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The externalities of the exploitation of minerals in the Brazilian government agenda: analysis from the multiple streams model

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Abstract. The preservation of the environment on a global scale was always on the agenda of the discussions due to the need for a model of sustainable economic development. This work aims to verify from what moment the issue of mineral waste reservoirs is placed on the government's agenda. For this, a documentary review and an analysis of the public policy formulation process based on the Multiple Streams model, developed by Kingdon (2003). The argument developed is that a "window of opportunity" was opened, due to the convergence of flows (problems, solutions, politics), as a result of the breakage of a reservoir in the municipality of Brumadinho, in the state of Minas Gerais.

Keywords: Reservoir safety; public politics; government agenda.

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1. Introduction

Considered by participants as one of the world's most important events, the Rio +10 Conference, held from May 26 to August 29, 2002, in Johannesburg (South Africa), brought together representatives from the governments of over 150 countries to discuss global environmental issues and development needs.
In its outcome document, the Conference considered mineral extraction as a fundamental activity for the economic and social development of many countries, taking into account that minerals are essential for modern life. However, respect for basic human rights, environmental protection and the balanced use of natural resources are also important points in the document, and it identifies the challenge for nations to promote sustainable development.

In Brazil, mineral exploitation activity dates back to the colonial period and has remained strong up to the 21st century. Together with the extractive industry, it represents 4% of the Gross Domestic Product (GDP) and contributes to 25% of Brazil's trade balance, according to the Ministry of Mines and Energy. In 2017, exports of value of US$46.4 billion worth of minerals were exported, with a surplus of 23.4 billion dollars (Ibram/2018). The sector is dominated by Vale, which was founded in 1942 and privatised in 1997, which is the world's largest producer of iron ore, and has immense power[1].
Although the externalities caused by the development of the activity are evident and create conflicts in the local communities. Among the most serious is the rupture of the mineral waste dams in Mariana and Brumadinho, two municipalities in the state of Minas Gerais. The breach in November 2015 of the dam at Samarco[2] in the municipality of Mariana[3] caused enormous environmental damage and the death of several workers and neighbours (19 people). It devastated two towns and travelled more than 600 kilometres to the Atlantic[4] altering the lives of hundreds of people and severely damaging the ecosystem (Kokke, 2017). Considered the largest environmental disaster in Brazil and one of the largest in the world, having reached water bodies and the environment some thirty-four million cubic metres of waste (Silva et al., 2017). In June 2018 the company Vale decided, after signing an agreement with the prosecutor's offices, public defenders' offices and the Brazilian state attorneys' offices for the central state and the states of Minas Gerais and Espírito Santo affected by the catastrophe, to contribute around 557.5 million reais (US$144 million) to the restoration of the environment and the communities affected by the raft breach.
But four years later, in March 2019, another one of the tailings dams of Vale company, one of Brazil's largest multinationals, collapsed and again caused a major disaster. In this case with the death of 235 people and the disappearance of 35 others, as well as causing significant environmental damage in the area. In this case, 13 million cubic metres of mud advanced at 80 kilometres per hour in some points, destroying houses, and reaching the river. It is astonishing to note that, more than three years later, Brazil is still debating the same problems that caused the first tragedy. It is even more astonishing that, during all this time, nothing has been done to improve the safety of this type of facility.
According to ANA (National Water Agency) there are 790 mineral waste reservoirs out of a total of over 24,000 reservoirs in Brazil, most of them small size. Of these, 417 are included in the National Reservoir Safety Policy (PNSB), but 369 are not. All reservoirs are arranged by categories based on the risk of rupture and the potential impact it would cause, in the event of an accident, on the nearby communities and the environment.
The article aims to verify at what point the issue of mineral tailings impoundments becomes on the agenda of governments and institutionalised by national regulations, from the macro to the micro level. The study uses the theory of the public policy cycle as a reference, and through a documentary review of mining policy in Brazil, to conduct an analysis of the process of public policy formulation based on the Multiple Streams model, which is based on the model developed by Kingdon (2003),

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[1] Vale has 55,000 employees in Brazil and a turnover of 36.5 billion dollars (32.5 billion euros).
[2] The dam was built to accommodate the waste generated from the extraction of iron ore, which is mined from various sites in the region (O Globo, 2015).
[3] For more information on the subject see: *'Desastre no Vale do Rio Doce'* (Milanez and Losekann, 2016), organised by PoEMA/Organon*; 'Desastre na Bacia do Rio Doce'* (Losekann and Mayorga, 2018), produced by the Organização Interinstitucional Mariana Rio Doce and Organon; and '*Mineração, Violência e Resistências*' (Zhouri, 2017), by the Brazilian Association of Anthropology.
[4] The pollutants, composed mainly of iron oxide and silica, travelled 55 km directly in the Rio Gualaxo do Norte, progressing into the Rio de Carmo and another 22 km to the Rio Doce. The socio-environmental tragedy extended along 663.2 km of watercourses, reaching as far as the coastline of the State of Espírito Santo (Kokke, 2017).

focusing the governmental decision on changing the reservoir control system for waste impoundments throughout Brazil.
The text is structured in three sections in addition to the introduction and concluding remarks. The first section discusses public policy as government action and deals with the National Dam Safety Policy in Brazil. The second section deals with the methodological aspects of the research, analyses the problem of tailings impoundments and its analysis based on the multiple streams model, examines and describes the official documents created by the Government, which established guidelines to solve the problems. The results of the research are presented in the third section.

2. Public policy as government action

There is a variety of definitions on the subject of public policy, which makes a diversity of concepts and definitions possible. According to Souza (2006) the field of knowledge of public policy makes it possible to analyse the government in action and propose changes in the direction or course of these actions. Its formulation is a phase in which democratic governments translate their purposes and electoral platforms into programmes and actions that will produce results or changes in the real world.
Public policy is also presented as a multidisciplinary field, as a way to build a common field of discussion between different perspectives that allow knowledge about the actions of the state (Marques, 2013; Faria, 2010).
For a better understanding, an attempt was made to analyse the the subject of public policy on the basis of two currents, American and European, which are present in the literature.
The American current deals with the study of public policy focused on the analysis of government action. In contrast to the American stream, the European stream puts the emphasis on studies and research focused on the analysis of the state and its institutions (Souza, 2006).
Among the main founders of public policy studies are the Americans: Simon (1947) and Lindblom (1979). Simon (1947) introduced the concept of bounded rationality of policymakers and argues that the central concern of administrative theory should be the rationality of decisions and their appropriateness for the realisation of specific objectives, since there are limits to human rationality.
Lindblom (1979) proposed the incorporation of other variables into the formulation and analysis of public policy, such as power relations and the integration between the different phases of the decision-making process, as well as the role of elections, bureaucracies, parties and interest groups.
Policy decisions should follow technical procedures (Simon, 1947), to the extent that for Lindblom (1979), policies are also the result of a real context in which political parties and interest groups act to influence decision making, so that in the end what is convenient for them prevails.
The understanding of public policy presented by the authors Simon (1947) and Lindblom (1979), encompass the process of formulation and implementation of public policies, which should be seen as a process, and not only as a technical product.
In Brazil, studies on public policy are influenced by American theorists, whose work on government action has been the focus of studies, in a wide range of areas such as education and health. However, the focus of the proposed study is on the role of the state and its institutions, on the understanding that it is through these that governments seek solutions to public problems, an approach that has been gaining strength in Brazil since 2000 (Metten et al., 2015).

2.1. The National Reservoir Safety Policy in Brazil

In Brazil, the National Policy on Reservoir Safety (PNSB) and the National Information System on Reservoir Safety (SNISB) are regulated by Law No. 12.334 of 20 September 2010. This Law applies to reservoirs intended for the water accumulation for any use, in the final disposition it also speaks of the temporary accumulation of waste and the accumulation of industrial waste. In the analysis of Law 12.334, it is verified that the objectives of the PNSB are intrinsically related to the issue of security, which leads to the deduction that the construction of dams implies an environmental and social risk, especially when they are close to the source of a river, the most frequently implemented by mining companies in Brazil.
The reservoir safety issues addressed in the objectives of the PNSB are related to the foundations and the control and claims that should be addressed in the phases of planning, design, construction, first filling and first spill, operation, decommissioning and future uses. The safety assessment of reservoirs should be carried out by means of periodic inspections to identify structural and functional anomalies of the dam and its auxiliary structures. This evaluation is the main instrument for auditing and preventing potential accidents, although it is only effective if it is accompanied by regular tests to ensure correct behaviour and proper functioning, between other, from internal pressure sensors, static and hydraulic reservoir - the "piezometers". Also, independent audits are also necessary to ensure that the instruments are functioning and the data generated are trustworthy and

representative of the real situation of the dam.
The responsibility of the various public actors (Union, States and Municipalities) and companies is indispensable for the objectives of the PNSB to be effective and guarantee the quality of socio-environmental life and avoid tragedies such as those that occurred in Mariana and Brumadinho (MG).
The PNSB also refers to the importance of the promotion of mechanisms for participation and social control, as well as publicity (Tenório, 1997) and the encouragement to participate, directly or indirectly, in preventive and emergency actions. However, information disseminated by the media reveals that the technical data produced by instruments (Article 6) of the PNSB were either not made public or were based on reports from consulting firms hired by the contracted by the companies themselves, with possible concealment of the reality of these reservoirs.
The PNSB establishes the instruments to ensure the safety of the country's reservoirs, which are: (i) the system of classification of reservoirs by risk category and associated potential damage; (ii) the Reservoir Safety Plan; (iii) the National Information System on Reservoir Safety (SNISB); (iv) the National Environmental Information System (Sinima); (v) the Federal Technical Register of Environmental Defence Activities and Instruments; (vi) the Federal Technical Register of Potentially Polluting Activities or Activities that Use Environmental Resources; (vii) the Reservoir Safety Report.
Veesaert et al. (2005) point out that the question of dam safety in Brazil has been discussed since 2003 as there was no specific law dealing with the issue, a fact which reveals the lack of attention of the competent authorities, taking into account the existence of a large number of dams, especially mineral tailings dams, due to the intense exploitation of this activity in the country. It also points out that since 2003, Bill 1.181 of 2003 was introduced in the Federal Senate, which dealt with Legal Liability, involving the owner of the reservoir and the engineer responsible for safety. In 2004, Project 4.038 suggested taking out compulsory insurance against dam failure. At examining Law 12.334 of 20 September 2010, it is clear that there is no mention of the suggestions made in the two draft laws analysed by Veesaert et al. (2005), even though they are very important issues for guaranteeing the lives of workers and the surrounding communities of the large projects installed in Brazil.
The PNSB further provides that the National Agency (ANA) is responsible for organizing, implementing and managing the National Information System on Dam Safety (SNISB); promote coordination between the supervisory bodies of the reservoirs; coordinate the preparation of the Reservoir Safety Report; and receive complaints from others audit bodies or entities on any compliance that involves an immediate risk to the safety or any accident occurred in the reservoirs.
Brazil currently has a register of 24,092 reservoirs for different purposes, such as water storage, mining or industrial waste storage and for energy production, which have been registered by 31 supervisory bodies. A large proportion, 9,827 (41%), are at-risk reservoirs. Of these, in the Reservoir Safety Report 2017, 3,545 were classified in the Risk Category (CRI), 5,459 Associated Potential Damage (APD) and 723 (3%) were simultaneously classified as high CRI and DPA.
After Mariana's accident several bills were presented to amend the law, in order to tighten monitoring and control measures. It was intended, inter alia, that those reservoirs with the highest risk would be inspected immediately. Since as pointed out by Andressa Lanchoti, coordinator of the team of prosecutors from Minas Gerais and the federal police who investigated what happened in Brumadinho. "We need a very important change of behaviour to regain trust because in less than three years there have been two disasters involving the same company (Vale) in two mines that had a certificate of stability and an external audit. And both collapsed. This represents a lack of credibility, not only of Vale, but of the entire Brazilian raft management system". Lanchoti also indicated that the State should assume the control that is now more a self-control of companies and increase the number of inspectors, which at that time was 34 for all of Brazil when only Minas Gerais is greater than all of Spain.
It should be noted, because it is important, that ANA asked, to draft the 2017 Reservoir Safety Report, to the control body of the reservoir of Brumadinho if this was in critical situation, to which the National Mining Agency (ANM), responsible for the control, answer no.

3. Methodological aspects of the research

This is qualitative research of descriptive exploratory nature. Public domain documents were used as data collection tools. The documents examined and described were Law No 12.334 of 20 September 2010, decree No 9.691 of 25 January 2019, resolution No 1 of 28 January 2019, resolution No 2 of 28 January 2019.
Analysis of the public policy formulation process is based on the Multiple Streams model (Multiple Flows Model), developed by Kingdon (2003). The study pays attention to the moments of pre-decision and governmental decision making about the change in the control system of waste impoundments in Brazil, which justifies the choice of such a model as it makes it possible to analyse the moments of public policy.

3.1. The problem of waste reservoirs and their analysis from the multiple stream model

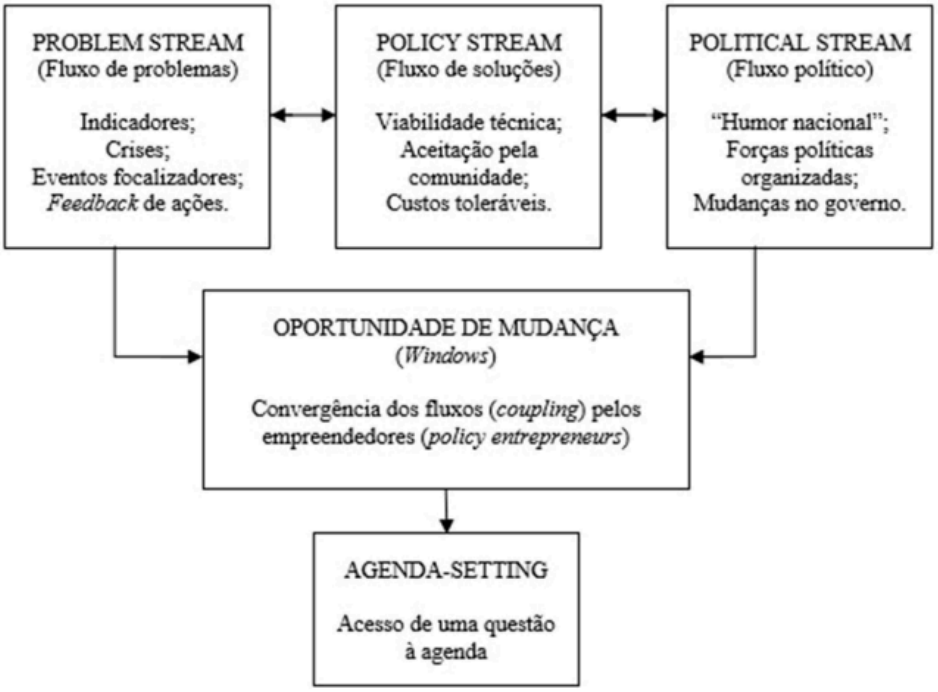
Why do some problems become important to a government? How is an idea included in the set of concerns of policymakers and transformed into public policies? These issues constitute the central axis of "Agendas, alternatives and public policies" of Kingdon (2003).

Kingdon (2003) considers that a governmental agenda is a list of issues that are the object of attention of governments and officials at a certain historical moment. His ideas, although the result of the analysis on the policies of the American government in the area of health and transport can be applied to diverse studies of specialized agendas such as the dams of mineral wastes or others. Kingdon (2003) understands public policies as groups formed by four processes: i) establishment of a public policy agenda; ii) formation of alternatives for the formulation of public policies, so that elections can be made; iii) dominant choice among a set of available alternatives; iv) implementation of the decision.

It should be noted that the analysis carried out in this work with the Kindgon model (2003) will only have in counts the first two of the four processes presented, the so-called pre-decision. Paying special attention to the moment of construction of the public policy agenda. The model developed by John W.Kingdon (2003) is considered suitable to allow the analysis of the moments of "pre-decision" and "decision", that is, the selection of problems and the choice of policy alternatives that are chosen as subject of the decision-making process.

In his quest to understand how some issues become part of the agenda and are considered by policymakers, Kingdon (2003) when studying the US government calls them an "organized anarchy", which is influenced by three decision flows: problems (problems), solutions or alternatives (policies) and politics (politics).

Figure 1. Model developed by Kingdon



Source: Kingdon (2003:182)

All three flows converge at some point, making it possible for changes to take place and for an issue to access the agenda (Almeida, Silva and Silva, 2013). In addition, according to Gottens et al. (2013) the model advocates the presence of ambiguity in public sector decision-making. In addition, according to Gottens *et al.* (2013) the model advocates the presence of ambiguity in public sector decision-making.

3.1.1. The problem

In the first flow of the model proposed by Kingdon (2003) examines how issues are recognized as problems and how certain issues are placed on the governmental agenda.
The answer lies both in the means by which actors know the situations, as in the way in which these are defined as problems. In what means of informing stakeholders about the problems, Kindgon (2003) defines them from three mechanisms:

a. systematic indicators: show the problems of a systematic, timely and accounting manner, such as costs of medical care, infant mortality, unemployment etc. They serve to assess the magnitude of a situation and to observe the changes that are leaving producing in that situation;
b. events such as crises and disasters (epidemics, budgetary, security issues etc.), which generally lead to immediate action;
c. by feedback on the operation of existing programmes, or by complaints made to the congress.

Kingdon (2003) notes that there are differences between situations and problems. They are faced daily in the various situations that cause disturbances, but which do not constitute a problem in the agenda of governments. Situations become a problem when people decide they need to do something to change. So a situation is defined as a problem if we consider three circumstances:

a. situations that raise important values and become a problem;
b. situations compared to other countries or regions;
c. classification of a situation that becomes necessary to certain sector of society, and may raise another problem;

Situations can therefore be highlighted among the policy makers, turning into problems, to later reach the government agenda. Government agendas don't just define problems, can also make them disappear. Kingdon (2003) defines four important aspects of this process:

a. the government can address the problem or not, making that people pay attention to other situations or lose confidence in the resolution, which makes people give up investing their time;
b. The situations which attracted attention may change because of the change of indicators or the emergence of another crisis which requires more attention;
c. situations cause people to get used to the problem or create new signs;
d. other situations arise and leave behind old problems;

For an issue to become a government agenda, a set of debates, competitions and games of interest from various sectors of society must emerge. Often the government invests resources in authorities with the aim of convincing them that a situation is a social problem and, therefore, to take it into account in their agenda, thus establishing a public policy.

3.1.2. The solutions

In the second stream - policy stream, Kingdon (2003) in his model stresses that it refers to the set of alternatives and solutions (policy alternatives) available for the problems. Kingdon (2003) considers that the ideas generated in this stream are not necessarily related to the perception of specific problems. The author states that people do not necessarily solve problems, they generally create solutions and seek problems for which they can find solutions, which most of the time are not taken into account by policy makers.
Kindgon (2003) compares the generation of alternatives and solutions by the *multiple stream* model with the analogy to the biological process of natural selection. From the same way that molecules fluctuate in what biologists call "primitive broth", the author understands that ideas regarding solutions are generated in communities (*policy communities*) and fluctuate in a "primitive broth of policies" (*policy primeval soup*). Ideas face an intense process of competition, in which some survive intact, others converge on new proposals and others are discarded. It is important to note that the ideas are analyzed, considering some aspects:

a. the technical and cost viability, which generally survive;
b. if they represent shared values, then they count generally with public acceptance and with responsiveness of policy makers.

Considering the aspects presented, the possible ideas constitute the alternatives that emerge from participation in the decision-making process. Kingdon (2003) considers that the communities generating alternatives (policy communities) are quite diversified, which implies an intense and competitive process alternative. These communities are composed of specialists - researchers, parliamentary advisers, academics, public officials, analysts belonging to interest groups, among others - who share a concern about an area (*policy area*), so the consensus around an alternative is not so easy.
Consensus on a viable proposal triggers to be disseminated in different forums in search of support and awareness of the various actors, policy communities (policy communities) and the public in general, as a form of pressure and guarantee that they are considered in the decision process. Kingdon (2003) believes that the dissemination process has a multiplier effect (bandwagon), in which ideas become public and gain more and more followers. Thus, the policy stream produces a limited list of proposals, bringing together some ideas that have survived the competition in the selection process.

3.1.3. The policy

The third flow of the model proposed by Kingdon (2003) is composed of the dimension of politics (*political stream*). According to the author, three elements influence the governmental agenda:

a. the national "climate" or "mood" (national mood), participants share the same ideas during a period, a factor that can favour changes in the country's policy. The favourable mood creates incentives for the promotion of some issues, reinforcing or altering the alternatives of the agenda.
b. changes in the political arena as a result of the electoral process brought by new governments with new configurations in the legislative and the entire bureaucratic structure, a factor that can contribute to the strengthening established agendas, radically modifying them or abandoning them for preferring others. Kingdon sees the start of a new government as a time of great possibilities for changes and the constitution of the agenda
c. The combination of national will with choice is important for the formation of agenda that is more firmly established compared to those suggested by interest groups.

In this flow, unlike in the previous one, of alternatives (policy stream), in which consensus is built based on persuasion and dissemination of ideas, in the political (political stream) coalitions are built from a process of compromise and negotiation between stakeholders and policy makers. Kingdon (2003) highlights that at a certain moment the three previously treated flows converge generating an opportunity for change, making a certain issue part of the agenda

3.1.4. Opportunity for change from convergence of the three flows: building the agenda

Kingdon (2003) explains that the opportunity for change is result of the convergence of the three flows: problems, solutions and policy. At a certain point there is recognition of a problem, a solution is suggested and the conditions of the political arena make it possible for a given situation or issue to become part of the agenda.
It is understood, therefore, that changes in the agenda occur when the three flows converge. However, the author considers that it is the flows of problems and politics that determine the opportunity for change. The flow of alternative or solution defined by the communities, only happens to integrate the agenda when the problems are recognized and politically the opportunity of agenda is created. Despite this indication, he stresses that communities are important in lobbying so that an issue on the agenda is actually fixed in front of decision-makers and, in that case, transformed into public policy.
The process of convergence of flows, which results in the creation of the opportunity for change, is possible through the window of opportunity of policy, which is the opportunity that proponents have to route their preferred solutions or draw attention to special problems. That window, that is, the opportunity open to certain initiatives, is presents and remains open for a certain period time. If they do not take advantage of the opportunities, participants must wait for a new propitious moment when the next opportunity arises (Kingdon, 2003).
Policy entrepreneurs have a strong influence on this process. By defending group interests, they act and invest resources so that they can influence the decision-making agenda.
The Kingdon model allows the understanding of the convergence process and window of opportunity that was created in Brazil, so that the problem of the breakage of mineral waste reservoirs was part of the decision-making agenda in mineral activity policy and its externalities.

3.1.5. Convergence between problems, solutions and political dynamics: the externalities of mineral exploitation on the governmental agenda in Brazil

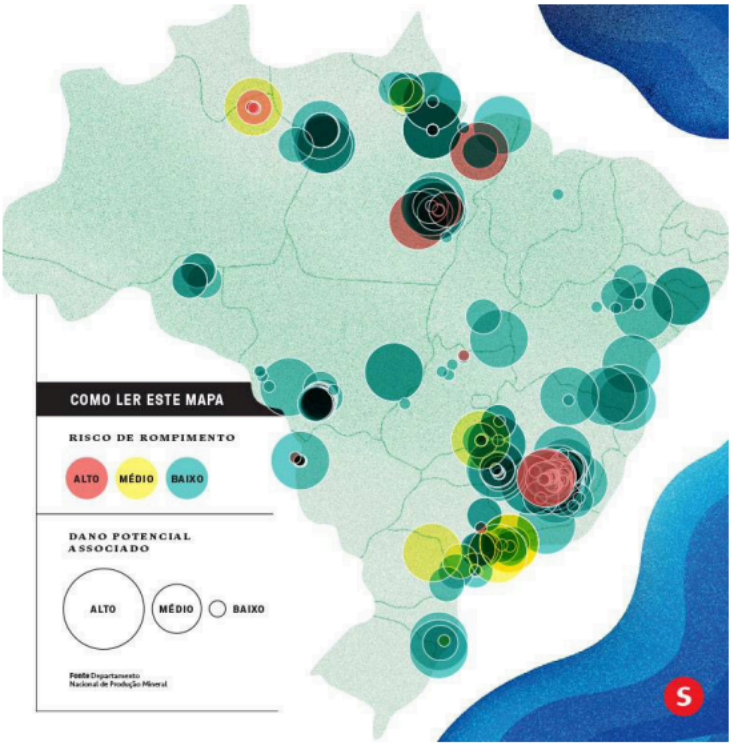
In this regard, it is noted that according to Kingdon (2003) the incorporation into the government agenda of the question of mineral waste reservoirs was the result of the process of convergence of flows: problem, solutions and policy, which created the opportunity for change, and the window of opportunity that opened with the national mood, due to the seriousness of the problem, making that externality integrated the decision agenda.

It is important to stress that the problems that emerge indicators and constant events (Kingdon, 2003), resulting from the externalities of mineral mining activity in the country, resulting in damage to local communities, with a strong national shock, were important to the attention of the new government that assumed power and serves as justification for inclusion in the agenda.

It is considered that the determining question for externalities of mining activity, in particular the mineral waste reservoirs, part of the government's agenda not only at the federal level, but also at the state and municipal level, is the rupture of the feijão reservoir, located in the municipality of Brumadinho, given that recently, the state of Minas Gerais also suffered the rupture of a reservoir of a company of the VALE group, which destroyed the community of Bento Gonçalves.

From this analytical perspective, it can be observed that the mineral extraction activity carried out by large companies, as in the case of VALE , the role of the state in regulation and control is questioned by specialists, workers, local communities and sectors of organised civil society, which demand a immediate response from the government and the company, to minimize damage and prevent new events from occurring, not only in the region where it has passed, but also in other regions of Brazil where waste reservoirs are located, as shown in Figure 2.

Figure 2. Waste reservoirs in Brazil (National Department of Mineral Production, 2



Source: Kingdon (2003:182)

Several actions were carried out by the Federal Government in order to accompany and control mineral waste reservoirs, with effects beyond the region of accidents. Such actions were regulated by official acts of the government and established the responsibilities of each federated entity (Union, States and Municipalities) in mitigating problems.

The examination of such acts by means of documents, which are in the public domain, made it

possible to understand solutions submitted by the Federal Government, as discussed in the next section.

4. Findings and discussions

4.1. The Government's solutions to tackle the problem

Solutions to address the problems caused for disasters resulting from the exploitation of mining activity, especially in the affected regions, were established by official documents: Decree No 9.691 of 25 January 2019, Resolution No 1 of 28 January 2019, Resolution No 2 of 28 January 2019; approved by the Brazilian Government as guidelines for the various organs of the State to the federal, state and municipal levels could implement immediate actions, as a way to minimize socio-environmental and human damage.

4.1.1. Decree No. 9.691 of 25 January 2019

The Brazilian Government published Decree No 9691 of 25 January 2019, which creates the Ministerial Council Disaster Response Supervision, with the aim of accompanying and monitoring the activities to be carried out due to the rupture of the Córrego Feijão reservoir in the municipality of Brumadinho, Minas Gerais State, and its repercussions in the Paraopeba River Basin.

The Ministerial Response Monitoring Council a Disasters is composed of the following Ministers of the State: Head of the Civil House of the Presidency of the Republic (coordinating); Defence; Citizenship; Health; Mines and Energy; Environment; of Regional Development; of Women, the Family and Head of the Security Cabinet Presidency of the Republic and the Ombudsman of the Union.

The aforementioned Decree established the Management and Evaluation Committee for Disaster Responses, such as the disaster at the Córrego de Feijão reservoir, and its repercussions on the Paraopeba River basin, composed of one member from each representative of the Council. That Committee has the aim of accompanying relief operations, assistance, restoration of essential services to affected and ecosystem recover.

The participation of representatives of local government and other institutions was limited by the aforementioned Decree, which may be invited to accompany or participate in the meetings of the Disaster Response Management and Evaluation Committee, but without the right to vote. Such limitation evidences a management model and regulation exclusively for top-down (top-down) public authorities, not ensuring that Committee decisions take into account actual interests of local actors.

For local public governance to be established, the bottom-up model is believed to be more democratic and participatory, as it makes possible the involvement of stakeholders in the process of decisions affecting them. In fact, as Oliveira (2006) shows us, the ideal of the planning process is the convergence of the two models presented by Sabatier (1986).

4.1.2. Resolution No 1 of 28 January 2019

The Ministerial Council for Monitoring Responses to Disasters through Resolution No 1 of 28 January 2019, recommended actions and measures to respond to the rupture of the Córrego de Feijão reservoir in the municipality of Brumadinho, Minas Gerais State.

The examination of this document reveals in articles 1 and 2 that the Federal Government recommends that the organs and entities of the federal public administration continue to prioritize efforts for the prompt care of direct and indirect victims of the rupture of the Córrego de Feijão reservoir, in the Brumadinho, and its repercussions in the River Basin Paraopeba, and mobilize human resources and financial resources for that purpose. Among the financial support actions is the release of *the Fundo de Garantia do Tempo de Serviço* (FGTS) to workers and families victims of the dam break.

Article 3 of the resolution notes that the actions go beyond the region concerned and recommends to the National Water Resources Council that it immediately approve a motion to request the oversight bodies, under the terms of the National Dam Safety Policy, established by Law No 12.334 of 20 September 2010, more effective monitoring and control of existing reservoirs throughout the country.

Table 1 presents the actions contained in Resolution No 1 of 28 January 2019.

The actions suggested by the Ministerial Council Disaster Response Oversight deal with macro- and micro-level attributions, when determining the federal audit bodies and recommending to the other federative entities that they require the audited agents to immediately update their respective Reservoir Safety Plans, of which the Law No 12.334 of 2010, with the intention of

protecting the integrity of workers and local residents of companies.

4.1.3. Resolution No 2 of 28 January 2019

Establishes the Subcommittee for Drafting and Updating Legislation, with the aim of preparing a preliminary draft for updating and revising the National Dam Safety Policy.

Table 1. Actions contained in Resolution No 1 of 28 January 2019

I.	carry out immediate audits of its procedures and review the regulatory acts guiding the monitoring of the safety of reservoirs;
II.	to keep records of reservoirs under its jurisdiction, with a view to incorporating them into the National Reservoir Safety Information System - SNISB;
III.	require employers to comply with recommendations contained in inspection reports and review periodic safety;
IV.	require employers to register and update information on dams in the SNISB;
V.	immediately carry out the control in the reservoirs under its jurisdiction, prioritizing those classified as "damage high associated potential" or as "high risk"

Source: DOU (2019)

The Subcommittee shall be composed of a representative, titular and alternate, of the following bodies and entities of the federal public administration: I) Civil House of the Presidency of the Republic, which will coordinate and provide administrative support; II) Ministry of Defence; III) Ministry of Mines and Energy; IV) Ministry of the Environment; V) Ministry of Regional Development; VI) Secretary-General of the Presidency of the Republic; VII) Secretary-General of the Presidency of the Republic; VIII) Institutional Security Office of the Presidency of the Republic; IX) Advocate-General of the Union; X) National Water Agency ANA; ; XI) National Electricity Agency - Aneel; XII) National Mining Agency - ANM; XIII) Institute Brazilian Environment and Renewable Natural Resources - Ibama; and XIV) National Electric System Operator - ONS.

Giving them very few days to make changes: 30 days from their training. The work of the Subcommittee will then be submitted to the Ministerial Council Disaster Response Monitoring Committee for approval in the form of a report within five working days, counted from the date of completion of its work.

The examination of this resolution establishes that representatives of other organs and entities of the federal public administration may be invited to participate in its meetings, although without the right to vote, evidenced the characteristics of the instrumental rationalist model, whose participation and decision-making on public issues are focused on the political leader, without any mention of the participation of representatives of state governments, municipalities and representatives of civil society, given that this is the review of a policy, whose consequences affect the lives of many Brazilians, hence the importance of hearing the actors premises (Chambers, 1994)

5. Conclusions

Unfortunately, as on many other occasions, they are not policies that failed, but their implementation. Brazilian legislation is robust, comparable, and in some cases more severe, than that of other countries in the world. However, there is a lack of clarity on the role, obligations and responsibilities of each institution in the federal, state and municipal levels, and on the ability to control and monitor compliance with standards (which must be constantly improved, mainly after boundary situations such as those of those events), the so famous "compliance".

Environmental licenses in Brazil, for example, are disproportionately bureaucratic with the certain small and low risk companies. Requirements and documentation go much further beyond the capacity of public bodies themselves to process and approve them, delaying works or simply leaving companies in an irregular situation. On the other hand, there is a lack of oversight and effective control of large and risky works and companies, where often specific interests prevail over the law.

The study in the theoretical field made it possible to understand that a "window of opportunity" was opened, as a result of the breakage of the mineral waste reservoir in the municipality of Brumadinho and human and environmental losses, by the convergence of flows (problems, solutions, politicians) and made the problem of waste reservoirs an integral part of the country's agenda. The news also influenced the media and the mobilization of the population.

The Kingdon model even if it considers the convergence of the three flows for the creation of the window of opportunity, cannot affirm that in the flow solutions, these are in fact of social interest (bottom-up). One can deduce a regression in the socio-centric approach in the treatment of public issues, with central state decisions contained in decrees and published resolutions.

In the empirical field, the examination of public domain revealed that they were several proposals actions by the Federal Government, as a normative instrument, to the states and municipalities, to avoid that the impacts of mineral activity cause more damage to workers and local communities.

The Subcommittee on Legislative Preparation and Updating was set up to prepare a preliminary draft for updating and revising the National Reservoir Safety Policy, established by Law No 12334 of 20 September 2010.

Even so, it is considered that the problem comes from the regulation control and control of the competent bodies.

Noting in conclusion that the problems of the Waste reservoirs are not solved with the elaboration of a new policy but with the effectiveness of the existing one and if a new law is elaborated, the involvement of local actors in the processes of elaboration and monitoring of the policy is fundamental.

Future contributions suggest studies of monitoring and evaluation of decisions taken by the integrate the problem into the agenda (limitation of the model Kingdon - pre-decision and decision).

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