign vessels (Valor, 28/09/2020), demand which was addressed as the requirement was vetoed by the President (Folha, 09/01/2022); representatives of maritime workers vowed to work with Congress to overthrow this veto (Agência INFRA, 19/01/2022), although the veto was not overridden by Congress.</p>
Shipbuilders	<p>The National Union of the Naval and Offshore Construction and Repair Industry (Sinaval) harshly criticised and opposed the government’s intention to liberalise the local cabotage market (Agência INFRA, 11/12/2019), complaining about the inclusion of the oil and gas sector in the proposal, fearing the possibility that Petrobras could start chartering ships to transport fuels by cabotage (Agência INFRA, 16/09/2020). Similarly, the Brazilian Society of Naval Engineering (Sobena) supported an amendment in the Senate that sought to guarantee priority for ships domestically built to be used on chartering operations (Agência INFRA, 29/06/2021).</p>
Truck drivers	<p>One of the concerns of truck drivers was that the new law would reduce the market for road transportation. In October 2020, the president of the Brazilian Association for Automotive Vehicle Conductors, Wallace Landim, sent a letter to the Minister of Infrastructure complaining that the proposal could reduce the volume of long-distance trips on roads by 40% and that the group had not been involved in discussions concerning the draft bill (Folha, 27/10/2020).</p> <p>Following that, in early 2021, Wallace Landim sent a letter to the Minister of the Economy, requesting that navigation companies were forbidden from offering road transport services, fearing that allowing navigation companies to provide road services for clients from or to ports would open the road transport market to foreign companies (Valor, 01/02/2021).</p>

Stakeholder	Position/Stake
Port owners and managers	Once an extension of Reporto was included in Draft Bill 4,199/2020, associations linked to port owners and managers (as well as railway companies) put pressure on Congress to see the bill approved and, after the President vetoed this extension, they vowed to work to overthrow this veto (Agência INFRA, 14/01/2022), which was overridden by Congress on 17/03/2022.
Users of freight transportation services	<p>In November 2020, the Minister of Infrastructure received a message of support favouring the draft bill from the National Association of Freight Transport Users, which congregates the steel, cement, sugar and pulp sectors, including large companies such as Gerdau, Usiminas, Raizen and JBS (Folha, 12/11/2020).</p> <p>Although in favour of the draft bill, some cabotage users (Association of Soy and Corn Producers of Mato Grosso - Aprosoja) from the agricultural sector did oppose a greater degree of market liberalisation, as suggested in the Senate in Draft Bill 3,129/2020 by Senator Katia Abreu, deemed as preferable to have a national fleet of cabotage vessels “even if it led to higher costs momentarily” (Agência INFRA, 22/08/2020). However, others in the same sector, such as the Federation of Agriculture and Livestock of Pará (FAEPA), complained about the difficulty and higher prices for buying a ship built in Brazil (Agência INFRA, 17/05/2019).</p> <p>Once “BR do Mar” was approved in the Senate and returned to the Chamber of Deputies, its quick approval and forwarding to presidential sanctioning relied in part due to the negotiations conducted by the Ministry of Infrastructure, but also due to the pressure from the industrial and agricultural sectors and its representatives (Agência INFRA, 06/01/2022). This pressure was motivated by the perception that Statute No. 14,301/2022 may reduce transportation costs for cargo such as soy, corn and fertilizers (Estado, 18/11/2021).</p>

Events within government

An interviewee recounted that important events occurred within government in the previous years to the creation of the draft bill, contributing to its development. In early 2018, the former Waterway Infrastructure Director of the National Transport Infrastructure Department (DNIT) took office as interim Minister of Transport to replace the previous representative, who licensed from his position to be a candidate for Senate.

In the beginning of his mandate, the minister requested that the Ministry’s Secretary for Promotion and Partnership start developing proposals to tackle specific cabotage problems. Although there was insufficient time for developing a robust policy proposal before the end of his mandate (in late 2018), it started the process that contributed to the draft bill.

In January of 2019, the new minister took office as Minister of Infrastructure (in what was previously the Ministry of Transport) and created its first navigation department, the Navigation and Waterways Department, whose first mission was to improve cabotage policies. That same year, the department started engaging with various public and private sector stakeholders involved in the cabotage sector, and refined proposals until the first version of the draft bill was conceived.

In the following year, the draft bill proposal was shared by the Ministry of Infrastructure with other ministries, finding some points of disagreement with the Ministry of the Economy. The main point of conflict referred to the conditions for the chartering of foreign bareboats. The Ministry of the Economy proposed that there be no prior conditions (i.e., no fleet owning requirement) to charter foreign bareboats, whereas the Ministry of Infrastructure argued that allowing the chartering of bareboats would not help solve the high operational costs in cabotage because foreign bareboats carry the Brazilian flag, and hence they incur the same labour expenses as Brazilian vessels. Other points of disagreement between the two ministries were on the extension of Reporto (Estado, 15/12/2021; Valor, 31/01/2022) and changes in AFRMM rates (Agência iNFRA 14/01/2022).

The disagreements between the two bodies delayed the submission of the proposal to Congress (Agência iNFRA, 28/11/2019; Folha, 25/11/2021). Indeed, for the proposal to advance, the Executive Office called a meeting between the two ministries to understand their views and inform the President so that a decision could be made (Agência iNFRA, 12/10/2019). The adoption of a transition period to ease chartering rules for foreign bareboats was a compromise between the two bodies that, after many months of negotiations, helped to advance the draft bill (Agência iNFRA, 15/02/2020).

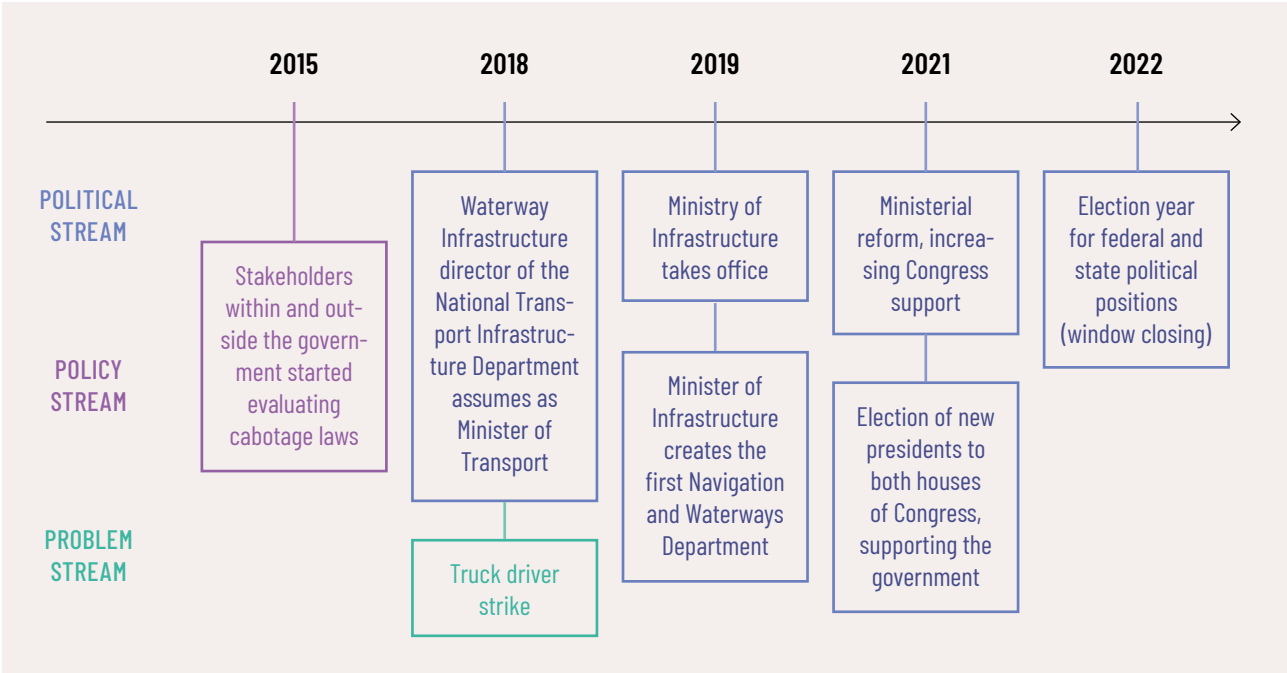
With regard to the turnover of key personnel, in addition to the entry of the Ministers of Transport/Infrastructure mentioned above, other events were also relevant for creating a more favourable environment for the item to rise on the agenda. If initially, in 2019, the government had difficulty negotiating with Congress, losing votes (Agência iNFRA, 04/09/2019) and facing the opposition from the President of the Chamber of Deputies (Agência iNFRA, 26/09/2019), after the election of new presidents to both houses of Congress (Folha, 03/02/2021) and a ministerial reform that sought to increase governmental support among deputies and senators (Folha, 06/09/2021), a more conducive environment for approving draft bills that were governmental priorities, as stipulated by the Executive power, was established.

On the other hand, discussions about the federal government handling of the COVID-19 pandemic made it more difficult for any other topic to go through the permanent commissions in the Senate (Agência iNFRA, 20/08/2022) as well as being put to vote earlier (Folha, 21/06/2021).

Finally, the opportunity for approving structural reforms (political window of opportunity) likely ended in 2021, with 2022 being an election year for federal and state political positions and most discussions revolving towards that end (Folha, 15/09/2021).

The timeline of relevant events are highlighted in the figure below.

Figure 4 – Timeline of relevant events in the problem, policy and political streams



Source: the authors

In the table below, we provide a more comprehensive account of the governmental stakeholders involved in the discussions leading up to the sanction of Statute No. 14,301/2022, according to the newspaper articles analysed.

Table 15 – Governmental stakeholders participating in the public policy process

Stakeholder	Position/Stake
President	<p>Attempts to increase competition in the cabotage market, with measures that facilitated the acquisition of ships and the development of new routes were deemed by the National Secretary of Ports from the Ministry of Infrastructure as a governmental decision, coming from the president himself (Agência iNFRA, 18/07/2019). The Executive Office also intervened in order to solve the disputes between the Ministries of Infrastructure and the Economy (Agência iNFRA, 12/10/2019).</p> <p>In sanctioning the draft bill into Statute No. 14,301/2022, the president vetoed three items: the extension of Reporto, changes to AFRMM and the requirement of a minimum quantity of national workers in foreign crewed vessels. To veto the extension of Reporto, he argued that the proposal was against public interest by granting a tax waiver whilst not presenting an estimate of the impact of compensatory measures on the public budget. He also argued that this measure was unconstitutional for violating the Fiscal Responsibility Law, the Budget Guidelines Law and the Constitution (Folha, 09/01/2022). To veto the requirement of a minimum quantity of national workers, the president argued that the measure would increase cabotage operational costs (Estado, 10/01/2022). The vetoes to Reporto and to AFRMM were later reversed by Congress.</p>

Stakeholder	Position/Stake
Ministry of Infrastructure	<p>The Ministry of Infrastructure considered this a priority draft bill as it deems that the Law has the potential to unlock private investments for transport infrastructure, and to contribute to filling the country's infrastructure gap in view of the reduced federal budget (Valor, 07/12/2020; Valor, 20/12/2021). The technical staff of the Ministry was against the full liberalisation of the domestic cabotage market and sought to protect the local industry from the price volatility observed in international shipping markets (Agência INFRA, 04/10/2019).</p> <p>With regards to the construction and refinement of the proposal, the Minister and his staff were very active in communicating the project in the media (Agência INFRA, 16/09/2020) and with different segments of the civil society, for instance, holding or participating in over 40 public events to discuss the contents of the draft bill (Agência INFRA, 23/03/2021).</p> <p>Regarding Reporto, the Ministry was in favour of its extension as the terms of the contracts recently celebrated between concessionaire companies and the federal government considered the tax exemption (Valor, 08/01/2022).</p>
Ministry of the Economy	<p>Together with the Ministry of Infrastructure, the Ministry of the Economy considered the draft bill a priority bill for contributing to promote structural reforms in the economy (Folha, 30/11/2020), although, as noted earlier, it had divergent views on certain aspects of the document in comparison to the positions defended by the Ministry of Infrastructure. For example, the Ministry of the Economy favoured a greater degree of market openness, being less concerned with potential price volatility (Agência INFRA, 25/09/2019; Agência INFRA, 04/10/2019). Still, the Minister of the Economy also defended the project publicly as a way of improving Brazil's logistics (Folha, 21/06/2021).</p> <p>The Ministry of the Economy was against items proposed by Congress during the legislative process that could impact the federal budget negatively, for example, extending Reporto and reducing the tax freight AFRMM for cabotage and long-distance navigation. Concerning Reporto, the Ministry preferred that the matter be discussed as part of a tax reform. The President of the Republic agreed with the Ministry of the Economy and vetoed these items (Valor, 08/01/2022; Valor, 19/01/2022), although these were later reversed by Congress.</p>
National Congress (Chamber of Deputies and Senate)	<p>The National Congress acted on the demands from the transportation sector, voting for the extension of Reporto and changes to the AFRMM freight tax in the Draft Bill. In addition, several other interest groups found representation within Congress, for instance, some senators manifested concerns with how the measures would affect truck drivers (Folha, 18/03/2021); port owners and managers (Agência INFRA, 14/01/2022); and agriculture and livestock companies (Valor, 18/11/2020).</p> <p>While initially the president of the Chamber of Deputies delayed the advancement of the draft bill (Folha, 04/12/2020; Valor, 07/12/2020), once approved in that house, the proposal faced intense debate in the Senate, with the rapporteur of the bill actively negotiating with interested parties to secure an environment conducive to its approval (Estado, 18/06/2021; Valor, 24/09/2021).</p>
National Agency on Waterway Transportation (Antaq)	<p>In 2020, the regulatory agency Antaq was particularly concerned about the extinction of Reporto, fearing that many concessionaires would request a revision of the terms of the concessionaire contracts (Valor, 24/11/2020). Indeed, private concessionaires had been in discussion with regulatory agencies Antaq and National Terrestrial Transport Agency (ANTT) to enquire about the possibility of revising the terms of the contract (Valor, 10/01/2022).</p>

Stakeholder	Position/Stake
Administrative Council for Economic Defence (CADE)	In 2020, the regulatory agency Antaq was particularly concerned about the extinction of Reporto, fearing that many concessionaires would request a revision of the terms of the concessionaire contracts (Valor, 24/11/2020). Indeed, private concessionaires had been in discussion with regulatory agencies Antaq and National Terrestrial Transport Agency (ANTT) to enquire about the possibility of revising the terms of the contract (Valor, 10/01/2022).
Federal Court of Accounts (TCU)	Still in 2019, the Federal Court of Accounts produced a report on the cabotage market, examining the major challenges for the greater development of this sector, such as the absence of a specific policy to incentivise cabotage and the lack of equality in fuel prices for cabotage and long-distance shipping activities (Agência iNFRA, 19/06/2019).
Others	Other participants from within government that also played a role in discussions around “BR do Mar” were the Ministry of Defense (Agência iNFRA, 05/06/2020); local state governors and public servants (Agência iNFRA, 04/10/2019; Agência iNFRA, 11/12/2021); and the Ministry of Agriculture (Valor, 01/06/2021).

Policy entrepreneur

The Minister of Infrastructure was identified as the (key) policy entrepreneur throughout this whole process, making use of his political connections and negotiating skills until the draft bill was sanctioned. One interviewee noted that all decisions made during the legislative process were strictly technical rather than politically motivated, and that she hopes that this type of relationship with the sector is kept in the next federal administration.

Claim to a hearing

According to the newspaper articles, the Minister of Infrastructure has built his political capital through his technical expertise and is well-regarded even by those parties opposed to the government (Valor, 13/11/2019). All the professionals who fill the Secretaries of the Ministry of Infrastructure have technical qualifications (Valor, 19/01/2022).

Political connections and negotiating skills

The Minister previously worked as a legislative consultant within the Chamber of Deputies, where he learned how to deal with politicians from different parties and inclinations (Valor, 19/01/2022). He and his team engaged with stakeholders from inside and outside the government to either soften up the system or to actively negotiate the terms of the proposal, as noted in the instances below:

- **With the Ministry of the Economy:** When the draft bill was under development, the Ministry of Infrastructure and the Ministry of Economy had divergent views on certain aspects, such as on the degree of market openness that should be allowed to the chartering of foreign bareboats. The ministries engaged in discussions and eventually reached an agreement that suited both parties (Valor, 23/10/2019; Valor, 12/03/2020; Valor, 24/10/2019).
- **With the transport sector:** During the legislative process, the Ministry of Infrastructure gathered formal support for the draft bill from associations, federations, unions and other sector representatives, including the Brazilian Association of Port Terminals (Associação Brasileira dos Terminais Portuários - ABTP), the National Merchant Marine Officials Union (Sindicato Nacional dos Oficiais da Marinha Mercante - Sindmar), the National Federation of Waterway Navigation Companies (Federação Nacional das Empresas de Navegação Aquaviária - Fenavega), the Port Traffic Navigation Companies Union (Sindicato das Empresas de Navegação de Tráfego Portuário - Sindiporto), the National Federation of Ports Operations (Federação Nacional das Operações Portuárias - FENOP) and the Agro and Livestock Parliamentary Caucus (Frente Parlamentar da Agropecuária - FPA)(Estado, 08/10/2020).
- **With the Chamber of Deputies:** After the Executive branch presented the draft bill for a vote to the Chamber of Deputies on 18 November 2020, the Minister of Infrastructure met with deputies from parties allied with the current administration to discuss the content of the document (Valor, 18/11/2020). Also, throughout the voting procedures, the Minister called leaders from parties allied to the current administration and from independent parties to ensure that the document be approved with no major changes (Valor, 09/12/2020). The Minister and his staff also sought support from the relevant caucuses in congress, such as the Agribusiness and the Logistics and Infrastructure caucuses²³ (Agência INFRA, 16/09/2020).
- **With the Senate:** The Minister of Infrastructure demonstrated his willingness to negotiate with senators who had previously submitted proposals regarding cabotage, such as the senator who authored Draft Bill 3,129/2020, and incorporate aspects of these bills within “BR do Mar” (Agência INFRA, 11/06/2020). When Draft Bill 4,199/2020 was to be voted in the Senate, members of the Ministry of Infrastructure spent a full day in the Senate meeting to discuss the draft bill so that senators who proposed amendments to it could discuss them with the Ministry’s technical team (Estado, 18/06/2021), while the Minister himself spent an entire morning in the Senate negotiating the necessary conditions for the proposal to move forward (Agência INFRA, 10/07/2021).
- **With cabotage users:** The Minister of Infrastructure also sought support from the companies and sectors that employ or could employ cabotage services, for instance, obtaining explicit support from the National Association of Cargo Transport Users (Associação Nacional dos Usuários do Transporte de Carga - Anut), which includes some of the largest Brazilian companies in steel, cement, sugar, cellulose, ceramics among other sectors (Folha, 12/11/2020). Indeed, since the inception of the project, members from the Ministry of Infrastructure carried out workshops with business associations, such as the Federation of Industries of the State of São Paulo (Federação das Indústrias do Estado de São Paulo - Fiesp) and the National Agriculture and Livestock Confederation (CNA) in order to present the general guidelines from the draft bill (Agência INFRA, 12/08/2019).

23 Respectively, Frente Parlamentar da Agropecuária(FPA) and Frente Parlamentar da Logística e Infraestrutura (Frenlogi).

Persistency

The Minister of Infrastructure acknowledged that working with “infrastructure in Brazil is a resilience challenge. It takes clarity, patience, ability to argue and, above all, serenity” (Agência INFRA, 23/03/2021). On this point, as soon as he took office, the Minister signaled how highly he regarded the issue of cabotage, even vowing to go on a travel by ship to understand the sectors’ problems (Agência INFRA, 17/05/2019). He also showed an optimistic view regarding “BR do Mar” (Agência INFRA, 12/10/2019) and a willingness to continue working for its approval in both houses (Estado, 25/11/2021).

Climate aspects

Statute No. 14,301/2022 lists “sustainable development” as one of its twelve guidelines (in its 2nd article, eleventh guideline). Therefore, the companies interested in participating in the “Road of the Sea” program will have to regularly present information regarding their operations in Brazil in accordance to this guideline. These reporting requirements, however, will need to be addressed in further regulatory acts (yet to be created).

In the technical note supporting the submission of Draft Bill 4,199/2020, the Ministry of Infrastructure listed as one of its eight objectives the ambition to “consolidate cabotage as a logistics alternative with better environmental and economic efficiency when compared to other modes of transport”. It also highlighted that the European Union devised its maritime transport policy, at least partially, due to environmental concerns and pointed to evidence in the literature about the positive externalities and environmental gains associated with a larger use of cabotage transportation. Nonetheless, these mentions are generic and include climate-related aspects as one of several benefits associated with this mode of transportation, with stronger emphasis put on economic concerns, such as lower logistical costs.

During the public discussions surrounding the proposal, members of the Ministry of Infrastructure defended the need for the draft bill in newspaper articles, for instance, claiming that transporting cargo through the sea was “to create opportunities for establishing trade flows cheaper, cleaner and more efficiently” (Estado, 08/10/2020). The Minister himself singled out the importance of the future of the policy (among others) once approved in Congress:

“Here we are talking about the future [...] We can imagine that we will have a more balanced transport matrix, we will go from the current 20% to more than 40% of rail in the [transport] matrix, we will have incentives for navigation (cabotage), a more competitive and sustainable system” (Folha, 20/12/2021).

Other participants inside the government occasionally made reference to the positive consequences of switching cargo from trucks to ships. In opinion pieces, members of different groups, such as port owners and managers (Agência INFRA, 02/12/2020) and experts from law firms specialised in maritime or environmental issues (Estado, 31/03/2021; Estado, 10/12/2021), also pointed towards the climate and environmental advantages of cabotage. Again, these benefits tend to be included as one of several offered by this mode of transportation, such as reduced logistical costs and smaller risk of accidents.

When asked about whether the navigation sector is involved in climate change mitigation efforts, 60 % of the interviewees mentioned that the United Nations agency responsible for regulating shipping, the International Maritime Organisation (IMO), is leading the sector's climate change actions. They noted that IMO has a global commitment to reduce the shipping industry's GHG emissions, which, according to the IMO website, are to cut GHG emissions from international shipping by half compared to the 2008 levels, and work toward phasing out GHG emissions from shipping as soon as possible in this century.

Moreover, the IMO strategy comprises a reduction of CO₂ emissions by at least 40% by 2030 and efforts towards a 70 % reduction by 2050, compared to 2008. Interviewees also remembered that the IMO 2020 regulation was already relevant for climate change mitigation by making it required for the whole shipping industry to use fuel oil with a 0.5 % sulphur limit and added that the IMO has two new mandatory measures for ship carbon intensity reduction:

- Energy Efficiency Existing Ship Index (EEXI): indicates the energy efficiency of the ship compared to a baseline. Ships of 400 gross tonnage and above will be required to meet a specific EEXI, based on a reduction factor.
- Carbon Intensity Indicator (CII): a ship's annual operational carbon intensity indicator (rated from A to E). Ships rated D for three consecutive years, or E, will have to submit a corrective action plan (IMO, 2021a).

To reduce GHG emissions, the interviewees observed that navigation companies have been employing different technologies. For example, navigation company Hidrovias is building a hybrid pusher, fueled by both diesel and electricity, whereas Norsul is applying paint with silicone on ships to reduce water friction, hence improving their energy efficiency. Mercosul Line plans to replace more carbon-intensive equipment from two of its container ships so as to comply with the IMO 2023 regulations. With the target to achieve carbon neutrality by 2050, the controller of Mercosul Line, CMA CGM Group, have acquired 24 ships fueled by liquefied natural gas instead of bunker oil to reduce carbon emissions. Moreover, CMA CGM started offering their clients the possibility of compensating carbon emissions through an additional fee, which funds carbon neutralisation projects from NGOs in Africa, Europe and Asia. ExxonMobil is developing fuel from marine algae.

As for client demand, one interviewee noted that there is a small, but growing interest from transport user companies in favouring less carbon-intensive transport companies so as to reduce their indirect carbon emissions.

In terms of attracting climate finance to the cabotage sector, an interviewee purported that, although cabotage navigation is a low-carbon transport mode, it is more difficult to attract climate finance for it since interior navigation could contribute more to balancing the freight transport matrix than cabotage navigation: interior navigation favours cross-country transportation of commodities produced in the Center-West region to the country's ports. Another interviewee disagrees, arguing that cabotage navigation has the ability to move cargo away from roads, for example, by transporting building materials and agricultural products from the South to the North and Northeast regions, food products up north to Venezuela and lesser container cargo, consolidating small amounts of cargo into containers.

As for interior navigation, an interviewee noted that the potential for development in Brazil is concentrated in the Amazon region, a barrier to attracting international climate finance. This is because the international community is generally wary of contributing to economic development of the Amazon region, preferring instead to invest resources in the biome's environmental conservation. For example, on the Tapajós and Teles Pires rivers, there is potential to develop interior navigation, linking the soy-producing municipality of Sinop, in the state of Mato Grosso, to the ports in the Northern region. According to an interviewee's evaluation, this soy exporting corridor could partially replace both highway BR-163 and future railway Ferrogrão, and be a less environment-intensive transport option. Nevertheless, according to this interviewee, because of the international symbolism of the Amazon region, foreigners will favour full conservation of the region.



Chapter six

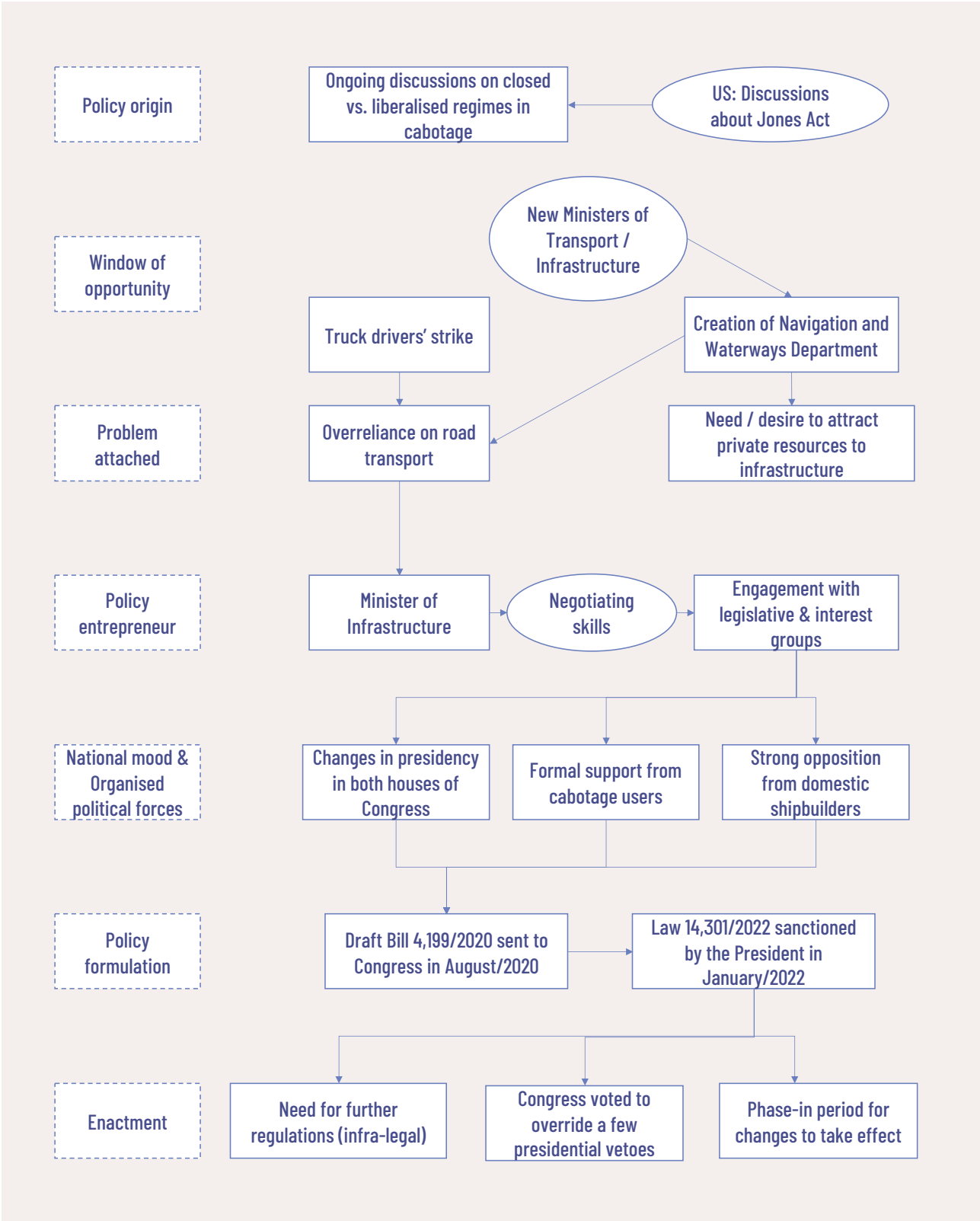
Discussion

6. Discussion

Moving cargo transportation away from roads in Brazil and reducing greenhouse gas emissions from the transport sector requires the creation of a conducive environment for the development of low-carbon transport modes, which includes regulatory changes, as exemplified by the research conducted in Years 1 and 2. Hence, there is a need to better understand how policy change takes place in such a context in the country. To this end, this study employed Kingdon's MSF as a theoretical lens to analyse the legislative process of Statute No. 14,301/2022 ("BR do Mar").

As with previous studies, this theoretical framework was found to be particularly useful in analysing, in the context of an emerging market, the main forces at work in the process of elevating the issue of cabotage on the governmental agenda and turning Draft Bill 4,199/2020 into Statute No. 14,301/2022. Figure 5 below summarises the main underlying events and processes, from the Statute's inception until enactment.

Figure 5 – Flowchart of the policy process for Statute No 14,301/2022



Source: the authors, inspired by Flores (2017).

RO1: Drawing on Kingdon's multiple streams framework, what are the major forces at work during the legislative process of Statute No. 14,301/2022?

According to our analysis of newspaper articles and interviews, there were several factors which have contributed to raising the importance of cabotage navigation as an issue worthy of attention and the development of this draft bill until it was sanctioned by the President.

As indicated in the Literature Review, global discussions around cabotage policy mostly rely around the level of openness of domestic markets to foreign ships. Given Brazil's initial position of an essentially closed regime, in line with international practice, any measures to come out of the policy stream would likely refer to different ways of opening up the market. Once a clear problem emerged (overreliance on road transport), a policy developed inside the government that facilitated the chartering of foreign vessels, within the values that underpin the administration (e.g. liberal economic views, economic development via market) and the fiscal constraints of the Brazilian context, was indeed attached to this problem.²⁴

Changes in cabotage policy were also made possible due to the repercussions caused by the manifestations of an interest group (truck drivers, who went on strike in 2018) trying to call for changes in another realm of transportation policy (high fuel costs and low road freight prices). By drawing (more) attention to the country's vulnerability in its transport matrix due to the economic impacts of the strike, this event elevated the issue to a national concern, raising the status of the overreliance on road transport from an issue to a problem worthy of action. On this point, the events surrounding the proposal and approval of Statute No. 14,301/2022 seem to confirm Kingdon's (2014) suggestion that focusing events, crises and disasters are particularly relevant in transport policy because the field (especially cargo transport) tends to be less visible to the general public.

The opening of a window of opportunity by compelling events and indicators in the problem stream as well as by changes in the configuration of the executive power (new Ministers of Transport and then Infrastructure, making navigation a priority to address) thrust cabotage policy onto the decision agenda. Once there, relevant actors involved bargained for a solution, first within the federal administration (with disputes between the Ministries of Infrastructure and the Economy) and later in Congress.

Although affected by external events, such as the covid-19 pandemic, such a window of opportunity lasted open for a long enough period of time to allow for the necessary adjustments to be made (e.g. with the adoption of a transition period for chartering bareboats), and the draft bill was eventually approved in the Chamber of Deputies and Senate before 2022's electoral concerns could close the window.²⁵ Certain political events also contributed to keeping the window open and approving the draft bill, including changes in presidency in both the Chamber of Deputies and the Senate, more aligned with the government's priorities, and a ministerial reform, nominating representatives from other political parties for governmental positions. Mass media and public opinion did not appear to play a relevant role in the events surrounding "BR do Mar".

²⁴ The policy was demanded by the Ministers of Transport and then Infrastructure, but drafted by career public servants within the Ministry, as postulated in the MSF.

²⁵ In October of 2022, there will be elections for numerous federal and state political positions, causing many politicians to temporarily licence from their mandates in the beginning of 2022 to dedicate to their candidacies, including the Minister of Infrastructure, who is running as candidate to governor of the state of São Paulo.

The persistency and negotiating skills of the Minister of Infrastructure and his technical staff likely helped keep the issue high on the decision agenda. Since the conception of the draft bill throughout the whole legislative process, the Minister himself and his team engaged with stakeholders from inside and outside the government negotiating the terms of the proposal (e.g. reaching a consensus on the proposal with the Ministry of the Economy), gathering formal support (e.g. from associations, federations, unions and other sector representatives), clarifying doubts about the draft bill and ensuring that it would be approved (e.g. engaging with members of Congress from supporting and independent parties).

As suggested by Kingdon (2014), the high level of fragmentation in the transport sector makes it more conducive to abrupt changes on the agenda. In this sense, the authoritative position (claim to a hearing) of the policy entrepreneur within the government may be an additional factor helping to sustain the priority character of the draft bill (and cabotage policy) through the years. Nonetheless, the proposed changes could have faced smaller opposition from interest groups (e.g. from the naval building industry) if they excluded the oil and gas sector, as initially intended by the Ministry of Infrastructure.

Finally, while Kingdon (2014) highlights the importance of arguments and persuasion within policy processes, recognising the rhetorical aspects of policymaking, he fails to provide further insight into how these aspects may be encountered and developed in practice (do Sol Osório, 2020). On this point, the branding of Draft Bill 4,199/2020 as “BR do Mar” is worthy of attention, given the desired connection with the country’s highway system,²⁶ signalling the intention to create a level of familiarity between laypeople and the contents of the policy. As described by the Minister: “We’ve baptized the project as ‘BR do Mar’”. The name is not in vain, it is to use this port avenue we have, this maritime avenue, over 8,000 km of coast” (Estado, 11/08/2020).

RO2: Is the Framework suitable for explaining policy change in developing countries?

Given the differences in political organisation, culture and traditions between developing countries, it is hard to extrapolate the usefulness of the MSF for the different contexts of these countries. Nonetheless, the framework was found to be particularly useful in the analysis of “BR do Mar”, possibly because, like the United States, Brazil has a democratic society and a presidential system, where the president has a large capacity to act as an agenda-setter and different societal stakeholders are free to voice their opinions.

On his side, the president has institutional resources, including the prerogative to hire (and fire) appointees who are aligned with his agenda priorities and the veto. As noted earlier, the President of the Republic chose Ministers of Infrastructure and of the Economy with a more market-based approach and focused on promoting economic development via private investments and structural reforms.

²⁶ In Brazil, federal highways are numbered, always preceded by the letters BR. For instance, the largest highway in the country is BR-116, which crosses 10 different states over more than 4,000 kilometers (<https://summitmobilidade.estadao.com.br/ir-e-vir-no-mundo/qual-e-a-maior-rodovia-do-brasil>).

In contrast, unlike the essentially bipartisan system present in the US, in Brazil, several political parties have members in Congress (Chamber of Deputies and Senate). Hence, an additional source of political manoeuvre by the administration lies in its relationship with these parties, for instance, by appointing prominent members to relevant positions within the executive, thus securing support for its legislative agenda.

The fact that transportation was one of the two sectors analysed by Kingdon (2014) offered us many insights in applying MSF to Statute No. 14,301/2022. In our research, we also observed that, by being largely made of nonpartisan issues, freight transportation tends to attract the interest of business interest groups more. Nonetheless, the fact that lobbying activities are not regulated in Brazil presents a challenge in better understanding the role and mechanisms through which organised political forces operate in the country, beyond public campaigns. This is different from the United States, where lobbyists must be registered, and should file quarterly reports on their lobbying activities and semi-annual reports on political contributions, whereas noncompliance can lead to civil or criminal penalties (OECD, 2021).

On a methodological note, the present study successfully employed the MSF relying mostly on secondary data, newspaper articles, and conducting content analysis. In countries with independent mass media, such an approach, uncommon in the MSF literature, may also be employed in order to study public policy processes.

RQ3: Are there any climate-related opportunities that could be (or could have been) explored by the Ministry of Infrastructure (or other participants of public policy processes) to attract finance for navigation such as cabotage navigation?

The research findings suggest that a barrier to the attraction of international climate finance to navigation in Brazil relates to the region where there is potential for developing navigation. For interior navigation, the development potential is concentrated in the Amazon region, enabling commodities to be moved from the Central-West region to the ports in the North of the country. However, according to one interviewee, the Amazon region is a particularly sensitive topic for the international community, which is wary of investing financial resources in physical infrastructure and other preconditions for economic development in the region, due to reputational concerns.

On a different note, we found that the IMO's climate commitments to cut GHG emissions in half by 2050, and carbon intensity by 40% by 2030, have been a powerful driver in international shipping, starting with IMO's 2020 regulation to reduce sulphur limits in oil fuel. As of 2023, ships will also have to measure their energy efficiency levels and develop action plans for carbon intensity reduction.

The focus given by the interviewees to IMO's climate commitments may also point to the sectorally-driven discussions about transportation and climate change, which fail to take into account that emission reductions from shifting cargo from more polluting means of transportation (road) towards cabotage (Jonkeren et al., 2019) and, more broadly, from low-carbon supply chain management (Das & Jharkharia, 2018), may be larger than those stemming from more efficient ships or greater use of alternative fuels. Naturally, these alternatives are not mutually exclusive.

Furthermore, the inclusion of the oil and gas sector within Statute No. 14,301/2022 not only enhanced political opposition to the draft bill (from the domestic shipbuilding industry), but also diminished the environmental appeal of the proposal given its role in transporting fossil fuels. For instance, according to the Climate Bonds Standards, to be eligible to issue green bonds, one criterion is that infrastructure must not be dedicated to exploring or transporting fossil fuels.

Therein lies a potential lesson for policy entrepreneurs before advancing with any proposals within such a niche subject as the transportation sector. Climate change does not seem to be the main driver behind changes in policies affecting transportation and logistics in Brazil.²⁷ However, considering the prominent position of climate change in international discussions, policy entrepreneurs could benefit from applying a climate lens to all policies under development (including transport policies), to check whether there could be opportunities for anticipating the opposition of emissions-intensive sectors, building a coalition of organised interests with climate concerns and/or attracting international climate finance.

In this sense, large (often multinational) companies that provide transportation and logistics services, as well as consumer goods companies that have assumed voluntary GHG emissions reductions targets for their indirect emissions (Scope 3 emissions, in the GHG Protocol nomenclature), appear as relevant and growing drivers of climate concerns in the transport sector, notably because of their public climate commitments as well as participation in climate-related international discussions (FGVces, in press). The need to decarbonise their supply chains offers a potential pool of supporters for additional changes in the transport sector's regulatory landscape in Brazil.

In the Conclusion section, we reflect on the possible implications of this research for climate policy entrepreneurs.

RQ4: What is the probability of successful implementation of Statute No. 14,301/2022?

To assess the probability of implementation of Statute No. 14,301/2022, we employed the checklist suggested by Flores (2017), with a few amendments to suit a more general context (Table 16). According to the checklist item, there is a high probability that Statute No. 14,301 will be successfully implemented.

It is worth noting, however, that certain aspects of the law still need to be further regulated (Agência INFRA, 02/02/2022), a process which may be impacted by turnover of key personnel in the federal government and in particular in Antaq, especially due to electoral outcomes in the end of 2022.

²⁷ Similarly, other environmental concerns regarding the ocean and Brazil's coast did not feature in the discussions. For instance, possible relations between Statute No. 14,301/2022 and Brazil's National Policy for the Conservation and Use of the Brazilian Marine Biome (Statute No. 6.969/2013) were not explored.

Table 16 – Checklist to assess probability of successful implementation, based on the MSF

#	Item	Answer	Justification
WINDOW OF OPPORTUNITY			
1	The window opened in political stream (e.g. elections)	Correct	The window of opportunity also opened in the political stream with the appointment of Ministers Valter Casimiro and Tarcísio Gomes vowing to improve cabotage policies.
2	There was no reason for a sudden close of the window (ex. accident of political upheaval)	Correct	Not a sudden close, but the COVID-19 pandemic has slowed the legislative process by adding other priorities. There was also the expectation that the 2022 elections would close the window, since many politicians take leave from their positions and focus on their campaigns.
3	The government was fast in policy approval (no more than 1 year since policy first emerged)	Incorrect	The draft bill started to be conceived in 2019 and was only approved in 2021.
POLITICAL STREAM			
4	The government was predominantly in favour of free market/liberal ideas	Correct	The current administration, especially the Ministry of the Economy, has a more liberal approach, favouring structural reforms and less government intervention.
5	The main opposition party did not oppose policy	Correct	There was no major opposition from opposing parties – transportation is largely a nonpartisan issue.
NATIONAL MOOD AND INSTITUTIONAL BALANCE			
6	General public was mostly in favour or not opposed	Correct	Not opposed.
7	Interest groups were generally in favour or not opposed	Not possible to verify	It depends on the interest groups in question and the item addressed by the draft bill.
8	Interest groups did not organise major strikes or demonstrations	Correct	No major demonstrations took place.
9	Local/regional authorities were favourable or not opposed	Correct	Not opposed.
10	No major opposition in the press	Correct	Not opposed.
11	Opposition surged mainly from marginal actors (intellectuals, small pressure groups)	Correct	It surged from shipbuilding association Sinaval and Logística Brasil.
PROBLEM STREAM			
12	There was more than one problem attached to the policy	Correct	Problems included overreliance on road transport, high operational costs of cabotage navigation and market concentration.
13	There was an event calling attention to the problem	Correct	Truck driver strike in 2018
14	The problem was quantified and well defined	Correct	Overreliance on road transport, high operational costs of cabotage navigation and market concentration have indicators highlighting them as problems.
15	The problem affected several interest groups	Correct	They affected different stakeholders, both positively and negatively.
16	There was an urgent problem to be solved	Incorrect	It was not an urgent problem.

#	Item	Answer	Justification
POLICY STREAM			
17	A similar policy had never been tested inside the country	Correct	The cabotage policy has always presented restrictions to the chartering of foreign vessels.
18	Policy represented a minor change on previous regulatory framework	Correct	There was no major change in comparison to the previous framework.
19	Policy did not imply a major investment from the government / tax payer	Correct	There is no significant impact on the federal budget.
20	Legislative act was just the beginning, without major enactment consequences	Correct	The Statute still needs to be further regulated to have any effect.
21	Transport service providers are aware of their role	Correct	They were involved in the discussions throughout the process.
ENTREPRENEUR STREAM			
22	The entrepreneur was in a decision-making position	Correct	The entrepreneur was the Minister of Infrastructure.
23	The entrepreneur had direct access to decision makers (political connection)	Correct	The entrepreneur had good a relationship with both support and opposition parties.
24	There is evidence that the entrepreneur coupled the streams	Correct	The Minister sought to solve the overreliance on roads (problem stream) through proposing a more comprehensive solution (policy stream), and engaging and gathering the support of different actors from Congress and sector associations for the Draft Bill to be voted and approved (politics stream).
25	The entrepreneur showed persistency	Correct	The Minister and his team engaged with different stakeholders during the whole legislative process.
26	The entrepreneur is an expert in the field under discussion	Correct	The Minister is known for his technical know-how and for hiring technical experts for his team.
27	There was evidence that the entrepreneur was investing time and/or money in promoting the policy	Correct	The Minister engaged with different stakeholders during the whole legislative process.
28	There was evidence of the entrepreneur producing reports and studies supporting the policy	Correct	For example, according to the Ministry of Infrastructure, national cabotage operations are 70% more expensive than chartered foreign vessels. Also, only four vessels were built in the past ten years (not including the oil & gas sector).
29	Speech framing was produced based on entrepreneur's ideas and reports	Correct	For instance, the Minister affirmed that the draft bill would not affect the truck driver market as last-mile transportation would still be carried out on road.
30	Media attention to the policy was vast and set attention to the policy/problem	Incorrect	Newspapers Folha and Estado, which target a large audience, had less articles on "BR do Mar" than business-focused newspaper Valor Econômico, demonstrating that there was no vast media attention.
31	Policy was presented in "chunks" that would increase with time	Correct	For example, chartering foreign bareboats by companies that do not own a fleet will be permitted progressively after 4 years
	TOTAL		Correct - 27/31 (87%) Incorrect - 3/31 (10%) Not possible to verify - 1/31 (3%)

Although there is a high probability that Statute No. 14,301 will be successfully implemented, it does not necessarily mean that the goal of increasing cabotage transport will materialise. For example, the high fuel costs, the need to improve port infrastructure and bureaucracy were not issues tackled by the law. Also, there may be a need to diversify the range of products being shipped via boats, which may be limited to other constraints, for instance shortage of available containers (as experienced during the COVID-19 pandemic). On this point, only 16Mt of products were transported in containers via cabotage in 2022 (out of 197Mt of products which were moved by vessels between Brazilian ports) (ANTAQ, 2022a).

Moreover, cabotage usage may depend on longer term contracts so as to protect users from price volatility. In this sense, Brazil's poor record with legal and judicial security (as discussed in the Year 2 study) may hinder the adoption of cabotage transportation services in favour of more flexible, short-term dependence on road transportation.

Nonetheless, the Ministry of Infrastructure's (and the federal government's) persistency in approving "BR do Mar" may be interpreted as a sign that there are economic groups that may benefit from the proposed changes, increasing their supply of (and demand for) cabotage navigation transport.

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Chapter seven

Concluding remarks

7. Concluding remarks

This research found that Kingdon's Multiple Stream Framework was useful in analysing the legislative process in an emerging market with a democratic society and a presidential system. The framework helped to analyse the different streams at play before and during the legislative process, and to identify which factors from each of these streams contributed to the development of the draft bill and to its final approval.

Given the original conditions for cabotage transport policy in Brazil, closed regime and small participation in the transport matrix (mostly for the oil and gas sector), the proposed changes in Draft Bill 4,199/2020, subsequently Statute No. 14,301/2022, have mostly been targeted towards reducing barriers of entry into the sector.

Still, that a statute with such a narrow focus, on cabotage instead of navigation transport as a whole, for example, required the persistency of the Ministry of Infrastructure for a long period of time, may be a sign that similar changes in other realms of transport policy in a scenario of entrenched interests, such as those of truck drivers, will also demand great investments from any prospective policy entrepreneur.

We noted, in the draft bill, that the topic of climate change has not played a significant role in its legislative process, with only a few mentions in the newspapers, mostly in opinion pieces, of the role of cabotage in contributing to reducing GHG emissions in transportation. The climate policy community was not involved in discussions on the development of the draft bill, and the inclusion of the oil and gas sector not only enhanced political opposition to the draft bill (from the domestic shipbuilding industry), but also diminished the environmental appeal of the proposal given its role in transporting fossil fuels. Therefore we reflect on some of the implications from this research to actors involved in public policy processes and interested in advancing the low-carbon transition:

- **Problem stream:** It is difficult to predict when a window of opportunity will open in the problem stream, requiring that policy entrepreneurs be attentive when these moments occur to couple the streams. On this point, the frequent and appropriate monitoring of indicators is necessary to understand the need to develop new policies for low-carbon sectors in the country.
- **Policy stream:** Although it is not always possible to foresee when a window of opportunity will open, those that are willing to improve the country's policy and regulatory framework (e.g. career civil servants, academics) could initiate the development of policy proposals in conjunction with interested parties, so that a solution may be ready and available once a window of opportunity opens – for example, when there is a more favourable political atmosphere or when a problem that this proposal could help to solve rises on the agenda (through a significant event or crisis).
 - For example, international cooperation agencies have an opportunity to contribute to low-carbon policy development in emerging markets (see (FGVces et al., 2021) for selected examples), helping to build ready-made policy solutions that will be available once a window of opportunity opens.

- **Political stream:** Certain political events, in particular presidential and legislative elections (which coincide in Brazil) are fairly easy to predict, however, turnover of key personnel within government during an administration may also happen and, consequently, open a window of opportunity for policy change. Questions of jurisdictions are likely to be a feature of any discussions related to climate change, for instance, given the responsibilities of the Ministry of the Environment within this topic, but also other ministries (such as the Ministry of the Economy) and regulatory agencies.
 - It is vital that climate policy entrepreneurs be attentive to the political movements in relevant ministries, ministry departments and agencies, engaging with them and mapping their interests and openness for receiving low-carbon policy briefs and policy recommendations, especially during favorable moments such as those prior to international climate-related events (e.g. Conference of the Parties – COP) as entry points to discuss low-carbon policies.

- **Policy entrepreneur:** for discussions in fragmented and niche sectors such as transport, a prospective policy entrepreneur has to display great persistency and will to invest time and resources, but could also benefit from building a larger coalition, gathering support from a wider range of actors. This could include involving actors and companies concerned and publicly committed to addressing climate change and that would directly benefit from the implementation of policy proposals, e.g. through reaching their voluntary climate change targets. Similarly, an entrepreneur could:
 - Attach a given policy proposal to additional problems such as rising GHG emissions, thus contributing to giving prominence to these proposals and gathering further societal support (coupling the streams).
 - Apply a climate lens to all public policies under development to help anticipate the opposition of emissions-intensive sectors, build a wider coalition through attracting interest groups with climate concerns and/or identify opportunities for attracting international climate finance for policy implementation. Indeed, there may also be opportunities to influence government officials and Congress members and introduce climate-related topics in ongoing, sectorally-driven, policy processes.
 - Attach policy proposals to environmental or social problems could also help attract public attention to activities and sectors that are relatively insulated from emotional content as it is the case of transport.

With regard to future studies, it would be interesting to analyse other case studies of low-carbon sectorally-driven policies in which the climate component has been effectively incorporated, examining whether the strategies proposed above were employed.

It would also be interesting to analyse the role of rhetoric in public policy processes and to what extent it can contribute to give prominence, in the media and among stakeholders, to policies under development.

Another future study could analyse the social impacts of low-carbon policies on actors, such as truck drivers, that rely on carbon-intensive sectors. In Brazil, there are nearly 866,000 independent truck drivers (ANTT, 2022) who will likely be affected by changes in the cargo transport matrix. Research could help identify what measures should be adopted to promote a just transition in freight transportation.

Finally, it would be interesting to further investigate to what extent discussions surrounding oceans and the blue economy could contribute to climate change mitigation and adaptation, especially considering the country's extensive coastline. For instance, Presidential Decree 11,075/2022, which institutes the National System for GHG Emissions Reduction as a single national registry for carbon credits trading, explicitly mentions blue carbon credits (Brazil, 2022).

Academic evidence shows that coastal and marine ecosystems, such as mangroves, protect inland communities against sea-level rise and natural hazards (ICMBio, 2018; Tiengo, 2017), provide habitats and nurseries for different fish species (UNEP FI, 2020) and are significant carbon sinks, storing over twice more carbon than upland evergreen forests and almost 10-fold more than tropical dry forests (Kaufmann, Kraay, & Mastruzzi, 2010). On the financial sector side, there is a nascent blue bond market, providing finance for the conservation of marine ecosystems and the promotion of sustainable marine activities (Roth, Thiele, & Unger, 2019), as illustrated by the examples of Seychelles and the Nordic Investment Bank. In conclusion, there is potential to bring ocean conservation discussions as part of solutions to combat climate change mitigation and promote more climate resilience.



Chapter eight

References

8. References

- Agência Senado. (2022, March 17). Congresso derruba nove itens do veto ao programa BR do Mar. Retrieved from <https://www12.senado.leg.br/noticias/materias/2022/03/17/congresso-derruba-nove-itens-do-veto-ao-programa-br-do-mar>
- Agencialnfra.com. (n.d.). Agência iNFRA.
- Almeida, L. de A., & Gomes, R. C. (2018). Processo das políticas públicas: revisão de literatura, reflexões teóricas e apontamentos para futuras pesquisas. *Cadernos EBAPE.BR*, 16(3), 444–455. <https://doi.org/10.1590/1679-395164108>
- ANTAQ. (2022a). Estatístico aquaviário. Retrieved May 17, 2022, from <http://anuario.antaq.gov.br/QvAJAXZfc/ependoc.htm?document=painel%5Cantag-anuario-2014-v0.9.3.qvw&lang=pt-BR&host=QVS%40graneleiro&anonymous=true>
- ANTAQ. (2022b). Navegação Marítima - Frota Geral - Analítica. Retrieved May 17, 2022, from <http://web.antaq.gov.br/Portal/Frota/ConsultarFrotaGeral.aspx>
- ANTT. (2022). RTNRC em números. Retrieved May 18, 2022, from <https://app.powerbi.com/view?r=eyJrJjoiOTczNzdmYzktNzU3NS00NGJkLTk0ZjktNDY2MDVkJzQzZmU3liwidCI6Ijg3YmJiOWRlRlWE40TlRlNGNkZS1hNDY2LTg4Zjk4MmZiYzQ5MCMJ9>
- Barbosa, L. P. (2018). Sustentabilidade e competitividade na cadeia logística: redução de emissões de gases de efeito estufa com o uso do modal de transporte cabotagem. Fundação Getulio Vargas.
- Bitencourt, R. (2022, February 22). Governo já recebeu 80 pedidos para construção de novas ferrovias, diz ministro. *Valor Econômico*. Brasil. Lei no 9.432, de 8 de janeiro de 1997. , (1997).
- Brasil. (2005). Decreto No 5.543, de 20 de setembro de 2005. Brasília, DF: Presidência da República.
- Brazil. (2022). Decreto No 11.075, de 19 de Maio de 2022. Brasília, DF: Diário Oficial da União.
- Brembatti, K. (2021, October 16). Patronização de taxas portuárias preocupa operadores e vai parar na Justiça. Retrieved from <https://www.agenciainfra.com/blog/padronizacao-de-taxas-portuarias-preocupa-operadores-e-vai-parar-na-justica/>
- Brooks, M. R. (2015). Shipping Regulation, Trade Realities and Social License: Will Short Sea Shipping Ever Be More Than Just a Niche Service? (p. 6). p. 6. Montreal, Quebec: Canadian Transportation Research Forum 50th Annual Conference—Another 50 Years: Where to From Here?
- Brooks, M. R., Hodgson, J. R., & Frost, J. D. (2006). Short Sea Shipping on the East Coast of North America: An analysis of opportunities and issues. Halifax.
- Cairney, P., & Jones, M. D. (2016). Kingdon's Multiple Streams Approach: What Is the Empirical Impact of this Universal Theory? *Policy Studies Journal*, 44(1), 37–58. <https://doi.org/10.1111/psj.12111>
- Capella, A. C. N. (2006). Perspectivas Teóricas sobre o Processo de Formulação de Políticas. *Revista Brasileira de Informações Bibliográficas Em Ciências Sociais*, 87–124.
- Carvalho, F., Müller-Casseres, E., Poggio, M., Nogueira, T., Fonte, C., Wei, H. K., ... Schaeffer, R. (2021). Prospects for carbon-neutral maritime fuels production in Brazil. *Journal of Cleaner Production*, 326, 129385. <https://doi.org/10.1016/j.jclepro.2021.129385>
- Cattaneo, K. H. (2018). Applying Policy Theories to Charter School Legislation in New York: Rational Actor Model, Stage Heuristics, and Multiple Streams. *Educational Policy Analysis and Strategic Research*, 13(2), 6–24. <https://doi.org/10.29329/epasr.2018.143.1>
- Cavalheiro, P. (2018). Transporte por cabotagem: Análise comparativa entre os modelos brasileiro e europeu. Universidade de Caxias do Sul.
- CNT. (2019a). Perfil dos Caminhoneiros: idade média da frota de caminhões passa dos 15 anos. Retrieved June 27, 2022, from <https://www.cnt.org.br/agencia-cnt/idade-media-frota-caminhoes-passa-15-anos-cnt-perfil-caminhoneiros>
- CNT. (2019b). Pesquisa CNT Perfil dos Caminhoneiros 2019. Retrieved from <https://www.cnt.org.br/perfil-dos-caminhoneiros>
- dados.gov.br. (2021a). Arrecadação do AFRMM - até 2020.
- dados.gov.br. (2021b). Liberações do FMM até 2021.
- dados.gov.br. (2022a). Arrecadação do AFRMM Adicional do Frete para Renovação da Marinha Mercante. Retrieved May 17, 2022, from <https://dados.gov.br/dataset/arrecadacao-do-afrmm-adicional-do-frete-para-renovacao-da-marinha-mercante>
- dados.gov.br. (2022b). Liberações do FMM (Fundo da Marinha Mercante).
- Das, C., & Jharkharia, S. (2018). Low carbon supply chain: a state-of-the-art literature review. *Journal of Manufacturing Technology Management*, 29(2), 398–428. <https://doi.org/10.1108/JMTM-09-2017-0188>
- do Sol Osório, G. I. (2020). Quadro analítico para abordagem retórica em políticas públicas: caso das políticas climáticas. Escola de Administração de Empresas de São Paulo. Fundação Getulio Vargas.
- Eccles, A. (2021). Remote care technologies, older people and the social care crisis in the United Kingdom: a Multiple Streams Approach to understanding the 'silver bullet' of telecare policy. *Ageing and Society*, 41(8), 1726–1747. <https://doi.org/10.1017/S0144686X19001776>
- Farah, M. F. S. (2018). Abordagens teóricas no campo de política pública no Brasil e no exterior: do fato à complexidade. *Rev. Serv. Público*, December, 53–84.
- Fazcomex. (2022). Zona Franca de Manaus: O que é. Retrieved May 18, 2022, from <https://www.fazcomex.com.br/blog/zona-franca-de-manaus-o-que-e/>

- FazComex. (2022). AFRMM – Adicional ao Frete para Renovação da Marinha Mercante.
- FGVces. (n.d.). Net Zero Political Economy Briefs: Brazil case-study. São Paulo, SP.
- FGVces, NewClimate Institute, ITB, TERI, University of Cape Town, & Vivid Economics. (2021). International Climate Finance and support to national climate policy processes in emerging markets. Retrieved from https://www.diw.de/documents/dokumentenarchiv/17/diw_01.c.821395.de/snapfi_intl_climate_finance_2021.594220.pdf
- Flores, I. (2017a). Proposing a methodology for the operationalisation of Multiple Streams Approach, using the Inner-City Technology Colleges as an empirical example. <https://doi.org/10.31219/osf.io/ua79y>
- Flores, I. (2017b). Proposing a methodology for the operationalisation of Multiple Streams Approach, using the Inner-City Technology Colleges as an empirical example. OSF Preprints.
- Goncalves, L., & De Santo, E. M. (2021). Unpacking the process: how agenda-setting theory explains the case of creating large scale marine protected areas in Brazil. *Environmental Politics*, 1-20. <https://doi.org/10.1080/09644016.2021.1915037>
- Government of Brazil. (2020). Brazil's Nationally Determined Contribution (NDC). Retrieved from [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil First/Brazil First NDC \(Updated submission\).pdf](https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Brazil%20First/Brazil%20First%20NDC%20(Updated%20submission).pdf)
- Grabow, C., Manak, I., & Ikenson, D. J. (2018). The Jones Act: A Burden America Can No Longer Bear. *Cato Institute Policy Analysis*, 845.
- Grennes, T. J. (2017). An Economic Analysis of the Jones Act.
- Hernandez, A. L. G., & Bolwig, S. (2021). Understanding climate policy integration in the global South through the multiple streams framework. *Climate and Development*, 13(1), 68-80. <https://doi.org/10.1080/17565529.2020.1723471>
- Heywood, A. (2007). *Politics*. New York: Palgrave Macmillan.
- ICMBio. (2018). *Atlas dos Manguezais do Brasil*. Brasília.
- IMO. (2021a). Further shipping GHG emission reduction measures adopted. Retrieved June 29, 2022, from <https://www.imo.org/en/MediaCentre/PressBriefings/pages/MEPC76.aspx>
- IMO. (2021b). IMO's work to cut GHG emissions from ships. Retrieved June 29, 2022, from <https://www.imo.org/en/MediaCentre/HotTopics/Pages/Cutting-GHG-emissions.aspx>
- Jann, W., & Wegrich, K. (2007). Theories of the Policy Cycle. In G. J. Miller & M. S. Sidney (Eds.), *Handbook of public policy analysis: theory, politics, and methods* (pp. 43-62). Boca Raton, FL: CRC Press.
- Jones, M. D., Peterson, H. L., Pierce, J. J., Herweg, N., Bernal, A., Lamberta Raney, H., & Zahariadis, N. (2016). A River Runs Through It: A Multiple Streams Meta-Review. *Policy Studies Journal*, 44(1), 13-36. <https://doi.org/10.1111/psj.12115>
- Jonkeren, O., Francke, J., & Visser, J. (2019). A shift-share based tool for assessing the contribution of a modal shift to the decarbonisation of inland freight transport. *European Transport Research Review*, 11(1), 8. <https://doi.org/10.1186/s12544-019-0344-x>
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). *The Worldwide Governance Indicators: Methodology and Analytical Issues*.
- Kingdon, J. W. (2014). *Agendas, Alternatives, and Public Policies* (2nd ed.). Harlow: Pearson.
- Llamosas, C., Upham, P., & Blanco, G. (2018). Multiple streams, resistance and energy policy change in Paraguay (2004-2014). *Energy Research & Social Science*, 42, 226-236. <https://doi.org/10.1016/j.erss.2018.03.011>
- Martins, A. S. (2019). *Cabotagem brasileira: mapeamento da origem e destino das cargas – diagnóstico e perspectivas de crescimento*.
- McCombs, M. (2002). The agenda-setting role of the mass media in the shaping of public opinion. *Mass Media Economics 2002 Conference*. London: London School of Economics.
- Md Arof, A. (2015). Determinants for a feasible short sea shipping: Lessons from europe for ASEAN. *Asian Social Science*, 11(15), 229-238. <https://doi.org/10.5539/ass.v11n15p229>
- Ministério da Infraestrutura. (2020). Financiamentos com recursos do FMM. Retrieved September 14, 2021, from <https://www.gov.br/infraestrutura/pt-br/assuntos/incentivos/incentivos-fiscais/financiamentos-com-recursos-do-fmm>
- Ministério da Infraestrutura. (2021). BR do Mar. Retrieved September 14, 2021, from <https://www.gov.br/infraestrutura/pt-br/brdomar>
- Ministério do Meio Ambiente. (2021). Diretrizes para uma Estratégia Nacional para Neutralidade Climática. Retrieved from <https://www.gov.br/mma/pt-br/diretrizes-para-uma-estrategia-nacional-para-neutralidade-climatica.pdf/>
- Ministério dos Transportes. (2018). Política Nacional de Transportes - Caderno das Estratégias Governamentais. Retrieved from http://portaldaestrategia.infraestrutura.gov.br/images/PNT/caderno_das_estrategias_governamentais_versao_2018.pdf
- Mordoj, B., Agostini, C. A., & Briones, I. (2018). Reserva de Cabotaje Marítimo y Libre Competencia: El Caso Chileno (Maritime Cabotage Restriction and Competition: The Chilean Case). *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3234367>
- Nam, A., Weible, C. M., & Park, K. (2022). Polarization and frames of advocacy coalitions in South Korea's nuclear energy policy. *Review of Policy Research*. <https://doi.org/10.1111/ropr.12466>
- Nelldal, B.-L., & Andersson, E. (2012). Mode Shift as a Measure to Reduce Greenhouse Gas Emissions. *Procedia - Social and Behavioral Sciences*, 48, 3187-3197. <https://doi.org/10.1016/j.sbspro.2012.06.1285>
- Nong, D., Countryman, A. M., Warziniack, T., & Grey, E. K. (2018). Arctic Sea Routes: Potential New Pathways for Nonindigenous Species Spread + Supplementary Appendix 1 (See Article Tools). *ARCTIC*, 71(3). <https://doi.org/10.14430/arctic4732>
- OECD. (2021). Lobbying in the 21st Century: Transparency, Integrity and Access. Retrieved from <https://www.oecd.org/corruption-integrity/reports/lobbying-in-the-21st-century-c6d8eff8-en.html>

- Paixão Casaca, A. C., & Lyridis, D. V. (2018). Protectionist vs liberalised maritime cabotage policies: a review. *Maritime Business Review*, 3(3), 210–242. <https://doi.org/10.1108/MABR-03-2018-0011>
- Pettersen, S. S., Garcia Agis, J. J., Rehn, C. F., Asbjørnslett, B. E., Brett, P. O., & Erikstad, S. O. (2020). Latent capabilities in support of maritime emergency response. *Maritime Policy & Management*, 47(4), 479–499. <https://doi.org/10.1080/03088839.2019.1710611>
- poder360. (2021). Grandes jornais registram queda de 12,2% na circulação impressa no 1o semestre. Retrieved February 26, 2022, from <https://www.poder360.com.br/brasil/grandes-jornais-registram-queda-de-122-na-circulacao-impressa-no-1o-semester/>
- Rawat, P., & Morris, J. C. (2016). Kingdon's "Streams" Model at Thirty: Still Relevant in the 21st Century? *Politics & Policy*, 44(4), 608–638. <https://doi.org/10.1111/polp.12168>
- Roth, N., Thiele, T., & Unger, M. von. (2019). Blue Bonds: Financing Resilience of Coastal Ecosystems. Retrieved from https://www.4climate.com/dev/wp-content/uploads/2019/04/Blue-Bonds_final.pdf
- Scheufele, D. A., & Tewksbury, D. (2007). Framing, agenda setting, and priming: The evolution of three media effects models. *Journal of Communication*, 57(1), 9–20. https://doi.org/10.1111/j.1460-2466.2006.00326_5.x
- SEEG. (2021). Análise das emissões brasileiras de gases de efeito estufa e suas implicações para as metas climáticas do Brasil: 1970-2020. São Paulo, SP.
- Soares, J. A. B. (2019). Cabotagem como complemento na matriz de transportes: uma análise dos desafios para seu crescimento no sistema de transportes brasileiro no século 21. Instituto Universitário de Lisboa.
- TCU. (2019). Obstáculos ao desenvolvimento da cabotagem: Auditoria Operacional.
- Teixeira, C. A. N., Rocio, M. A. R., Mendes, A. P. do A., & D'Oliveira, L. A. S. (2018). Nevegação de cabotagem brasileira (No. 47).
- Thomas, E. (2021). Cabotagem de contêineres: Análise da Estrutura de Mercado no Brasil. *International Law and Business Review*, 1(1), 207–231.
- Tiengo, R. de P. (2017). Manguezais sob uma perspectiva social e econômica: percepção ambiental dos serviços ecossistêmicos presentes na Olha das Caieiras, Vitória, ES. Universidade Federal do Espírito Santo.
- UN Affairs. (2021). Brazilian President commits country to climate neutrality by 2050. Retrieved September 21, 2021, from <https://news.un.org/en/story/2021/09/1100472>
- UNEP FI. (2020). Turning the Tide: How to finance a sustainable ocean recovery—A practical guide for financial institutions. Geneva.
- Vinhal, G. (2022, March 17). Congresso derruba trechos de veto ao projeto da "BR do Mar." CNN. Retrieved from <https://www.cnnbrasil.com.br/business/congresso-derruba-trechos-de-veto-ao-projeto-da-br-do-mar/>
- Watanabe, P. (2021, November 10). Brasil não cita nova meta climática para 2030 em carta para a ONU. Folha de São Paulo. Retrieved from <https://www1.folha.uol.com.br/ambiente/2021/11/brasil-nao-cita-nova-meta-climatica-para-2030-em-carta-para-a-onu.shtml>
- World Ocean Review. (2022). Key shipping terms in brief. Retrieved from <https://worldoceanreview.com/en/wor-1/transport/global-shipping/key-shipping-terms-in-brief/>
- Yamahaki, C., & Breviglieri, G. V. (2022). Atração de investimentos privados para infraestrutura no Brasil. *Revista de Administração Pública*, 56(3), 413–425. <https://doi.org/http://dx.doi.org/10.1590/0034-761220210403>
- Zahariadis, N., & Exadaktylos, T. (2016). Policies that Succeed and Programs that Fail: Ambiguity, Conflict, and Crisis in Greek Higher Education. *Policy Studies Journal*, 44(1), 59–82. <https://doi.org/10.1111/psj.12129>

Chapter nine

Appendix 1

Exploration of Kingdon's
Multiple Streams
Framework (MSF)

9. Appendix 1 – Exploration of Kingdon’s Multiple Streams Framework (MSF)

Processes (within the three streams) ²⁸

Problem stream

Problems are distinct from issues as they refer to situations in which policymakers believe they must act on and do something in order to address (Capella, 2006). Although the definition of what constitutes a problem is in itself a cause of political conflict (Farah, 2018), problems usually capture the attention of different participants in the public policy process via three avenues:

- i) indicators;
- ii) focusing events, crises, and symbols; and
- iii) feedback (from existing programs).

Given that several problems are simultaneously “battling” for attention, problems may fade if governmental officials perceive that they have been addressed or solved because they stop growing, because people become accustomed to the current state of affairs or the attention simply drifts elsewhere (Jones et al., 2016).

Indicators

It is common for an indicator to make apparent that there is a problem worthy of attention. For example, “highway deaths, disease rates, immunisation rates, consumer prices, commuter and intercity ridership, costs of entitlement programs, infant mortality rates” (Kingdon, 2014) and other indicators are either routinely monitored by the government as well as nongovernmental organisations or are the focus of special studies, surveys and reports.

These indicators are used by policymakers (and actors around them) not to ascertain whether a problem exists, but to gauge its magnitude as well as recent changes related to it. Indeed, “steady state is viewed as less problematic than changing figures” (Kingdon, 2014, p. 91) and changing figures are often perceived as being symbolic of larger trends or events and tend to have great (even exaggerated) impact on the governmental agenda. However, indicators must be interpreted by individuals, and certain aspects and topics are more easily quantifiable than others.

As an example of how indicators can be relevant within public policy process, Goncalves & De Santo (2021) explore how Brazil’s distance from an internationally agreed target, concerning the designation of marine protected areas, contributed to the rise of this topic on the decision agenda, since in 2018 the country had only 1.5% of its maritime territory under protection (far from the 10% Aichi Biodiversity Targets).

²⁸ Except when otherwise indicated, the contents in this topic are derived from Kingdon (2014).

In Mozambique, “environmental and climate change issues rose on the political agenda” due to the appearance of evidence of their impact on (economic) development as well as the publication of a study on disaster risk in the country (Hernandez & Bolwig, 2021, p. 76). Similarly, the systematic collection of indicators regarding the use of solid biomass for cooking played a role in enhancing the problematic character of the energy mix in Paraguay (Llamosas, Upham, & Blanco, 2018).

Focusing events, crises and symbols

Another motivation for a problem to be noticed is the occurrence of a focusing event, such as a crisis or disaster. For example, “airplane crashes stimulate concern about air safety” and “bridge collapses focus attention on highway infrastructure deterioration” (Kingdon, 2014, p. 95). Occasionally, more than one crisis may be necessary to raise public awareness towards a given problem if a first occurrence is interpreted as an isolated incidence.

These crises and disasters are of particular importance in the field of transportation since: i) the domain is less visible²⁹ and, therefore, problems may require an additional “push” to become evident; ii) crises in this field tend to have aggregated effects and impact several people simultaneously. In addition, the personal experiences of policymakers may also prompt an item on the agenda, although more likely providing reinforcements and marginally heightening factors that have already received some consideration. Similarly, a powerful symbol, such as a specific technology or a vivid example of an idea,³⁰ can capture the essence of an issue that was previously dispersed.

For example, the topic of social care for older people in the UK was perceived as a crisis in terms of quality and funding, and recognised as such in the initial public address of Prime Minister Boris Johnson in July of 2019, whilst the Economic Affairs Committee of the UK Parliament had released a report framing the issue as a “scandal”. The appearance of this compelling problem contributed to opening a window of opportunity for the advancement of remote care (telecare) technologies (Eccles, 2021).

In a similar fashion, the economic downturn in Greece (with GDP shrinking 25% between 2008 and 2011) and the subsequent cuts in higher education funding, characterised a scenario of crisis in the country (Zahariadis & Exadaktylos, 2016).

Feedback (from existing programs)

The feedback about the operation of existing programs may bring the attention of government officials to certain problems, such as “programs that are not working as planned, implementation that does not square with their interpretation of the legislative mandate, new problems that have arisen as a result of a program’s enactment, or unanticipated consequences that must be remedied” (Kingdon, 2014, p. 100). This feedback may be institutionalised, for instance, as planned periodic reviews, or informally, as citizen complaints or the experiences of bureaucrats administering the program.

²⁹ For instance, in comparison to public health.

³⁰ Kingdon (2014) mentions how the Washington METRO became a symbol for high-cost fixed rail transit systems.

Policy stream

In the policy stream, the MSF proposes that alternatives and proposals be generated in “policy communities”, composed of specialists in a given field or policy domain.³¹ These specialists include academics, consultants, analysts for interest groups and members of Congressional committees, and the community behaves and interacts to its own accord, as if insulated from or independent of relevant political events.

A wide range of ideas circulate within these policy communities, for example with the introduction of a bill, the draft of a proposal or even a speech given. Ideas that meet certain criteria (see below) may survive and be taken more seriously than others. This process resembles an evolutionary one, and the mutation and recombination of confronting ideas allows for the refinement of proposals until (a degree of) consensus is reached in the community and the proposals become ready for a decision.

On this point, the MSF considers that ideas become prominent not only through the use of lobbying and the mobilisation of large numbers of individuals, but also via processes of argumentation and persuasion as government officials face different proposals.

Criteria for the survival of an alternative

The MSF considers three main criteria necessary for an alternative to survive: i) technical feasibility; ii) value acceptability (within the policy community); and iii) anticipation of future constraints (in the larger policy arena). Any proposal that does not satisfy these criteria may need to be transformed or combined with another in order to be floated again.

- **Technical feasibility:** entails the elimination of inconsistencies, delineation of the mechanisms for practical implementation, as well as the assessment of a proposal’s feasibility of implementation. Takes place within the policy community.
- **Value acceptability:** involves the compatibility of the proposal with the values of the (majority of) specialists, such as their views on the proper size of the public sector or their concerns with equity or efficiency. Takes place within the policy community; and
- **Anticipation of future constraints:** entails considerations about how the proposal will be met in the larger policy arena. For instance, the proposal needs to fit within the (federal) budget, be acceptable to the public (either general or more specialised), and be supported (or not opposed) by elected officials.

For example, the creation of two large-scale marine protected areas (LSMPAs) in Brazil was seen as a low-cost, low-conflict alternative to help Brazil improve protection of its biodiversity and achieve its international targets (Goncalves & De Santo, 2021). In Greece, education reform was inspired by advice from the Organisation for Economic Co-operation and Development (OECD), although, once approved, it was met by strong resistance by university unions, rectors and youth organisations of political parties for changing the status quo (Zahariadis & Exadaktylos, 2016).

On the other hand, the repeated attempts to create a dedicated Ministry of Energy in Paraguay failed, despite general agreement on the merits of the proposal by most policy experts, as the solution was seen as an increase in the administrative burden of the State and, therefore, poorly aligned with the prevailing political discourse during the period between 2004 and 2014 (Llamosas et al., 2018).

³¹ In transportation, Kingdon (2014) notes that there is a high degree of fragmentation, since specialists tend to focus on a single mode of transportation, and consequently an increased likelihood of abrupt shifts in the agenda.

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On the other hand, the repeated attempts to create a dedicated Ministry of Energy in Paraguay failed, despite general agreement on the merits of the proposal by most policy experts, as the solution was seen as an increase in the administrative burden of the State and, therefore, poorly aligned with the prevailing political discourse during the period between 2004 and 2014 (Llamosas et al., 2018).

Political stream

In the political stream, people within and close to the government pay attention and perceive shifts in factors such as the national mood and the balance of forces between organised interest groups and their capacity to mobilise the electorate. In addition, turnover of personnel within the different branches of government, as well as changes in jurisdictional boundaries (for instance, due to modifications in the attributions of regulatory agencies), may propel (or remove) certain issues on the agenda.

On this point, the political stream involves factors that are electoral, partisan or related to pressure from organised groups. Here, consensus is achieved via bargaining efforts, such as the formation of coalitions or concessions made in return for support. Moreover, when there is any movement in the

³² Jones et al. (2016) suggest that the existence of a policy network (or community) and how it shapes the dissemination of an alternative (along dimensions of size, mode, capacity and access – simply referred as network integration) are in themselves criteria that affect the likelihood of a proposal to survive or become extinct.

political arena, participants join in on the discussions to protect their interests. As a result, events within the political stream have a powerful effect on the governmental and decision agendas.

An important factor within the political stream is the “national mood”, reflected in changes in public opinion or wide-ranging social movements, that is perceived by individuals inside and around the government. For instance, a general climate of antagonism (support) towards government intervention may offer fertile ground for deregulation (increased spending or nationalisation) proposals. Shifts in the national mood may not be widespread, but rather emerge as a consequence of organised social movements or debates within activist circles and political elites. However, some shifts can have larger impacts, even impacting election results.

Secondly, organised political forces are also noticed by political leaders and, if they overwhelmingly point in the same direction, they may provide an impetus for the government to act accordingly. Here, communication flows are particularly relevant, given that people inside and around government may assume that the more vocal side in a dispute may have a greater degree of support. Similarly, the balance of political resources, and the capacity of a group to affect the economy or electoral results also affect how politicians perceive the strength of these organised forces. As a consequence, advocating for a proposal opposed by organised political forces is deemed as costly and less likely to happen.

Finally, the events within government itself are also a major factor within the political stream. For instance, the turnover of key personnel, as brought by a change of administration, may bring new priorities to the agenda as well as prevent certain items from being considered. Matters of jurisdiction, with different agencies (ministries or departments) fighting for greater control of budget and other resources, may deter governmental action in some front and lead to stalemates. On other occasions, such battles may provide impetus for an item as an agency seeks to act before its competitor, particularly if the topic is regarded as popular.

On this point, the change of administration in Brazil in 2018 welcomed a new Minister of the Environment to office and, consequently, a new Biodiversity Secretary who had a ‘life-driven motivation’ for protected areas and was a key figure in the designation of two large-scale marine protected areas (LSMPAs), for instance, by ensuring the support of the Brazilian Navy. Interestingly, the environmental concerns of the new president’s daughter also played a role during the bargaining and negotiation process (Goncalves & De Santo, 2021).

On the other hand, the behaviour of organised political forces in Paraguay, in particular, labour unions in the electricity sector and their reluctance to support changes that could lead to fewer funds allocated to the industries they serve, was a contributing factor in preventing energy policy reforms in the country (Llamosas et al., 2018).

Windows of opportunity

A key feature of the MSF is the understanding that policy change is more likely to take place when the three separate streams come together. In those instances, there is a clear and recognisable problem, an available solution and a favourable political atmosphere. Therefore, there is an opportunity, within the decision agenda, to move proposals to the point of an imminent decision or legislative enactment.

These windows of opportunity can be opened both predictably, for example, during the programmed renewal of an existing program or due to expected changes in the administration, or unpredictably, with a new problem commanding the attention of people inside and around government. The existence of a window, however, is also a matter of perception, with participants in the public policy process sensing that it is the right moment for action.

Moreover, the opening of a window may establish the priority with which several items may be considered on the decision agenda. Given that there are limits to the number of different proposals that may actually be enacted by an administration (or Congress) at any given time, participants may seize a window of opportunity to push their proposals ahead of the “queue” if they perceive that there is a higher probability of those measures passing and being ratified.

On this point, if a window is opened by the appearance of a compelling problem (“problem window”), policymakers may look to the policy stream to find a solution. If a window is opened by a change in administration or other political event (“political window”), politicians may start looking for proposals that help their electoral objectives, even if there are no new problems per se (Table 17).

Table 17 – Types of policy windows and potential openers

Stream	Window type	Definition	Potential openers
Problems	Random	Random events or crises open unpredictable windows	Focusing events Indicators Policy feedback
	Spill over	Related issues are drawn into an already open window	High-profile issues, to which own problems can be attached
Political	Routine	Institutionalised procedural events dictate predictable window openings	Institutional procedures Political-administrative turnovers
	Discretionary	The behaviour of individual political actors leads to less predictable window openings	Discrete steps of influential policy-makers Political campaigns

Source: Hernandez & Bolwig (2021)

Windows, however, do not stay open long and may close for several reasons:

- Participants may feel the problem has been solved;
- Participants may turn their action to other topics;
- The events that were responsible for opening the window may pass;
- If the window was opened by a change in key personnel, these positions may change again; and
- There may be no available alternative.

In summary, for an item to be placed high on the agenda it is necessary for several factors to come together. Put differently, an item is much more likely to rise on the decision agenda if the three streams are joined; but the odds of it becoming prominent in the absence of a clear and compelling problem, a viable solution, or political support are slim. Here, the action of policy entrepreneurs is particularly important as they seek to couple the different streams, attaching solutions to problems, linking specific proposals to a favourable political momentum and connecting problems to political events.

For instance, although proposals for the designation of new marine protected areas dated several years prior to 2018 (policy stream), it was only with Brazil's difficulty in achieving internationally agreed targets on biodiversity (problem stream), and a new administration coming into office with new personnel in relevant positions (politics stream), that the LSMPAs around the Archipelagos of Trindade & Martim Vaz, and São Pedro & São Paulo were created (Goncalves & De Santo, 2021).

Policy entrepreneur

Policy entrepreneurs are advocates, inside or outside of government, who support a proposal or an idea and, like business entrepreneurs, are willing to "invest their resources – time, energy, reputation, and sometimes money – in the hope of a future return" (Kingdon, 2014), such as the enactment of a policy they favour or a career promotion. More than trying to solve a problem, entrepreneurs seek to attach their preferred alternative to an existing problem.

Given their commitment to their preferred proposals and "pet" ideas, entrepreneurs start discussions and present these in several forums, trying to "soften up" policy communities and the general public, making them more accustomed to new ideas and diminishing resistance to any given change. This preliminary work makes it easier for entrepreneurs to push their proposals and couple the streams when opportunities arise.

Policy entrepreneurs tend to be successful when they possess the following characteristics:

- They have some claim to a hearing, for instance due to their expertise, their ability to speak on behalf of others, or because they hold an authoritative decision-making position;
- They are known for their political connections or negotiating skills; and
- They are persistent.

In the case of Brazil's creation of LSMPAs, the newly appointed Biodiversity Secretary acted as entrepreneur, having access to high-level policymakers and wanting to leave a legacy, whilst being historically and intensely committed to the idea of creating protected areas (Goncalves & De Santo, 2021).

Another example of a government official acting as policy entrepreneur can be seen in the enactment of Charter Schools Legislations in the State of New York in 1998, in which Governor George Pataki framed his favoured policy alternative (charter schools) as an act of "class empowerment", coupling it with a broader problem (class inequality) and gathering support from ethnic communities and organisations, which would otherwise oppose market-based solutions (Cattaneo, 2018).

The absence of a persistent policy entrepreneur in Indonesia, however, was identified by Hernandez & Bolwig (2021) as an explanation for the opening of a policy window to be left unexplored in the context of climate policy integration. Such an absence also hindered energy policy reform in Paraguay despite policy windows occasionally being opened (Llamosas et al., 2018).

Participants (of the public policy process) ³³

Inside the government

Three participants can be identified as relevant to the public policy process within the government: i) the president (in a presidential system)³⁴; ii) public servants; and iii) congress (legislators).

The **president of the country** has the unique capacity to greatly influence, although not to control, the governmental agenda. In particular, the president attracts and often commands the attention of the general public and has the power to directly nominate staff to shift the agenda. Considered a powerful agenda-setter, when a president and his or her top appointees decide to place high priority on a given item, "agendas are set all over town" (Kingdon, 2014, p. 697). On the other hand, presidents do not have the capacity to determine the alternatives that will be seriously taken into consideration in the policy stream.

Public servants usually have more influence on generating policy proposals and implementing these alternatives (once a decision has been made). For instance, it is common for the staff appointed by the president to set an agenda and then request the support of (career) public servants in drafting proposals that address the problem at hand.

Lastly, **members of Congress** have considerable impact on both setting the agenda and defining the alternatives to be considered as possible solutions to prominent problems. Such power stems from the fact that substantive changes in public policies require new laws and members of Congress often have a marked public presence and lasting careers.

³³ Except when otherwise indicated, the contents in this topic are derived from Kingdon (2014).

³⁴ Such as the US (original focus of Kingdon's work) and Brazil (focus of this study).

Outside of the government

Outside of the government, but playing a role in the public policy process, it is possible to identify: i) interest groups; ii) researchers, academics, and consultants; iii) political parties and election-related actors; iv); the media v) and the public at large.

Interest groups may be tied to: businesses associations representing certain economic activities and sectors; worker unions and other groups which act on behalf of professional categories; and groups representing the interests of the general public, such as environmental and consumer protection organisations. These entities may play a negative role, blocking the rise of certain issues on the agenda in order to protect their existing positions and benefits. On the other hand, they may use their resources, mobilise support and conduct awareness campaigns to attract the attention of actors inside of the government towards their preferred causes. Once the agenda is set, interest groups also seek to present their favoured alternatives and policies.

Researchers, academics and consultants exercise greater influence with regard to public policies that are taken into consideration in order to solve a problem, especially in the long-term. Generally, members of Congress or of the administration seek assistance from the academic community to find answers to problems that have already risen on the governmental agenda.

Actors involved in the electoral process, such as political parties, have greater impact over the governmental agenda, by affecting the configuration of the executive and legislative branches of government and crafting campaign platforms, than they have over the set of policies presented and considered in the policy stream.

The **(mass) media** amplifies or attenuates certain events, thus affecting the public agenda. Put differently, the enhanced (or diminished) focus awarded by the media towards certain topics may contribute to divert the attention of the other participants in the public policy process, in particular the general public, and provide additional impetus for some issues (in detriment of others) (Capella, 2006). The framing of an issue by the media also affects how its audience connects that issue with their worldviews, biases and values (Scheufele & Tewksbury, 2007), and intense coverage about a topic may lead certain actors to publicly position themselves and manifest their preferences on the matter (McCombs, 2002).

Public opinion is observed by politicians and other actors inside the government and consequently affects the governmental agenda. The “national mood” usually prevents certain topics from rising on the agenda and has little to no relationship with the policy stream. Moreover, since public attention may not be consistent and/or uniform, it is often more likely for interest groups and the government itself to command the attention and influence the public agenda.

A large, stylized number '10' is positioned in the background. The '1' is on the left and the '0' is on the right. Both numbers have a vertical gradient from purple at the top to blue at the bottom. The '0' is a thick, rounded ring.

Chapter ten

Appendix 2

Interview Guide

10. Appendix 2 – Interview guide

About Statute No. 14,301/2022:

- 1 - (to the government) What was the inspiration/origin of the proposals suggested in Statute No. 14,301/2022?
- 2 - (to the government) Who were the most active stakeholders (both supportive and adversarial) during the legislative process of Statute No. 14,301/2022?
- 3 - (to the government) In the railway sector, the Ministry of Infrastructure has signed a Memorandum of Understanding with the Climate Bonds Initiative to pre-certify new railway projects so that future concessionaires can issue green bonds to finance investments. Is there any similar discussion in the navigation sector?
- 4 - (to the government) Through Statute No. 14,301/2022, you have made alterations in the scope of the Merchant Marine Fund. What was the rationale behind it?
- 5 - In your view, will Statute No. 14,301/2022 contribute to further develop cabotage transportation in Brazil? Why?

About the Merchant Marine Fund:

- 6 - What is your view of the Merchant Marine Fund? Is it effective in financing cabotage vessels in Brazil?
- 7 - (for cabotage navigation companies) Have you ever used funds from the Merchant Marine Fund to build vessels? If so, how was the experience?
- 8 - Do you have any suggestions on how the the Merchant Marine Fund could be further improved?

About climate change:

- 9 - Is the cabotage sector/company you represent adopting climate change mitigation and adaptation measures?

