

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

CITY OF OURO PRETO, on behalf of itself and  
all others similarly situated

Plaintiff,

v.

MERRILL LYNCH, PIERCE, FENNER &  
SMITH INC., BARCLAYS CAPITAL, INC.,  
CITIBANK INC., CITIGROUP GLOBAL  
MARKETS, INC., JP MORGAN, JP MORGAN  
SECURITIES LLC.

Defendants.

Case Number: 23-\_\_\_\_\_

**CLASS ACTION COMPLAINT**

Jury Trial Demanded.

TABLE OF CONTENTS

<b>I. INTRODUCTION .....</b>	<b>3</b>
<b>II. SUMMARY OF THE CASE .....</b>	<b>5</b>
<b>III. PARTIES .....</b>	<b>9</b>
<b>A. Plaintiff .....</b>	<b>9</b>
<b>B. Defendants .....</b>	<b>9</b>
<b>IV. JURISDICTION, NECESSARY PARTIES, AND VENUE .....</b>	<b>14</b>
<b>V. CLASS ACTION ALLEGATIONS .....</b>	<b>15</b>
<b>VI. ADDITIONAL CLASS CERTIFICATIONS AND INJUNCTIVE RELIEF .....</b>	<b>15</b>
<b>VII. APPLICABILITY OF BRAZILIAN LAW .....</b>	<b>19</b>
<b>A. Brazil’s Federal Constitution .....</b>	<b>19</b>
<b>B. Brazil’s National Environmental Policy Act (and Pertinent Case Law) .....</b>	<b>20</b>
<b>C. Brazil’s Civil Code .....</b>	<b>23</b>

<b>VIII. RELEVANT BACKGROUND AND DEFENDANTS’ KNOWLEDGE .....</b>	<b>25</b>
<b>A. The Iron Quadrangle.....</b>	<b>25</b>
<b>B. Vale’s Mining Operations Produce and Store Toxic Waste Without Limitation.....</b>	<b>26</b>
<b>C. Vale’s Operations Have Inflicted Significant Damage on the Environment in the Iron Quadrangle .....</b>	<b>33</b>
<b>a. Mariana Dam Disaster: The 2015 Fundão Dam Collapse .....</b>	<b>33</b>
<b>b. Brumadinho Dam Disaster: The 2019 Córrego do Feijão Dam Collapse .....</b>	<b>36</b>
<b>D. Vale’s Well-Known Reputation .....</b>	<b>40</b>
<b>E. The Defendant’s Response to Vale’s Malfeasance: Nothing .....</b>	<b>43</b>
<b>IX. THE FUNDING BY DEFENDANTS .....</b>	<b>46</b>
<b>A. Defendants Funded Vale’s Mining Subsidiary: Companhia Vale Do Rio .....</b>	<b>46</b>
<b>a. Defendants Issued Guaranteed Promissory Notes and Credit Facilities to Vale .....</b>	<b>47</b>
<b>b. Defendants Violated the Equator Principles.....</b>	<b>53</b>
<b>c. Defendants Are Foremost Institutional Investors .....</b>	<b>54</b>
<b>d. Defendants’ Ratified Vale’s Conduct by Continuing to Fund Vale’s Mining Operations and Even Increasing Its Funding.....</b>	<b>58</b>
<b>B. Vale’s Mining Operations in Ouro Preto, the Class Representative .....</b>	<b>58</b>
<b>a. Vale’s Evacuation Process Pollutes the Air and Causes Significant Noise Pollution in the Proposed Class .....</b>	<b>59</b>
<b>b. Vale’s Tailings Dams in and Around Ouro Preto Present Continuing Danger of Further Environmental Damage and Have Already Polluted Local Waterways .....</b>	<b>64</b>
<b>C. What Defendant Banks Knew: Vale’s Admission of Its Environmental Damage to The Iron Quadrangle.....</b>	<b>66</b>
<b>D. Defendants’ Funding Enabled the Violations at Vale’s Mining Operations in the Municipalities .....</b>	<b>69</b>
<b>X. CAUSES OF ACTION.....</b>	<b>70</b>
<b>A. Strict Liability as Polluters Under Brazilian Law .....</b>	<b>70</b>
<b>B. Violation of the Brazilian Constitutional Rights to Security, Property, and Social Well-Being.....</b>	<b>71</b>
<b>XI. DAMAGES.....</b>	<b>72</b>
<b>A. The City of Ouro Preto, Minas Gerais, Brazil .....</b>	<b>73</b>
<b>B. “Moral Damages” under Brazilian Law .....</b>	<b>74</b>
<b>C. Specific Damages as to each Class Member .....</b>	<b>75</b>
<b>XII. EXCEPTION.....</b>	<b>77</b>
<b>XIII. REQUEST FOR RELIEF.....</b>	<b>77</b>
<b>DEMAND FOR JURY TRIAL.....</b>	<b>80</b>

Plaintiff, the City of Ouro Preto, Minas Gerais, Brazil (“Plaintiff”), individually and on behalf of the proposed class consisting of certain Brazilian municipalities,<sup>1</sup> by and through their attorneys, Milberg Coleman Bryson Phillips Grossman LLP, hereby alleges as follows against Defendants Merrill Lynch, Pierce, Fenner & Smith Inc., Barclays Capital, Inc., Citibank Inc., Citigroup Global Markets, Inc., JP Morgan, JP Morgan Securities LLC (collectively, “Defendants”):

## **I. INTRODUCTION**

1. In the heart of Brazil, nestled among the lush greenery and captivating landscapes, lies the state of Minas Gerais. Home to a rich history and an economy largely dependent on mining, it had always held a significant place in the country's fabric. However, its vibrant heart now beats to a troubling rhythm, as the looming threat of dam collapses persistently haunts its municipalities and residents alike.

2. The sirens that often echo across the hillsides, their piercing cries a stark contrast to the usual serenity, herald an unsettling change. A menacing cloud of dust, fumes, and particles billows up, churned by the relentless tread of heavy equipment. These are the markers of another evacuation, a grim routine that the people have had to become all too familiar with.

3. While the immediate dangers of such situations are evident, a deeper, more insidious impact has begun to reveal itself. The municipalities are grappling with a tangible loss of revenue. Sales tax income, a significant part of their financial lifeblood, has dwindled as the local economy crumbles under the pressure. The cost of assisting residents during the evacuation

---

<sup>1</sup> These municipalities include: Barão De Cocais with 2 dams (Norte/Laranjeiras, Sul Superior); Itabira with 1 dam (Pontal System); Itabirito with 1 dam (Maravilhas II); Mariana with 3 dams (Campo Grande, Dicaõ Leste, Xingu); Nova Lima with 7 dams (5-Mutuca; 6 MAC; 7A MAC; B; B3/B4; Peneirinha; Vargem Grande); São Gonçalo Do Rio Abaixo with 1 dam (PDE 3); and Ouro Preto with 6 dams (Forquilha I, Forquilha II, Forquilha III, Grupo, Doutor, Dique de Pedra).

process has imposed an additional burden. Property values, once a reliable pillar of wealth, have plummeted, leaving gaping holes in the region's economic fabric.

4. The strain extends to the local services as well. Emergency services, police forces, and social services have all faced the challenge of rapidly escalating expenses. The necessary overtime and additional resources required to cope with the crisis have stretched their budgets thin. The need to ensure safe access and evacuation routes further strains these municipal resources.

5. The residents of Minas Gerais, often left at the mercy of this ongoing chaos, have also had to endure severe damages. Their homes, once considered valuable assets, have seen their worth diminish drastically. The threat of dam collapses, frequent evacuations, and disruption have affected their ability to earn, causing significant income losses.

6. Furthermore, air and noise pollution have become an unwelcome part of their daily lives, impacting their health and well-being. The social fabric of the community is under strain, as education, social and familial connections are repeatedly disrupted. Roads, the arteries of the community, are frequently shut down, turning the evacuation process into a stressful ordeal, particularly for the elderly and infirm.

7. The relentless threat of dam collapses in Minas Gerais casts a long, deep shadow over the municipalities and residents alike. The physical, financial, and emotional toll continues to mount, transforming what was once a thriving region into a landscape echoing with sirens, shrouded in dust, and etched with the worry lines of its people.

8. Since 2011, a group of banks have enabled and funded Vale's environmental degradation of the Iron Quadrangle and dashed hopes of its people. This cause of action seeks environmental damages allowable under Brazilian law from the banks involved with funding Vale who are subject to the jurisdiction of this Court.

## **II. SUMMARY OF THE CASE**

9. Plaintiff brings this Action pursuant to Brazil's National Environment Policy Act, Federal Law No. 6,938/1981, for lender liability against the Defendants arising from loans and financing which directly promoted, and continues to promote, significant environmental degradation in and around the Brazilian State of Minas Gerais, as well as continuing harm to Plaintiff and the proposed Class members.

10. The mining company Vale, S.A. (the "borrower" or "Vale") has constructed high risk tailings dams within the Metropolitana de Belo Horizonte mesoregion in the state of Minas Gerais known as the "Iron Quadrangle" (In Portuguese, the "*Quadrilátero Ferrífero*").

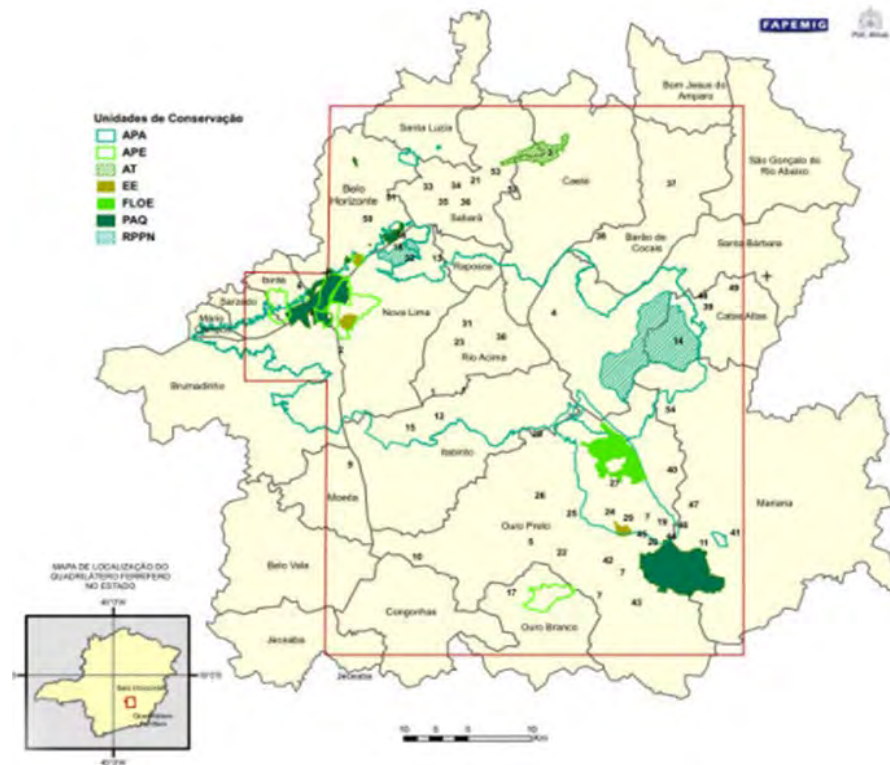
11. Defendants, a group of banks, provided essential financing to Vale, a company notorious for committing horrendous environmental ruination in Brazil. Defendants profited from their customer's environmental degradation that was imposed upon Plaintiff and the proposed Class without any concern for the devastation that has ravaged those communities. Without the funding by Defendants, the construction, operation, and expansions of Vale's dams would have been impossible because Vale did not have the financial resources to perpetuate its systemic decimation of the environment within the municipal limits of the Plaintiff class herein. That destruction is ongoing and the extraordinary losses it causes the Plaintiff Class increase every day and force Plaintiff municipalities to spend billions of reais because of their obligations to their citizens under Brazilian law.

12. Vale engages in mining operations throughout Brazil. This Complaint, however, focuses on the mining operations in an approximately 7,000-square kilometer area of Minas Gerais, the Iron Quadrangle. These mining operations have polluted and contaminated, and continue to pollute and contaminate, Plaintiff's land, air, and water within the Iron Quadrangle. Defendants'

financing of Vale's mining operations has directly funded the ongoing pollution and contamination of the environment, which has caused significant losses to Plaintiff and the proposed Class.

13. In addition to the pollution and contamination that has dramatically damaged Plaintiff's environment, the tailings dams in the Iron Quadrangle, which hold the toxic byproducts of Vale's mining operations, are in imminent danger of collapse. This ever-present risk of injury, death, and destruction has, and continues to, damage the health, safety, and well-being of Plaintiff. This creates adverse conditions for their social and economic activities by devaluing Plaintiff's property, community, health, welfare, and environment. Plaintiff and proposed Class members live under the constant threat of another massive collapse of Vale's dams and other mining structures which will destroy their entire environment, including homes, businesses, and land. Multiple evacuations of the areas surrounding Vale's dangerous upstream dams have caused severe emotional distress to the members of the proposed class.

14. The area of the Iron Quadrangle is shown below, outlined in red. The outlined area contains the numerous mining operations which lend the Iron Quadrangle its name. These mining operations present a constant flow of pollution and contamination within Minas Gerais, Brazil, as well as a constant danger to those living in and around these areas.



15. Defendants agreed to fund Vale’s destruction of Plaintiff’s environment, effectively appropriating Plaintiff’s, and the proposed Class’s, land for mining, in order to profit from their business relationship with Vale. This was done not merely to reap the benefits of their current loans with Vale but also to continue their profitable ownership relationship with Vale for its ongoing abuse of the environment in and around the Iron Quadrangle. Defendants directed and oversaw the utilization of their funds by Vale, thereby knowingly providing the resources to permit Vale to damage Plaintiff, destroy its property, and make the air and water unsuitable to support human or animal life. Moreover, Defendants continue to purchase hundreds of millions of dollars of stock on a weekly basis to provide additional funds to Vale to finance its environmental destruction.

16. Brazilian law establishes a strict liability standard to ensure protection of the environment. Under Brazilian law, lenders are liable for pollution and contamination caused by

the endeavors their loans financed, in addition to the liability of the entities whose endeavors directly caused the pollution and contamination. Thus, Defendants are strictly liable to Plaintiff under Brazilian law.

17. As permitted under Brazilian law, Plaintiff seeks to represent and protect the interests of the environment, including the interests of the flora and fauna, in and around the dams that have been, and continue to be, destroyed by the mining operations financed by Defendants. Plaintiff also seeks to represent and protect the interests of the governmental municipalities in and around this area that have been, and continue to be, negatively impacted by the mining operations financed by Defendants causing losses of revenues and increased costs for the municipalities.

18. Defendants are lenders who have loaned more than *\$17.2 billion USD* to Vale. In the relevant loan agreements, Defendants uniformly mandated that New York be the jurisdiction governing the procedural law as to these transactions. Therefore, Plaintiff brings this action in Defendants' chosen forum.

19. As a direct and proximate result of Defendants' funding of Vale's mining activities, Plaintiff and the Class members have suffered and will continue to suffer injuries to themselves and their families, a reduction or elimination of their property values, a reduction in their use and enjoyment of their real and personal property, and a collapse of their businesses/livelihoods all of which continues to be deleterious to their health and well-being. Plaintiff and the other Class members are entitled to recover compensatory damages in amounts to be ascertained at trial.

20. This action seeks compensation from the Defendants for financing Vale's reprehensible conduct described herein and a disgorgement of the Defendants' profits accumulated at the expense of Plaintiff's environment.



21. To the best of the Plaintiff's information, knowledge, and belief, there is no other action pending in any jurisdiction which requests monetary damages from Defendants for funding Vale's egregious conduct as pled herein.

### **III. PARTIES**

#### **A. Plaintiff**

22. The **City of Ouro Preto**, in the state of Minas Gerais, is a governmental entity formed as a city within and in accordance with the laws of Brazil. There are currently multiple Vale dams located in Ouro Preto which are classified by Vale and the Independent Mining Agency as having a high hazard level based on the possibility of failure.<sup>2</sup> There are a total of 21 of these high-risk tailings dams located in the area of the proposed Class.

23. Ouro Preto brings this action on behalf of the municipalities affected by the impending ruptures of Vale's 21 high-risk dams (the "Class"). These dams, their locations, and emergency level status are listed in the attached **Exhibit A** (translated into English) created by the Brazilian National Mining Agency ("ANM") and Vale.

#### **B. Defendants**

24. As illustrated in the table below, Defendants are financial institutions that, for nearly 20 years, have financed Vale's activities through debt securities with Vale or Vale's financing arm, Vale Overseas, Ltd. ("Vale Overseas").<sup>3</sup> Vale Overseas is a finance company wholly owned by Vale for the purpose of issuing debt securities to finance Vale's mining, energy resource, and steel production activities.<sup>4</sup> In an effort to escape detection of its environmental violations and impede litigation, Vale Overseas was registered and incorporated as a Cayman

---

<sup>2</sup> Four upstream dams are sited in Ouro Preto as noted by Vale (Forquilha I, Forquilha II, Forquilha III, Grupo).

<sup>3</sup> *Dividends, Debts, and Debentures*, VALE, <https://www.vale.com/dividends-debts-and-debentures>.

<sup>4</sup> *Id.*

Islands exempted company with limited liability on April 3, 2001.<sup>5</sup> Defendants approved and participated in this corporate evasive strategy to hide their funding of Vale in an attempt to avoid Brazilian environmental law.

<b>Date of Issuance</b>	<b>Relevant Banks Involved</b>	<b>Amount</b>
January 9, 2004 <sup>6</sup>	Merrill Lynch & Co. and J.P. Morgan	\$500,000,000, 8.25% Guaranteed Notes due 2034
November 3, 2009 <sup>7</sup>	J.P. Morgan (underwriter is J.P. Morgan)	\$1,000,000,000, 6.875% Guaranteed Notes due 2039 (underwriter agreed to purchase \$333,333,000.)
September 8, 2010 <sup>8</sup>	J.P. Morgan	\$1,000,000,000, 4.625% Guaranteed Notes Due 2020 (the “2020 Notes”) and \$750,000,000, 6.875% Guaranteed Notes Due 2039 (the “2039 Notes”) (JP Morgan agreed to purchase 500,000,000 and 375,000,000)
January 4, 2012 <sup>9</sup>	Citigroup and J.P. Morgan, (underwriters are Citigroup Global Markets Inc. and J.P. Morgan Securities LLC.)	\$1,000,000,000, 4.375% Guaranteed Notes due 2022 (underwriters agreed to purchase \$285,714,000 and \$285,714,000 respectively)
March 28, 2012 <sup>10</sup>	Barclays Capital Inc. and Citigroup Global Markets Inc., (underwriters are Barclays Capital Inc. and Citigroup Global Markets Inc.)	\$1,250,000,000, 4.375% Guaranteed Notes due 2022 (underwriters agreed to purchase \$416,668,000, and \$416,666,000 respectively)
September 4, 2012 <sup>11</sup>	Citigroup and J.P. Morgan (underwriters are Citigroup Global Markets, Inc., and J.P. Morgan Securities LLC)	\$1,500,000,000, 5.625% Guaranteed Notes due 2042 (underwriters agreed to purchase \$300,000,000 and \$300,000,000, respectively)
July 3, 2012 <sup>12</sup>	Barclays and Citigroup	€750,000,000, or \$964,500,000 <sup>13</sup> , 3.750% Guaranteed Notes due 2023

<sup>5</sup> *Id.*

<sup>6</sup> <https://www.sec.gov/Archives/edgar/data/1169446/000119312504003915/d424b2.htm>.

<sup>7</sup> <https://www.sec.gov/Archives/edgar/data/1169446/000095012309057367/y80111b2e424b2.htm>.

<sup>8</sup> <https://www.sec.gov/Archives/edgar/data/917851/000095012310084949/y86506b2e424b2.htm>.

<sup>9</sup> <https://www.sec.gov/Archives/edgar/data/1169446/000104746912000040/a2206465z424b2.htm>.

<sup>10</sup> <https://www.sec.gov/Archives/edgar/data/1169446/000104746912003635/a2208545z424b2.htm>.

<sup>11</sup> <https://www.sec.gov/Archives/edgar/data/917851/000104746912008691/a2210895z424b2.htm>.

<sup>12</sup> <https://www.sec.gov/Archives/edgar/data/917851/000104746912007052/a2210118z424b2.htm>.

<sup>13</sup> Average Euro to USD exchange rate in 2012 was 1.286, available at: <https://www.exchangerates.org.uk/EUR-USD-spot-exchange-rates-history-2012.html#:~:text=Average%20exchange%20rate%20in%202012%3A%201.286%20USD>.

August 3, 2016 <sup>14</sup>	Citigroup (underwriter is Citigroup Global Markets Inc.)	\$1,000,000,000, 6.250% Guaranteed Notes due 2026 (underwriter agreed to purchase \$156,250,000)
February 6, 2017 <sup>15</sup>	J.P. Morgan (underwriter is J.P. Morgan Securities LLC)	\$1,000,000,000, 6.250% Guaranteed Notes due 2026 (underwriter agreed to purchase \$185,185,000)
July 6, 2020 <sup>16</sup>	Citigroup (underwriter is Citigroup Global Markets Inc.)	\$1,500,000,000, 3.750% Guaranteed Notes due 2030 (underwriter agreed to purchase \$250,000,000)
June 7, 2023 <sup>17</sup>	Citigroup and J.P. Morgan (underwriter is J.P. Morgan Securities LLC)	\$1,500,000,000, 6.125% Guaranteed Notes due 2033 (underwriter agreed to purchase \$214,286,000)
	<b>TOTAL:</b>	<b>\$12,214,500,000.00</b>

25. The Defendant banks are also investors in Vale and thereby not only profit from the interest on their loans, but also on the increased value of Vale’s stock.

26. Each of the Defendants are joint bookrunners, managers, or underwriters on notes issued by Vale or Vale Overseas, which are all guaranteed by Vale.<sup>18</sup> Not only did the Defendants loan nearly \$12.2 billion USD to Vale, they partnered with other financial entities to become a “banking syndicate”<sup>19</sup>—a group of eighteen global banks that provided Vale with another \$5 billion USD line of credit.<sup>20</sup> The sum of the debt securities in the notes loaned to Vale from the Defendants total approximately \$17.2 billion, and is regularly increasing.<sup>21</sup>

27. Each note states that the debt securities are to be governed by New York law, that the Bank of New York is serving as the trustee of the debt securities, and that Vale will apply to

<sup>14</sup> <https://www.sec.gov/Archives/edgar/data/1169446/000104746916014677/a2229375z424b2.htm>.

<sup>15</sup> <https://www.sec.gov/Archives/edgar/data/1169446/000104746917000570/a2230262z424b2.htm>.

<sup>16</sup> <https://www.sec.gov/Archives/edgar/data/917851/000104746920004003/a2242033z424b2.htm>.

<sup>17</sup> [https://www.sec.gov/Archives/edgar/data/917851/000129281423002608/vale20230607\\_424b2.htm](https://www.sec.gov/Archives/edgar/data/917851/000129281423002608/vale20230607_424b2.htm).

<sup>18</sup> *Id.*

<sup>19</sup> [http://www.vale.com/EN/investors/information-market/Press-Releases/Pages/vale-signs-a-US\\$-2-billion-revolving-credit-facility.aspx](http://www.vale.com/EN/investors/information-market/Press-Releases/Pages/vale-signs-a-US$-2-billion-revolving-credit-facility.aspx).

<sup>20</sup> *Vale secures US\$2B revolving credit facility*, S & P Global (June 12, 2017),

<https://www.spglobal.com/marketintelligence/en/news-insights/videos/do-your-sustainability-commitments-add-up-to-net-zero>.

<sup>21</sup> See *infra* section VII.A.1-3.

list the notes on the New York Stock Exchange.<sup>22</sup> Thus, Vale and the Defendants have agreed that the law of the State of New York concomitantly applies to these loans. The notes also state that there is no statutory enforcement in the Cayman Islands of judgments obtained in the United States.<sup>23</sup> Thus, because it is virtually impossible to use the courts of the Cayman Islands to recognize or enforce judgements, Defendants have created, participated in, and have so far received, the legal protection of this “safe haven” to enjoy the profits they reap from their lucrative financial relationship with this corrupt corporate mining giant—at the expense of the Brazilian environment, Plaintiff, and its proposed Class members’ financial and individual losses. This business model, set up as a joint venture by Vale and Defendants, has caused environmental devastation that has cost, and continues to cost, the Municipalities billions of reais in payments for food, water, shelter, and healthcare for their citizens. In addition, there have been increasing amounts of lost revenue to the Municipalities because of the property value loss and reduction in public fees to the Municipalities.

28. Defendant **MERRILL LYNCH, PIERCE, FENNER & SMITH INCORPORATED** and previously branded as Merrill Lynch, is an American investing and wealth management division of Bank of America and is also headquartered in New York, New York.

29. Defendant **BARCLAYS**, established in the United Kingdom in 1690, is a major global financial services provider engaged in retail and commercial banking, credit cards, investment banking, wealth management, and investment management services. Barclays operates

---

<sup>22</sup> *Id.*

<sup>23</sup> In all above-mentioned promissory notes, the language states: “Vale Overseas has been advised by its Cayman Islands counsel, Walkers, that although there is no statutory enforcement in the Cayman Islands of judgments obtained in the United States, the courts of the Cayman Islands will, based on the principle that a judgment by a competent foreign court imposes upon the judgment debtor an obligation to pay the sum for which judgment has been given, recognize and enforce a foreign judgment of a court having jurisdiction over a defendant according to Cayman Islands conflict of law rules.”

in more than 50 countries, including the United States, and employs approximately 120,000 people, serving 48 million customers and clients worldwide. Barclays is headquartered in London, England and has offices in New York, New York.

30. Defendant **CITIGROUP INC.** is an American multinational investment bank and financial services corporation. Citigroup owns Citicorp, the holding company for Citibank, as well as several international subsidiaries including **CITIGROUP GLOBAL MARKETS INC.** which provides institutional brokerage services. The Company offers a full range of financial advisory, research, and capital raising services to corporations, governments, and individuals. Citigroup Global Markets serves clients worldwide. Citigroup is incorporated and headquartered in New York, New York.

31. Defendant **J.P. MORGAN** is one of the Big Four Banks of the United States (along with Bank of America, Citigroup and Wells Fargo). The firm was formed in 2000 when Chase Manhattan Corporation acquired J.P. Morgan & Co. JPMorgan Chase operates in more than 60 countries. The bank is a market leader in investment banking, financial services for consumers, small business and commercial banking, financial transaction processing, asset management, and private equity. Defendant **J.P. MORGAN SECURITIES LLC**, also known as BEAR, STEARNS & CO., BEAR, STEARNS & CO. INC., CHASE INVESTMENTS, CHASE PRIVATE CLIENT, J.P. MORGAN, J.P. MORGAN PRIVATE BANK, J.P. MORGAN PRIVATE WEALTH MANAGEMENT, J.P. MORGAN SECURITIES, J.P. MORGAN SECURITIES INC., J.P. MORGAN SECURITIES LLC, J.P. MORGAN WEALTH MANAGEMENT, J.P. MORGAN SECURITIES INC., JPMORGAN CHASE, is headquartered in New York, New York.

#### **IV. JURISDICTION, NECESSARY PARTIES, AND VENUE**

32. While Vale committed the acts that have resulted in environmental degradation, Vale is not an indispensable party under Fed. R. Civ. P. Rule 19. Complete relief may be accorded among Defendants in Vale's absence because Plaintiff's allegations are that Defendants violated Brazilian law by financing the environmental disaster in the communities adjacent to Vale's dams in the Iron Quadrangle. Vale is not a lender to itself and thus is not liable as a lender under Brazilian law on that basis.

33. The Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. § 1332. Plaintiff represents the municipalities in the Iron Quadrangle, Minas Gerais, Brazil. Defendants are citizens of the State of New York. The amount in controversy exceeds \$75,000, exclusive of interest and costs.

34. This Court has personal jurisdiction over Defendants because they are joint lenders, bookrunners, managers, and/or underwriters in agreements and notes with Vale which Defendants have contractually required to be governed by New York law. Defendants conduct business in New York, they purposefully direct or directed their actions toward New York, and they have the requisite minimum contacts with New York to permit this Court to exercise jurisdiction. Defendants have purposely subjected themselves to the jurisdiction of New York through their negotiated contractual relationship with Vale and used these contracts to profitably finance the continuing damages to the Plaintiff's environment through Vale's mining activities.

35. Venue is proper in this District pursuant to 28 U.S.C. § 1391, because a substantial part of the events or omissions giving rise to the claims occurred in this District, and each Defendant transacted, and still transacts, business and still conducts the same business activities that gave rise to the claims for relief in this case.

36. New York is the most convenient forum for this litigation as Defendants specifically required the application of New York law in their financial agreements with Vale. The borrower is Vale Overseas, Ltd., a Cayman Islands corporation, where, as recognized in the notes themselves, there is no effective statutory enforcement for claims such as those stated in this Complaint.

37. Brazil is not the proper jurisdiction because the Defendants have purposely never subjected themselves to personal jurisdiction in Brazil. Private and public interest factors weigh in favor of New York as the proper jurisdiction. Private interests support the exercise of jurisdiction in New York because most of the evidence in this case, other than regarding the harm, is in New York, including business records and witnesses within Defendants' companies. In short, evidence of Plaintiff's underlying harm is in Brazil, but evidence of Defendants' wrongdoing and liability is in New York. Public interest factors also weigh in favor of New York as the proper jurisdiction because the state must assure that New York companies, or those that choose New York to govern their financial agreements, are held accountable in the jurisdiction they chose.

## **V. CLASS ACTION ALLEGATIONS**

38. Pursuant to Federal Rule of Civil Procedure 23, Plaintiff brings this case as a class action on behalf of a Class defined as follows:

All of the municipalities in the Iron Quadrangle that contain a high-risk dam, namely Barão De Cocais with 2 dams (Norte/Laranjeiras, Sul Superior); Itabira with 1 dam (Pontal System); Itabirito with 1 dam (Maravilhas II); Mariana with 3 dams (Campo Grande, Didão Leste, Xingu); Nova Lima with 7 dams (5-Mutuca; 6 MAC; 7A MAC; B; B3/B4; Peneirinha; Vargem Grande); São Gonçalo Do Rio Abaixo with 1 dam (PDE 3); and Ouro Preto with 6 dams (Forquilha I, Forquilha II, Forquilha III, Grupo, Doutor, Dique de Pedra).

39. Plaintiff reserves the right to modify or amend the Class definition, as appropriate, during litigation.

40. Members of the proposed Class are readily ascertainable because the class definition is based upon objective criteria.

41. Numerosity. Seven represented municipalities are situated in the Iron Quadrangle. The total class members are too numerous to practically join in a single action. Class members may be notified of the pendency of this action by mail, supplemented by published notice (if deemed necessary or appropriate by the Court).

42. Commonality and Predominance. Common questions of law and fact exist as to all proposed Class members and predominate over questions affecting only individual Class members. These common questions include:

a. Whether Defendants funded any of Vale's mining operations in the Iron Quadrangle;

b. Whether Defendants knew, or should have known, about the risks associated with Vale's mining operations in the Iron Quadrangle;

c. Whether Defendants knew, or should have known, about the potential that environmental damage could be caused, or has already been caused, by Vale's mining operations in the Iron Quadrangle;

d. Whether Defendants constitute polluters under Brazilian law;

e. Whether Vale's mining operations in the Iron Quadrangle pose risks to municipalities in the area;

f. Whether Vale's mining operations in the Iron Quadrangle have damaged, or pose an imminent risk of damage in the future to, the environment in the Iron Quadrangle;

g. Whether Vale's mining operations constitute a violation of Brazilian citizens' constitutional right to security and well-being; and



43. Typicality. Plaintiff's claims are typical of the claims of the proposed Class. Plaintiff and the members of the proposed Class were all exposed to the same constant risks associated with the significant dangers arising out of Vale's mining operations in the Iron Quadrangle. Further, Plaintiff and the members of the proposed Class all may, under Brazilian law, sue to enforce the protection of the environment.

44. Adequacy. Plaintiff is an adequate representative of the proposed Class because its interests do not conflict with the interests of the members of the Class it seeks to represent. Plaintiff has retained counsel competent and experienced in complex class action litigation and will prosecute this action vigorously on Class members' behalf.

45. Superiority. A class action is superior to other available means for the fair and efficient adjudication of this dispute. The injury suffered by each Class member, while meaningful on an individual basis, is not of such magnitude as to make the prosecution of individual actions against Defendants economically feasible. Even if Class members themselves could afford such individualized litigation, the court system could not. In addition to the burden and expense of managing many actions arising from the risks associated with Vale's mining operations in the Iron Quadrangle and the environmental damages caused by such operations, individualized litigation presents a potential for inconsistent or contradictory judgments. Individualized litigation increases the delay and expense to all parties and the court system presented by the legal and factual issues of the case. By contrast, a class action presents far fewer management difficulties and provides the benefits of single adjudication, economy of scale, and comprehensive supervision by a single court.

46. In the alternative, the proposed Class is certifiable because:

a. the prosecution of separate actions by the individual members of the proposed Class would create a risk of inconsistent adjudications, which could establish incompatible standards of conduct for Defendants;

b. the prosecution of individual actions could result in adjudications, which as a practical matter, would be dispositive of the interests of non-party Class members or which would substantially impair their ability to protect their interests or the interests of the environment under Brazilian law; and

c. Defendants have acted or refused to act on grounds generally applicable to the proposed Class, thereby making appropriate final and injunctive relief with respect to the members of the proposed Class as a whole.

## **VI. ADDITIONAL CLASS CERTIFICATIONS AND INJUNCTIVE RELIEF**

47. The proposed Class is also certifiable under Federal Rule of Civil Procedure 23(c)(4). Rule 23(c)(4) states that Plaintiff may carve the proposed Class into subclasses. *See Bacon v Toia*, 437 F Supp 1371 [SDNY 1977], *affd.*, 580 F2d 1044 [2d Cir 1978]. Rule 23 (c)(4) allows for class certification with respect to specific or particular issues, and is well suited for identifying a single, common issue relevant to the entire class—liability as an example, while allowing for appropriate treatment of a class members damages. The Rule is intended to give courts discretion when handling complex cases by allowing them to divide cases into subclasses to distinguish unusual or complicated issues or claims that would otherwise prevent class certification because an individual class representative could not represent the entire class

48. The proposed Class is also certifiable under Federal Rules of Civil Procedure 23(b)(2). Rule 23(b)(2) permits injunctive relief or corresponding declaratory relief with respect

to the class as a whole if the party opposing the class has acted or refused to act on grounds that apply generally to the class. F.R.C.P. 23(b)(2).

## **VII. APPLICABILITY OF BRAZILIAN LAW**

49. Plaintiff's claims are governed by the procedural rules of class actions. Substantively, however, Plaintiff is also implementing claims and damages pursuant to Brazilian law.

50. Plaintiff pleads foreign law in accordance with Federal Rule of Civil Procedure 44.1. Pursuant to Federal Rule of Civil Procedure 44.1, Plaintiff "give[s] notice by a pleading" (this Complaint) that Plaintiff "intends to raise an issue about a foreign country's law," namely the law of Brazil.

51. Plaintiff has attached translated versions of applicable foreign law to this Complaint.

52. The law applicable to all Plaintiff's claims in this action is Brazilian law. Particularly, the Brazilian Federal Constitution; Brazil's National Environmental Policy Act, codified as Federal Law No. 6.938/1981, (attached hereto as **Exhibit B** and translated into English); and material sections of Brazil's Civil Code, are applicable here.

### **A. Brazil's Federal Constitution**

53. The Brazilian Federal Constitution (attached hereto as **Exhibit C** and translated into English) contains the following relevant provisions:

a. Article 5 provides that:

**"All persons are equal before the law, without any distinction whatsoever, Brazilians and foreigners residing in the country being ensured the inviolability of the right to life, to liberty, to equality, to security and to property . . . ."**<sup>24</sup>

---

<sup>24</sup> Constituição Federal [C.F.] [Constitution] art. 5 (Braz.) (emphasis added).

b. Article 193 provides that:

**“The social order is based on the primacy of work and aimed at social well-being and justice.”<sup>25</sup>**

c. Article 225 provides that:

**“Everyone has the right to an ecologically balanced environment, which is a public good for the people's use and is essential for a healthy life. The Government and the community have a duty to defend and to preserve the environment for present and future generations.”<sup>26</sup>**

d. Article 225 § 2 provides that:

**“Those who exploit mineral resources are obligated to restore any environmental degradation, in accordance with technical solutions required by the proper governmental agencies, as provided by law.”<sup>27</sup>**

e. Article 225 § 3 provides that:

**“Conduct and activities considered harmful to the environment shall subject the violators, be they individuals or legal entities, to criminal and administrative sanctions, irrespective of the obligation to repair the damages caused.”<sup>28</sup>**

54. As preservation of the environment is a duty for the Government and the citizens of Brazil, there is a heavy emphasis placed on holding those who damage and destroy the environment accountable. To that end, Brazil passed the National Environmental Policy Act.

### **B. Brazil’s National Environmental Policy Act (and Pertinent Case Law)**

55. Brazil’s National Environmental Policy Act<sup>29</sup> (“NEPA”) contains, amongst others, the following relevant provisions:

a. Article 3 (II) defines *Degradation of the Quality of the Environment* as:

**“The adverse alteration of the characteristics of the environment.”<sup>30</sup>**

---

<sup>25</sup> Constituição Federal [C.F.] [Constitution] art. 193 (Braz.).

<sup>26</sup> Constituição Federal [C.F.] [Constitution] art. 225 (Braz.).

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> Lei No. 6.398, de Agosto de 1981 (Braz.). Available at: <https://faolex.fao.org/docs/pdf/bra12932ENG.pdf>.

<sup>30</sup> *Id.* at 3(II).

b. Article 3 (III) defines *Pollution* as:

**“The degradation of the environmental quality resulting from activities that directly or indirectly:**

- 1. Harm society’s health, security and wellbeing;**
- 2. Result in unfavorable conditions to social and economic activities;**
- 3. Adversely affect the environment;**
- 4. Affect the sanitary and aesthetic environmental conditions;**
- 5. Release substances or energy that does not comply with the established environmental standards.”<sup>31</sup>**

c. Article 3 (IV) defines *Polluter* as:

**“The physical or legal person, of public or private right, that is directly or indirectly responsible for any activity resulting in the degradation of environmental quality.”<sup>32</sup>**

d. Article 14 paragraph 1 provides that:

**“Without prejudice to the penalties provided for by this article, the polluting agents are obliged to, independently of being guilty or not, indemnify or repair the damage caused to the environment and third parties, affected by their activities.”<sup>33</sup>**

56. Those who cause socio-environmental harms or reap benefits are considered indirect polluters, and thus are to be held strictly liable for that harm.

57. In 2009, the Superior Tribunal de Justiça (S.T.J.), Brazil’s highest court of appeals on non-constitutional matters,<sup>34</sup> decided a case in which the Public Ministry of the State of Goiás sued a major electric utility company, among others, for environmental damages resulting from the construction of a hydropower plant. In a unanimous decision (attached hereto as **Exhibit D** and translated into English), the court stated:

**“Liability for environmental damage is objective and, as such, does not require proof of culpability, but only the finding of a nexus between injury and**

---

<sup>31</sup> *Id.* at 3(III) (emphasis added).

<sup>32</sup> *Id.* at 3(IV) (emphasis added).

<sup>33</sup> *Id.* at 14, ¶ 1.

<sup>34</sup> Constituição Federal [C.F.] [Constitution] art. 105 (Braz.).

**causation. . . . The joint and several liability arises from the National Environmental Policy Act, article 3(IV) and article 14, paragraph 1.”<sup>35</sup>**

58. The same court issued another unanimous decision the same year concerning environmental damage in a mangrove area, stating:

**“For the purpose of determination of the proximate cause in environmental damage cases, one who commits [the act] shall be equated with one who does nothing when he or she should act, who allows it to happen, who does not care what is being done, who is financing so that it can be done, and who benefits when others act.”<sup>36</sup>**

59. Finally, the same court decided a case in which the Federal Public Ministry sued the Brazilian Development Bank (BNDES), among others, for environmental damages because of a borrower’s mining activities. The court stated:

**“Regarding BNDES, the simple fact that it is the financial institution responsible for financing the mining activities . . . at a first analysis, does not establish that it can be a defendant in the case. However, if there is evidence that this government-owned corporation [BNDES] was even aware of serious and severe environmental harm [and] ... has released intermediate or final disbursements to the mining project . . . in this case, [BNDES] shall be under a joint and several liability for damages.”<sup>37</sup>**

60. Brazilian law establishes a strict scheme to protect the environment, holding those who harm the environment—either directly or indirectly—*strictly liable*. The higher court in Brazil

---

<sup>35</sup> S.T.J., REsp 1056540, Realtor: Min. Eliana Calmon, 16.05.2008, R.S.T.J., 14.09.2009 (Braz.) (original wording: “a responsabilidade por danos ambientais é objetiva e, como tal, não exige a comprovação de culpa, bastando a constatação do dano e do nexo de causalidade.”) and (original wording: “A solidariedade nessa hipótese decorre da dicção dos arts. 30, inc. IV, e 14, § 1, da Lei 6.398/1981 (Lei da Política Nacional do Meio Ambiente.”)), available by case number at [www.stj.jus.br](http://www.stj.jus.br).

<sup>36</sup> S.T.J.-T2, REsp 650728, Realtor: Min. Benjamin Herman, 23.10.2007, R.S.T.J., 02.12.2009 (Braz.) (original wording: “Para o fim de apuração do nexo de causalidade no dano urbanístico-ambiental e de eventual solidariedade passiva, equiparam-se quem faz, quem não faz quando deveria fazer, quem não se importa que façam, quem cala quando lhe cabe denunciar, quem financia para que façam e quem se beneficia quando outros fazem.”), available by case number [www.stj.jus.br](http://www.stj.jus.br) (emphasis added).

<sup>37</sup> S.T.J., REsp 995321, Realtor: Min. Benedito Gonçalves, 15.10.2007, R.S.T.J., 15.12.2009 (Braz.) (original wording: “Quanto ao BNDES, o simples fato de ser ele a instituição financeira incumbida de financiar a atividade mineradora . . . em princípio, por si só, não o legitima para figurar no pólo passivo da demanda. Todavia, se vier a ficar comprovado . . . que a referida empresa pública, mesmo ciente da ocorrência dos danos ambientais que se mostram sérios e graves... houver liberado parcelas intermediárias ou finais dos recursos para o projeto de exploração mineral, sim, caber-lhe-á . . . responder solidariamente com as demais entidades-r-s pelos danos . . .”), available by case number at [www.stj.jus.br](http://www.stj.jus.br) (emphasis added).

considering comparable issues declared that lenders aware of environmental damages created by their borrowers should bear strict, joint and several liability for such damage. Brazil's National Environmental Policy Act provides the basis for this liability, requiring only that causation and injury to be established before a court to constitute a tort claim sufficient to impose liability upon a "direct" or an "indirect" polluter.

61. Defendants meet the definition of indirect polluters under Brazilian law. Thus, they are strictly liable, and jointly and severally liable, for all such damage to the Plaintiff.

### **C. Brazil's Civil Code**

62. In addition, the Brazilian Civil Code (attached hereto as **Exhibit E** and translated into English) contains, amongst others, the following material provisions:

63. Article 186 provides that:

**"A person who, by voluntary act or omission, negligence or imprudence, violates rights and causes damage to another, even though the damage is exclusively moral, commits an illicit act."**<sup>38</sup>

64. Article 187 provides that:

**"The holder of a right also commits an illicit act if, in exercising it, he manifestly exceeds the limits imposed by its economic or social purpose, by good faith or good conduct."**<sup>39</sup>

65. Article 927 provides that:

**"Anyone who, by an illicit act (Articles 186 and 187), causes harm to another, is obliged to redress it. (Sole paragraph) There will be an obligation to redress the damage, regardless of guilt, in the cases specified by law, or where the activity usually developed by the wrongdoer involves, by its nature, risk to the rights of others."**<sup>40</sup>

---

<sup>38</sup> Código Civil [C.C.], art.186.

<sup>39</sup> C.C., art. 187.

<sup>40</sup> C.C., art. 927.

66. Article 942 provides that:

**“The property of the person responsible for the offense or violation of another’s right is liable for redress of the damage caused; if more than one person has committed the offence, all of them shall be jointly and severally liable for the redress.”**<sup>41</sup>

**(Sole paragraph) “All those who committed the offence are jointly and severally liable; the persons designated in Article 932 are also jointly and severally liable responsible with those who committed the offence.”**

67. Article 949 provides:

**“In the event of the injury or other offense to health, the offender shall indemnify the offended person for the expenses of treatment and loss of profit until the end of the convalescence, in addition to any other loss that the offended person proves he has suffered.”**<sup>42</sup>

68. The Supreme Federal Court (“S.T.F.”) is the highest organ of the Brazilian Judiciary and has primary responsibility for ensuring compliance with the Brazilian Constitution. Recently, in 2020, the S.T.F. also ruled that environmental damages remediation claims have *no time limitation*.<sup>43</sup> The appeal arose from a claim filed in 1996 by the Federal Public Prosecutor’s Office against individuals involved in illegal logging and removal of timber between 1981 and 1987 located on indigenous land. The Superior Tribunal de Justiça sentenced the loggers to indemnify indigenous people and to pay for the forest restoration of affected areas. In so doing, the Superior Tribunal de Justiça ruled that:

**“the right to claim for environmental damages, within the hermeneutic logic, is protected by the mantle of imprescriptibility.”**<sup>44</sup>

That decision was appealed to the Supremo Tribunal Federal, which affirmed the decision, ruling (attached hereto as **Exhibit F** and translated into English) that:

---

<sup>41</sup> C.C., art. 942.

<sup>42</sup> C.C., art. 949.

<sup>43</sup> S.T.J., Nº 1.120.117 - AC (2009/0074033-7) Available at: <https://www.jusbrasil.com.br/jurisprudencia/stj/5706626/inteiro-teor-11866112>.

<sup>44</sup> *Id.*



**“the claim for civil remediation for environmental damage is not barred by time limitation.”<sup>45</sup>**

## **VIII. RELEVANT BACKGROUND AND DEFENDANTS’ KNOWLEDGE**

### **A. The Iron Quadrangle**

69. The Iron Quadrangle is in the state of Minas Gerais in the southeastern region of Brazil. With a population of over 4,135,000 inhabitants, it comprises an area of about 7,000 square kilometers and includes (fully or partially) 35 municipalities in the mid-region of the state of Minas Gerais, Brazil, including Ouro Preto.<sup>46</sup>

70. The Iron Quadrangle hosts one of the largest concentrations of iron ore deposits in the world. Iron ore is an essential component for the global iron and steel industries, as approximately 98% of mined iron ore is used in steel production.<sup>47</sup> In 2019, Brazil provided for 19.2% of the global iron ore market, or 480 million tons. The Iron Quadrangle accounts for 60% of Brazil’s iron ore production.<sup>48</sup> As of 2022, Brazil is the world’s second-largest iron ore producer with an increase in output of 0.98% in 2021.<sup>49</sup> Though production has decreased in the past five years, iron ore production is expected to increase by 4% between 2022 and 2026.<sup>50</sup> The iron ore in the Iron Quadrangle is of the type known as itabirite. This material produces a high-grade iron ore, as impurities such as sulfur or phosphate are removed during the metamorphic processes.<sup>51</sup>

---

<sup>45</sup> S.T.F., Extraordinary Appeal N° 654,833/AC, available by case number at: <https://portal.stf.jus.br>.

<sup>46</sup> IGBE, 2010 Census. Retrieved Feb. 10, 2019.

<sup>47</sup> *Iron Ore Statistics and Information*, USGS, <https://www.usgs.gov/centers/national-minerals-information-center/iron-ore-statistics-and-information#:~:text=Iron%20ore%20is%20the%20source,ore%20is%20used%20in%20steelmaking>.

<sup>48</sup> Rodrigues, et al., *The Use of Iron Ore Tailings in the Iron Quadrangle of Minas Gerais, Brazil*, KnE Engineering (April 2020).

<sup>49</sup> *Iron ore production in Brazil and major projects*, Mining Technology (July 7, 2023), <https://www.mining-technology.com/data-insights/iron-ore-in-brazil/>.

<sup>50</sup> *Brazil Iron Ore Mining Market by Reserves and Production, Assets and Projects, Fiscal Regime including Taxes and Royalties, Key Players and Forecast, 2021-2026*, GlobalData (Nov. 4, 2022).

<sup>51</sup> *Iron Quadrangle, Minas Gerais, Brazil*, Mindat, <https://www.mindat.org/loc-21133.html>

71. In 2018, Vale produced 384.6 million metric tons of iron ore in total, with a significant amount of the total production coming from the Iron Quadrangle.<sup>52</sup> On September 16, 2020, the company announced that it expects to reach an iron ore capacity of 400 million tons per year by 2022 by increasing output across its operations, including in the Iron Quadrangle, despite the enormous negative impact on the lives and livelihoods of those who reside there.<sup>53</sup> This includes Vale’s successful push for permission to resume operations at its Germano iron ore mine, where production was finally halted after a tailings dam failed in 2015, causing a massive environmental disaster.

72. Vale continues to push its ore production further, getting a license for its new Torto dam at the Brucutu complex in Barão de Cocais and São Gonçalo do Rio Abaixo as recently as July 3, 2023.<sup>54</sup> Vale expects to produce 36 to 40 million tons of iron ore this year and a further 50 to 55 million tons in 2026.<sup>55</sup>

## **B. Vale’s Mining Operations Produce and Store Toxic Waste Without Limitation**

73. Vale operates numerous mines throughout the Iron Quadrangle. As part of these operations, Vale uses dams to hold the toxic waste byproduct from its mining, known as “tailings.”

74. As ore is mined, an enormous amount of waste is generated. Following extraction of the ore, various processes are used to separate the desired ore. In a process known as beneficiation, the ore is separated, and a waste stream (known as “tailings”) is produced, which consists of a mixture of water, processing chemicals, and finely ground dirt and rock.

---

<sup>52</sup> Lewis, Jeffrey T., *Iron Ore Producer Vale Estimates Sales Impact of Dam Disaster*, The Wall Street Journal (Mar. 28, 2019), <https://www.wsj.com/articles/iron-ore-producer-vale-estimates-sales-impact-of-dam-disaster-11553796662>.

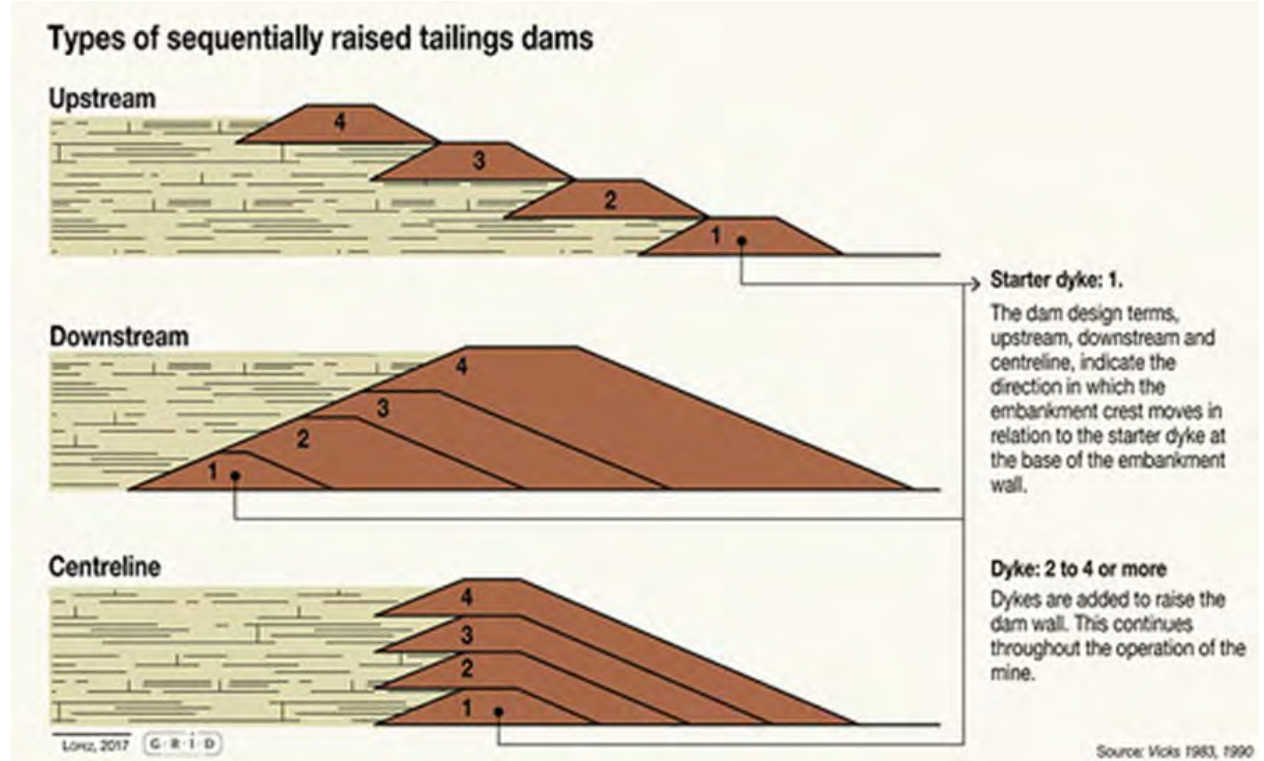
<sup>53</sup> Venditti, Bruno, *Vale targets 400m tonnes of iron ore capacity per year*, Mining (Sept. 16, 2020), <https://www.mining.com/vale-targets-400m-tonnes-iron-ore-production/>.

<sup>54</sup> *Torto dam at Brucutu receives license to operate*, Vale (July 3, 2023), <https://www.vale.com/w/torto-dam-at-brucutu-receives-license-to-operate/-/categories/1968788>

<sup>55</sup> *Id.*

75. Typically, these tailings are then pumped via pipes into a retention basin, which is part of a tailings dam. These dams are created for the specific purpose of retaining the tailings waste product.

76. There are various methods for constructing a tailings dam: the downstream method, the upstream method, and the centerline method. The below graphic depicts each of these designs:



77. The downstream design is the most secure method for building the tailings dam for long-term retention of the waste slurry. However, it is the most expensive method. The upstream design, which is much cheaper, is a less secure method for storing the tailings.

78. In all designs, as more tailings are pumped into the basin for retention, additional storage space is needed. Thus, to expand the tailings dam, additional dykes are built. In the downstream design, the dykes are built on top of the previous solid layer dyke. As additional dyke layers are added, this requires more and more volume of solid material. This ensures that each successive layer is built on a solid foundation, which ensures the strongest possible retention of

the tailings. In the centerline design, additional dyke layers are built partially upon the previous solid layer and the tailings slurry. In the upstream design, additional dyke layers are built upon the tailings slurry. In the latter designs, construction requires that the slurry dry out before the next dyke layer is built on top of it.

79. The centerline and upstream designs are much less secure than the downstream design, because they rely on the stability of the tailings themselves as a foundation for construction of the dam's retention walls. Because the upstream design's dykes are built entirely on tailings, it is by far the least secure.

80. The Wall Street Journal also described how upstream construction works:

“Upstream” design . . . involves letting the tailings closest to the dam dry out. These dry tailings are then used as the foundation for new levels, raised by plowing earth or tailings into successive embankments. As it requires the least amount of bulldozing, the upstream method is the least expensive way of building a tailings dam and was employed by Samarco.<sup>56</sup>

81. A well-recognized hazard of upstream dams (built on tailings) is that they are more susceptible to liquefaction, a physical phenomenon in which the strength and stiffness of soil is reduced by either dynamic events (e.g., earthquake or other sudden increases in load) or static forces (e.g., slope instability or the buildup of water pressures unrelated to dynamic forces). One paper on the history of tailings dam failures concluded that static liquefaction likely is the most common cause of tailings dam failures.<sup>57</sup>

---

<sup>56</sup> Kiernan, Paul, *Mining Dams Grow to Colossal Heights, and So Do the Risks*, The Wall Street Journal, (Apr. 5, 2016), <https://www.wsj.com/articles/brazils-samarco-disaster-mining-dams-grow-to-colossal-heights-and-so-do-the-risks-1459782411>.

<sup>57</sup> Davies, Michael P., & Ed McRoberts, *Static Liquefaction of Tailings – Fundamentals and Case Histories*, Association of State Dam Safety Officials (May 1, 2002).

82. On April 5, 2016, the Wall Street Journal reported that “[s]cientists say the typical culprit for tailings accidents is too much water, which can cause earthen dams to liquefy.” The following graphic reprinted from the Wall Street Journal illustrates the concept:<sup>58</sup>

#### Tailings Dam Risks



##### Water

Water is a tailings dam's worst enemy. If it saturates the dam walls or the tailings beneath an upstream dam, the whole structure can liquefy and slide. Wetter tailings also travel farther and faster if they escape, causing more destruction.



##### Weak Foundation

An undetected layer of clay or silt beneath a tailings dam can prove disastrous. In addition to being less sturdy than rock or sand, such materials drain poorly, allowing water to silently infiltrate the dam.



##### Rate of Rise

Upstream tailings dams should be raised slowly, to allow the beach time to dry and consolidate enough to support a new level of the dam. But this requires a level of discipline that can test mining companies.

83. While it seems counter-intuitive, unlike conventional water reservoir or hydroelectric dams, tailings dams are not designed to hold substantial amounts of water. In fact, water is the number one enemy of tailings dams, as too much of it makes them unstable and greatly increases the risk of collapse. Accordingly, great care must be taken not to raise the level of an upstream dam too quickly to ensure that the tailings used to construct the “lifts” have sufficient time to dry out before additional lifts are added. If the tailings do not dry sufficiently, the risk of a collapse resulting from liquefaction increases significantly.

84. The significant risks of liquefaction have been documented for decades in public and academic literature, both in connection with dynamic events and static forces . These risks, as well as the many other risks associated with tailings dams, are undoubtedly well known to Vale and Defendants.

---

<sup>58</sup> Kiernan, Paul, *Mining Dams Grow to Colossal Heights, and So Do the Risks*, The Wall Street Journal, (Apr. 5, 2016), <https://www.wsj.com/articles/brazils-samarco-disaster-mining-dams-grow-to-colossal-heights-and-so-do-the-risks-1459782411>.

85. In contrast, the more expensive downstream and centerline construction methods achieve higher resistance to liquefaction than tailings dams constructed by the upstream method.

86. Vale owns and operates, or owns jointly, 30 tailings dams in the Iron Quadrangle. 10 dams are built like those that failed in the Fundão and Brumadinho disasters—that is, with an “upstream design.” As Vale and Defendants are aware, this design is the cheapest and least-stable type of tailings dam design because upstream design dams stay waterlogged, and thus are easily susceptible to cracks, bursts, and other events that ultimately lead to their failure with disastrous consequences. These dams are built in the opposite direction of the water flow (upstream). The body of the dam is constructed using the deposited tailings which the dam is designed to hold. There is not a separate layer of concrete or metal to hold back the contents. Upstream designs dams instead rely on the lake of mud to remain solid enough to contain itself.

87. In 2019, Vale announced the de-characterization, or decommissioning, of all upstream tailings dams due to their stability issues.<sup>59</sup> Vale claimed that all upstream tailings dams would be fully decommissioned and reintegrated into the environment within three years of that announcement.<sup>60</sup> As of today, four years later, only 40% of those upstream dams have been decommissioned.<sup>61</sup>

88. Additionally, 21 of Vale’s dams have high hazard classifications, meaning they have a combination of large dam volumes containing hazardous tailings and downstream

---

<sup>59</sup> *Vale announces the decommissioning of all its upstream dams*, VALE (Jan. 29, 2019), [https://www.vale.com/pt/w/vale-announces-the-decommissioning-of-all-its-upstream-tailings-dams#:~:text=Vale%20informs%20that%20it%20has,reintegrate%20them%20into%20the%20environment.29,2019\), https://www.vale.com/pt/w/vale-announces-the-decommissioning-of-all-its-upstream-tailings-dams#:~:text=Vale%20informs%20that%20it%20has,reintegrate%20them%20into%20the%20environment.](https://www.vale.com/pt/w/vale-announces-the-decommissioning-of-all-its-upstream-tailings-dams#:~:text=Vale%20informs%20that%20it%20has,reintegrate%20them%20into%20the%20environment.29,2019),https://www.vale.com/pt/w/vale-announces-the-decommissioning-of-all-its-upstream-tailings-dams#:~:text=Vale%20informs%20that%20it%20has,reintegrate%20them%20into%20the%20environment.)

<sup>60</sup> *Id.*

<sup>61</sup> *Upstream dam de-characterization program advances*, VALE, <https://www.vale.com/programa-de-descaracteriza%C3%A7%C3%A3o-de-barragens-a-montante-avan%C3%A7a.>



populations with a high concentration of social-economic activity. Further, many of these dams are not certified as stable, and/or already have noted stability concerns.

89. Vale has categorized these dams based on the emergency levels of geotechnical structures.<sup>62</sup> Categorization of the dams is also assessed by the Brazilian National Mining Agency (“ANM”). This independent agency oversees regulating and supervising mining activities through review of the dams’ physical and hydraulic safety conditions.<sup>63</sup> It establishes requirements for dam safety that must be met in order to for a mine to remain in commission.

90. The following table is a condensed version of Exhibit A, demonstrating that the 21 high-risk dams in the impacted municipalities, externally assessed by the ANM, are still at emergency levels.<sup>64</sup>

#	Dam	Operational Situation	Municipality	Emergency Level Mar/23	Change since Mar/23?	Last Change
1	5 - Mutuca	Inactive	Nova Lima	1	No	7/29/20
2	6	Inactive	Nova Lima	1	No	6/9/20
3	7A	Inactive	Nova Lima	1	No	6/9/20
4	B	Inactive	Nova Lima	1	No	4/1/19
5	B3/B4	Decommissioning	Nova Lima	2	No	12/2/22
6	Campo Grande	Decommissioning	Mariana	1	No	4/1/19
7	Dicão Leste	Operation	Mariana	1	No	4/24/20
8	Dique de Pedra	Inactive	Ouro Preto	2	No	2/22/22
9	Doutor	Decommissioning	Ouro Preto	1	No	5/18/21
10	Forquilha I	Decommissioning	Ouro Preto	2	No	10/8/20
11	Forquilha II	Decommissioning	Ouro Preto	2	No	2/20/19
12	Forquilha III	Decommissioning	Ouro Preto	3	No	3/27/19
13	Grupo	Decommissioning	Ouro Preto	2	No	2/20/19
14	Maravilhas II	Inactive	Itabirito	1	No	4/1/19
15	Norte/Laranjeiras	Inactive	Barão de Cocais	1	No	11/30/21
16	PDE 3	Operation	São Gonçalo do Rio Abaixo	1	No	9/1/21
17	Peneirinha	Inactive	Nova Lima	1	No	4/1/20
18	Sistema Pontal	Decommissioning	Itabira	1	No	3/31/19
19	Sul Superior	Decommissioning	Barão de Cocais	3	No	3/22/19
20	Vargem Grande	Decommissioning	Nova Lima	1	No	6/4/19
21	Xingu	Decommissioning	Mariana	2	No	9/29/20

<sup>62</sup> Dam Performance, VALE, <https://www.vale.com/web/esg/dam-performance>.

<sup>63</sup> Dam Performance, VALE, <https://www.vale.com/web/esg/dam-performance>.

<sup>64</sup> Control and Management of Dams, VALE, <https://www.vale.com/web/esg/control-and-management-of-dams>, updated May 10, 2023.

91. A Level 1 emergency means an anomaly has been detected in the dam with a potential compromise in the safety of the structure, requiring special daily inspections.<sup>65</sup> As such, the ANM, environmental agencies, and Civil Defense (national, state and municipal), are notified and Vale is required to signal instability and intensify monitoring of the dam. Thirteen Level 1 dams are present in the municipalities represented by this Complaint.

92. A Level 2 emergency occurs when the result of the actions taken in a Level 1 emergency is classified as “uncontrolled” or “not extinguished,” requiring new special inspections and interventions.<sup>66</sup> In addition to the ANM, environmental agencies, and Civil Defense being notified, the Self-Rescue Zone (“ZAS”)<sup>67</sup> and Secondary Safety Zone (“ZSS”)<sup>68</sup> are now also involved. At this level, Vale is required to evacuate citizens within the ZAS. Six Level 2 dams are present in the municipalities represented by this Complaint.

93. A Level 3 emergency means a situation of imminent or ongoing rupture.<sup>69</sup> The same groups are contacted (ANM, environmental agencies, Civil Defense, ZAS, and ZSS) and relocation efforts are extended to citizens who live within the ZSS through additional educational measures. Two Level 3 dams are present in the municipalities represented by this Complaint.

94. The land, air, and water in the Iron Quadrangle have been severely contaminated by Vale’s mining operations and tailings dams and, as a result, the property values of the homes and businesses in these historic cities have plummeted. Indeed, the imminent threat of collapse of Vale’s dams has destroyed the property values in the Iron Quadrangle to such an extent that the

---

<sup>65</sup> *Id.*

<sup>66</sup> *Id.*

<sup>67</sup> The Self-Rescue Zones, or ZAS, is the region where there is not enough time for the authorities to intervene in an emergency situation. Defined roughly as wherever a flood wave from a dam could reach within thirty minutes or 10 km. *Control and Management of Dams*, VALE, <https://www.vale.com/web/esg/control-and-management-of-dams>, updated May 10, 2023.

<sup>68</sup> The Secondary Safety Zones, or ZSS, means the region contained in the flood map but cannot be defined as ZAS.

<sup>69</sup> *Id.*



properties have been effectively expropriated. None of these losses, of which the Defendants are acutely aware, would have occurred but for the enabling financing provided by the Defendants.

**C. Vale’s Operations Have Inflicted Significant Damage on the Environment in the Iron Quadrangle**

**a. Mariana Dam Disaster: The 2015 Fundão Dam Collapse**

95. Vale is responsible for the largest recorded pollution event in Brazil’s history when a tailings dam used for mining operations near Mariana, Minas Gerais (in the Iron Quadrangle) failed, spilling contaminants across the surrounding areas and spreading pollutants down the Rio Doce river and into the Atlantic Ocean.<sup>70</sup> This widespread pollution significantly impacted the environment, as well as directly affecting countless communities. Below is a satellite photo of the magnitude of Vale’s pollution:



<sup>70</sup> Fonseca do Carmo, Flávio; et al., *Fundão tailings dam failures: the environment tragedy of the largest technological disaster of Brazilian mining in global context*, Perspectives in Ecology and Conservation (July-Sept. 2017), doi:10.1016/j.pecon.2017.06.002.

96. Scientists estimate that it will take 10 to 20 years, if not longer, for the Rio Doce to recover from this disaster.<sup>71</sup> Presently, the river is left with only 13% of the Atlantic Forest's original vegetation. Municipalities along the Rio Doce have been forced to prohibit fishing in the river, its tributaries, and the oceanic water near the mouth of the river for the health and safety of citizens. On average, the metal contamination of fish in the Rio Doce is 140 times above the legal consumption limit. These restrictions and the pollution from the disaster have decimated fishing communities, leaving them without their traditional source of income.

97. The disaster created a humanitarian crisis with hundreds of people displaced, business and livelihoods destroyed, property irreparably damaged, and cities along the Rio Doce suffering from water shortages due to polluted water supplies. The physical health of those in the Iron Quadrangle has also been greatly impacted. For example, in the municipality of Barra Longa high levels of contaminated dust remains in the area, which residents continually inhale and absorb through their skin. Approximately 77.9% of Barra Longa's urban and rural residents have reported worsening health conditions since the disaster.<sup>72</sup> Further, 83.4 percent of citizens reported mental health issues that developed following the Fundão dam incident.<sup>73</sup>

98. While Plaintiff's claims are not based on this disaster, these facts illustrate the serious dangers associated with tailings dams, just like those that are in constant use at Vale-owned (and Defendant-funded) mining operations. The risk of their failure is an ever-present concern for Plaintiff and Class members and their use contaminates and will continue to contaminate the

---

<sup>71</sup> Shook, Bryana, *Challenges Linger Three Years after Fatal Dam Collapse in Mariana*, Wilson Center (Dec. 13, 2018), <https://www.wilsoncenter.org/blog-post/challenges-linger-three-years-after-fatal-dam-collapse-mariana>.

<sup>72</sup> *Avaliação Dos Riscos em Saúde da População Afetada Pelo Desastre de Mariana*, GreenPeace (Mar. 2017), [https://www.greenpeace.org.br/hubfs/Campanhas/Agua\\_Para\\_Quem/documentos/RelatorioGreenpeace\\_saude\\_RioDce.pdf](https://www.greenpeace.org.br/hubfs/Campanhas/Agua_Para_Quem/documentos/RelatorioGreenpeace_saude_RioDce.pdf).

<sup>73</sup> *Id.*

environment—contamination that will only significantly worsen when one of these tailings dams fails.

99. Both Vale and Defendants understand these risks, as they have experienced such a catastrophic failure firsthand. Nevertheless, Vale continues to operate tailings dams at its other facilities throughout the Iron Quadrangle, and Defendants continue to fund these operations—seemingly with no concern either for the risks posed to Plaintiff and Class members or for the environmental damage already being caused by these operations.

100. As a result of the Mariana Dam Disaster, Plaintiff understands that it is only a matter of time before the tailings dams in its community—and the communities of the municipalities it represents—collapse. Vale’s conduct has not changed, continuing mining operations at a feverish pace, overburdening existing tailings dams. All the while, Defendants continue to fund the company and Plaintiff understands that the next disaster is inevitable. Meanwhile, Plaintiff’s air, water, and land is damaged further every day. Plaintiff is economically trapped, however, and knows it cannot avoid the coming environmental destruction.

101. The Mariana Disaster was highly publicized worldwide. In the United States, countless articles were published on the event, given that it was the worst pollution event in Brazil’s history. As lenders to Vale, Defendants were aware of the tragic events in Mariana. Not only were Defendants aware of their client’s massive failure because it was published in the global media, but it is also referenced in SEC forms that were addressed to Defendants.<sup>74</sup>

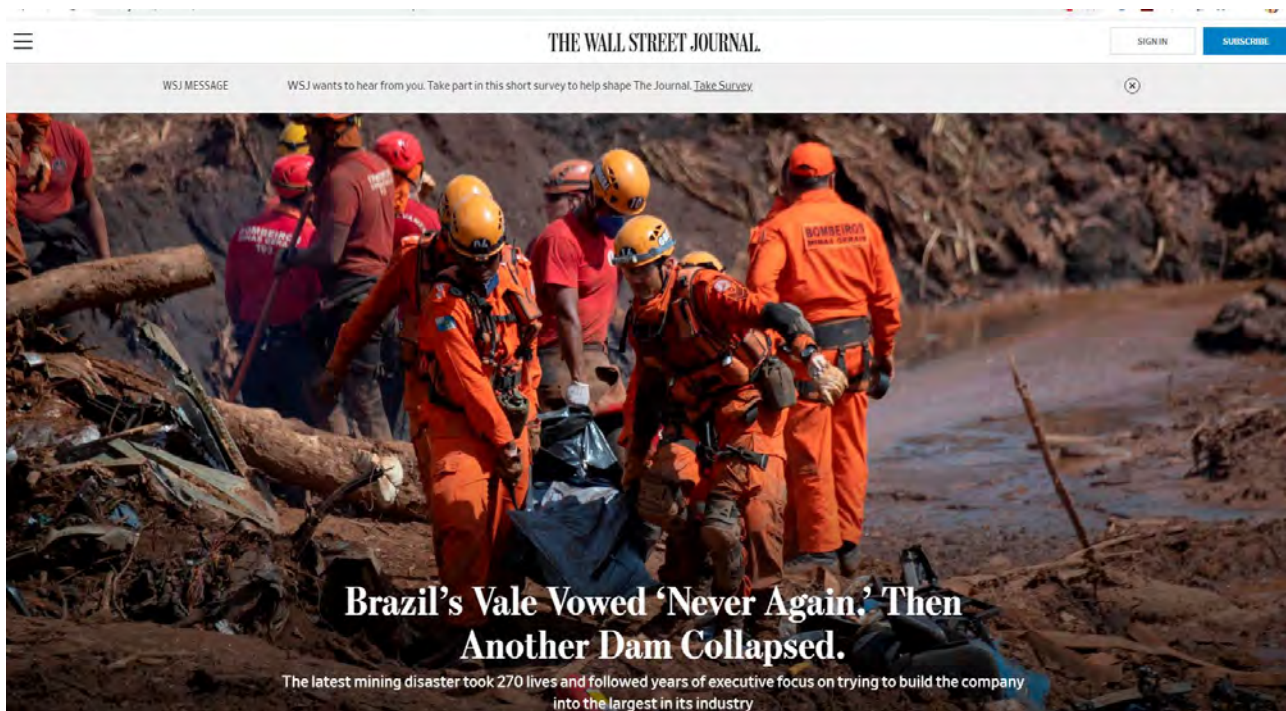
---

<sup>74</sup> See Form 20-F, SEC (2022), p. 22-23,

[https://www.sec.gov/ix?doc=/Archives/edgar/data/917851/000129281423001516/valeform20f\\_2022.htm](https://www.sec.gov/ix?doc=/Archives/edgar/data/917851/000129281423001516/valeform20f_2022.htm) (“The collapse of any of these structures could cause loss of life and severe personal, property and environmental damages, as well as negative social impact, and could have adverse effects on our business and reputation, **as evidenced by the consequences of the dam collapse in Brumadinho and Samarco’s dam collapse in Mariana.**”) (emphasis added). See also Form 20-F, SEC (2016), p. 22-23, <https://www.sec.gov/Archives/edgar/data/917851/000104746916011818/a2227496z20-f.htm>; Form 20-F, SEC (2018), <https://www.sec.gov/Archives/edgar/data/917851/000104746918002777/a2234766z20-f.htm>; Form 20-F, SEC (2020), <https://www.sec.gov/Archives/edgar/data/917851/000104746920002065/a2240808z20-f.htm>.

## b. Brumadinho Dam Disaster: The 2019 Córrego do Feijão Dam Collapse

102. Following the Mariana Dam Disaster—and while the tragedy was still fresh in the minds of those in the Iron Quadrangle—Vale continued its operations without addressing the underlying causes that led to the Fundão tailings dam’s failure. Not long after that disaster, another tailings dam owned and operated by Vale collapsed, killing 270 Brazilians<sup>75</sup> and once again wreaking widespread devastation to surrounding areas.



103. This collapse, known as the Brumadinho Dam Disaster, occurred on January 25, 2019, when the tailings dam at the Córrego do Feijão iron ore mine suffered a similar massive failure. The dam collapsed, releasing a wave of toxic mud that inundated houses in a rural area near the city of Brumadinho in Minas Gerais.

<sup>75</sup> Pearson, Samantha, et al., *Brazil's Vale Vowed 'Never Again.' Then Another Dam Collapsed.*, The Wall Street Journal (Dec. 31, 2019), <https://www.wsj.com/articles/brazils-vale-vowed-never-another-dam-collapse-then-an-even-worse-one-11577809114>.



104. Once again, Vale had previously been warned—but again ignored—that the dam’s risk of collapse was twice that allowed by internal guidelines.<sup>76</sup> Multiple employees were also aware of leaks in the dam, but their voiced concerns were ignored by Vale.



Satellite images courtesy of USGS/ESRI and Maxar Technologies

105. Satellite photos<sup>77</sup> before the dam collapse, as compared to those after the collapse, illustrate the incredible devastation:

---

<sup>76</sup> Slattery, Gram & Marta Nogueira, *Brazil's Vale dam disaster report highlights governance shortcomings*, Reuters (Feb. 21, 2023), <https://www.reuters.com/article/us-vale-disaster/brazils-vale-dam-disaster-report-highlights-governance-shortcomings-idUSKBN20F2Q6>.

<sup>77</sup> <https://weather.com/news/news/2019-02-07-brazil-dam-collapse-satellite-photos#1>;  
<https://weather.com/news/news/2019-02-07-brazil-dam-collapse-satellite-photos#2>.



106. To date, 259 people have been confirmed dead, and another 11 bodies have never been found as of September 2020.<sup>78</sup>

107. In the city of Brumadinho, many agricultural areas have been damaged or destroyed by the flood of tailings from Córrego do Feijão. The local livestock industry suffered massive damages due to the loss of livestock (primarily cattle and poultry) from exposure to environmental pollutants. Local markets and business were damaged, and many had to close. Even daily activities became incredibly challenging as a mass of thick mud cut directly through the town.

108. Weeks after the disaster, residents, and volunteers within Brumadinho who were exposed to the toxic sludge began to show signs of contamination, including nausea, vomiting, and dermatitis.<sup>79</sup>

109. Like the Mariana Disaster, the Brumadinho Dam Collapse was publicized globally. In the United States, countless articles were published on the event. As a lender to Vale, Defendants were aware of the events in Brumadinho. Not only were Defendants aware of their client's massive failure because it was published in the global media, but it is also referenced yearly in SEC forms that were addressed to Defendants.<sup>80</sup>

---

<sup>78</sup> Nogueira, Marta & Christian Plumb, *Exclusive: Brazil prosecutor aims to charge Vale within days over mining waste dam disaster*, REUTERS (Jan. 8, 2020), <https://www.reuters.com/article/us-vale-sa-disaster-exclusive-idUSKBN1Z72GS>.

<sup>79</sup> Sudré, Lu, *Criminal negligence: 30 days from Brumadinho dam burst*, BrasilWire (Mar. 1, 2019), <https://www.brasilwire.com/criminal-negligence-30-days-from-brumadinho-dam-burst/>.

<sup>80</sup> See Form 20-F, SEC (2022)

[https://www.sec.gov/ix?doc=/Archives/edgar/data/917851/000129281423001516/valeform20f\\_2022.htm](https://www.sec.gov/ix?doc=/Archives/edgar/data/917851/000129281423001516/valeform20f_2022.htm) (“The collapse of any of these structures could cause loss of life and severe personal, property and environmental damages, as well as negative social impact, and could have adverse effects on our business and reputation, **as evidenced by the consequences of the dam collapse in Brumadinho and Samarco’s dam collapse in Mariana.**”) (emphasis added); see also Form 20-F, SEC (2019), p. 2,

<https://www.sec.gov/Archives/edgar/data/917851/000104746919002391/a2238479z20-f.htm>; Form 20-F, SEC (2020), <https://www.sec.gov/Archives/edgar/data/917851/000104746920002065/a2240808z20-f.htm>; Form 20-F, SEC (2021), p. 19-26, <https://www.sec.gov/Archives/edgar/data/917851/000104746921000687/a2243060z20-f.htm>.



#### D. Vale's Well-Known Reputation

110. Vale's mining operations, and particularly its operation of tailings dams associated with such mining, have caused—and continue to cause—significant environmental damage in Brazil, including in Minas Gerais. The damages caused by Vale's operations, and the dangers associated with them, have been well-known for decades. Plaintiff and represented Class members, the municipalities, have suffered the brunt of those damages.

111. Vale's notorious reputation of causing significant environmental damage has been well-known on a global scale for decades. In 2012, Vale “won” the Public Eye Awards—an ignominious prize awarded to Vale for being the company with the most “*contempt for the environment and human rights*” in the world<sup>81</sup>—based, in part, upon its carefree stance on causing continued environmental damage.

112. Vale had been nominated for this notorious honor by numerous Brazilian groups, who cited Vale's negative environmental, social, and working impact resulting from its activities in Brazil and elsewhere over the previous decade. For example, these groups cited Vale's displacement of communities in the Iron Quadrangle to make way for its operations, its damaging the native areas and water resources of indigenous communities, and its constant endangering of public health.<sup>82</sup>

113. Investigations revealed that Vale knew that the dams would fail but took no action, instead focusing on cutting costs and increasing production.<sup>83</sup> In 2009, a Vale employee compiled a 73-page report that pointed to the “rising volume of tailings produced at the company's mines”

---

<sup>81</sup> *Vale wins the Public Eye Awards, given to the worst company in the world*, Int'l Alliance of Inhabitants (Jan. 27, 2012), [https://www.habitants.org/news/inhabitants\\_of\\_americas/vale\\_wins\\_the\\_public\\_eye\\_awards\\_given\\_to\\_the\\_worst\\_company\\_in\\_the\\_world](https://www.habitants.org/news/inhabitants_of_americas/vale_wins_the_public_eye_awards_given_to_the_worst_company_in_the_world).

<sup>82</sup> *Id.*

<sup>83</sup> *Vale 'knew collapsed dam was at risk', says report*, BBC (February 12, 2019), <https://www.bbc.com/news/business-47209265>.



and suggested a number of alternative uses for the waste given the danger of the current system.<sup>84</sup> Vale ignored this report and chose not to implement several steps that would have prevented the environmental degradation and harm to locals and communities it caused. Additionally, in 2013, a non-profit environmental and geotechnical modelling institute was commissioned by the Minas Gerais Environment Ministry to prepare a report relating to Vale's operations.<sup>85</sup> That report predicted that the Fundão dam was likely to burst.<sup>86</sup>

114. After the Mariana dam failed, Vale officials deceptively assured the public that they would adopt stricter safety protocols.<sup>87</sup> In reality, Vale took the opposite approach. Instead, Vale intentionally ignored the structural warnings it received prior to the collapse of both the Fundão and Brumadinho dams.

115. Months before the Brumadinho collapse, Vale hired a German inspection company, TÜV SÜD, to evaluate the Brumadinho site.<sup>88</sup> The company found blocked drainage pipes and cracks, found water visibly seeping from at least one area, and stated there was a risk of liquefaction of the mud, which often leads to dam bursts.<sup>89</sup> Despite this information, Vale did not address the problems or take increased safety precautions. Defendants, of course, continued to

---

<sup>84</sup> Nogueira, Marta & Ernest Scheyder, *Exclusive: Vale Eyed Dam Design Changes in 2009 that May Have Prevented Disaster*, Insider (2019), <https://www.insider.com/r-exclusive-vale-eyed-dam-design-changes-in-2009-that-may-have-prevented-disaster-2019-1>.

<sup>85</sup> Saunders, Amanda, et al., *Experts warned deadly BHP Billiton dam had flawed design*, Australian Financial Review (Nov. 12, 2015), <https://www.afr.com/companies/mining/experts-warned-deadly-bhp-billiton-dam-had-flawed-design-20151111-gkw7ii>.

<sup>86</sup> Phillips, Dom, *Brazil's mining tragedy: was it a preventable disaster?*, THE GUARDIAN (Nov. 25, 2015), <https://www.theguardian.com/sustainable-business/2015/nov/25/brazils-mining-tragedy-dam-preventable-disaster-samarco-vale-bhp-billiton>

<sup>87</sup> Pearson, Samantha, et al., *Brazil's Vale Vowed 'Never Again.' Then Another Dam Collapsed.*, The Wall Street Journal (Dec. 31, 2019), <https://www.wsj.com/articles/brazils-vale-vowed-never-another-dam-collapse-then-an-even-worse-one-11577809114>.

<sup>88</sup> TÜV SÜD hires law firms to probe Vale dam disaster role, Reuters (Feb. 6, 2019), <https://www.reuters.com/article/us-vale-sa-disaster-t-v-s-d/tv-sd-hires-law-firms-to-probe-vale-dam-disaster-role-idUKKCN1PV2N0>.

<sup>89</sup> Kowsmann, Patricia, & Scott Patterson, *Inspectors of Vale Dam in Brazil Issued Warning Before Collapse*, The Wall Street Journal, <https://www.wsj.com/articles/inspection-of-vale-dam-in-brazil-issued-warning-before-collapse-11549485427>.

fund Vale's expansion of its production. Following the Brumadinho Dam Disaster, a Vale executive and numerous employees, along with five others, were charged with homicide and environmental violations related to this disaster.<sup>90</sup>

116. These deceptions were confirmed and further publicized in March 2023 when Vale agreed to pay \$55.9 million to settle charges from the Securities and Exchange Commission (SEC) which accused Vale of giving erroneous and deceptive representations regarding the security of its dams before the collapse of the Brumadinho dam in January 2019.<sup>91 92</sup> Despite this information, Vale did not significantly address the problems or take increased safety precautions and, of course, Defendants continued to fund Vale's expansive production increases.

117. In May 2019, Vale withdrew from the United Nations Global Compact, which is the world's largest network for corporate social responsibility.<sup>93</sup> An international group of civil society organizations submitted a request for the exclusion of Vale for violations of the UN Global Compact's principles on environmental rights.<sup>94</sup> These violations include, but are not limited to, failure to carry out adequate risk assessment and the failure to take the necessary measures for prevention and mitigation of environmental damage in the Iron Quadrangle.<sup>95</sup> Due to Vale's failure to abide by the Compact's mission for moral corporate culture and respect for the

---

<sup>90</sup> Phillips, Dom, *Brazil prosecutors charge 16 people with murder in dam collapse that killed 270* (Jan. 21, 2020), <https://www.theguardian.com/world/2020/jan/21/brazil-dam-collapse-mining-disaster-charges>.

<sup>91</sup> *SEC Charges Brazilian Mining Company with Misleading Investors about Safety Prior to Deadly Dam Collapse*, SEC (Apr. 28, 2022), <https://www.sec.gov/news/press-release/2022-72>.

<sup>92</sup> *Brazilian Mining Company to Pay \$55.9 Million to Settle Charges Related to Misleading Disclosures Prior to Deadly Dam Collapse*, SEC (Mar. 28, 2023), <https://www.sec.gov/news/press-release/2023-63>.

<sup>93</sup> *Brazil: Following pressure, Vale withdraws from the UN Global Compact, because of Rio Doce and Brumadinho dam disasters, says civil society*, Business and Human Rights Resource Center (June 11, 2019), <https://www.business-humanrights.org/en/brazil-following-pressure-vale-withdraws-from-the-un-global-compact-because-of-rio-doce-and-brumadinho-dam-disasters-says-civil-society>.

<sup>94</sup> *In the wake of deadly dam collapse, organizations call for Vale to be delisted from the Global Compact*, Conectas (Feb. 12, 2019), <https://www.conectas.org/en/noticias/dam-collapse-delisted-global-compact>.

<sup>95</sup> *Wilde-Ramsing, Joseph, Brazil: organizations call for Vale to be delisted from the UN Global Compact*, Somo (Feb. 12 2019) <https://www.somo.nl/brazil-in-the-wake-of-another-deadly-dam-collapse-organizations-call-for-vale-to-be-delisted-from-the-un-global-compact/>.

environmental and human rights, the public's outcry against Vale resulted in Vale's withdrawal from the UN Global Compact.<sup>96</sup> Despite this, Defendant's increased their funding of Vale's expanding production.

### **E. The Defendant's Response to Vale's Malfeasance: Nothing**

118. In the face of these local, national, and global outcry over Vale's ongoing environmental damages and nonexistent risk assessment to ensure the safety of their mining operations, Defendants have done *nothing* to limit the environmental destruction, financing only Vale's increased production. Defendants could have easily demanded that Vale be held accountable for its numerous violations, required that it assess the risks of an environmental disaster relating to its mining operations—but Defendants did neither. Vale has been, and remains, entirely dependent on these bank loans so that had the mere threat of cutting off loans or substantially lowering Defendants' funds contingent upon ending Vale's wrongful practices been made by Defendants, Vale would have been forced to alter its corporate behavior to stay afloat as a business. Instead, Defendants continued to unconditionally fund Vale's operations despite these numerous disasters, deaths, and losses.<sup>97</sup> While these violations ramped up, Defendants continued to reap the profits from Vale's operations in the Iron Quadrangle, without even so much as a public condemnation. Mesmerized by their profits, the Defendants did absolutely nothing.

119. Had Defendants refused to loan further funds to Vale until it met its obligation to the environment and the people living near its dams, the company would have been forced to focus its assets on maintenance to protect the populations proximate to the high-risk dams rather than

---

<sup>96</sup> *Brazil: Following pressure, Vale withdraws from the UN Global Compact, because of Rio Doce and Brumadinho dam disasters, says civil society*, Business and Human Rights Resource Center (June 11, 2019), <https://www.business-humanrights.org/en/brazil-following-pressure-vale-withdraws-from-the-un-global-compact-because-of-rio-doce-and-brumadinho-dam-disasters-says-civil-society>.

<sup>97</sup> See *infra* sections VII.A.1-3.

expansion of mining production. But because Defendants never did what was required of them under Brazilian law, Vale continued to increase the number of dangerous dams to maintain its production quota.

120. There is no statutory or financial reason that would have prevented Defendants from reducing or even canceling their loans or placing requirements on Vale that the company close its dangerous dams and provide adequate compensation to the people proximate to the dams. But instead, Defendants encouraged Vale's refusal to stop the environmental devastation by rewarding the company with more loans and investments.

121. There is nothing in the promissory notes from Defendants that prevents these banks from reducing the amounts of loans, delaying payments, or outright cancelling loans to Vale. Moreover, looking at Defendants' investments, they could have simply stopped buying more shares or sold the shares that they already owned. Defendants did none of these things. Instead, they continued to fund Vale through loans and purchasing of securities, because that strategy was extraordinarily profitable.

122. Indeed, despite *multiple* large-scale environmental disasters directly resulting from dam collapses at Vale facilities and governmental penalties against Vale, Defendants still refuse to even require that Vale improve its environmentally destructive operations. These operations have, and continue to, damage fragile ecosystems in the Iron Quadrangle, killed wildlife, and seriously damaged populated areas—leading to losses, injuries, and deaths. Defendants have steadfastly refused to even require that Vale respond in any positive, preventative way to the destructive danger of its operations. Defendants could have required annual ESG reviews of Vale or established a system to evaluate Vale as a borrower to ensure that they were not in violation of Brazilian law. But Defendants refused to do so. Defendants continued to fund Vale's mining

operations—and, in fact, *increased* their loans to Vale starting in 2018—directly profiting off environmental disasters while funding the continued environmental contamination and its effects on the Plaintiff’s lives and livelihoods.<sup>98</sup>

123. Defendants cannot claim to be ignorant of these tragic facts. As noted earlier, concerns regarding Vale’s environmental and human rights records have been highly publicized for nearly two decades.<sup>99</sup> Further, Vale’s role in causing two major dam collapses, resulting in major environmental disasters in Brazil, were globally publicized, yet, again the Defendants did nothing, but keep the money flowing.<sup>100</sup> Specifically, Defendants were well-aware—even with the most *limited* exercise of diligence—of the peril of the Plaintiff’s citizens living proximately to the 21 most dangerous dams that are the loci of both Vale’s fortune and its failures. Defendants’ actions are not complicated. It is easy to understand that Defendants saw an opportunity to profit enormously from Vale’s environmentally destructive mining activities and continued their loans unabated to Vale as a result. Defendants’ knowledge and actions to continue funding Vale make them liable pursuant to the strict liability scheme established by Brazilian law.

124. In addition to these well-publicized reports regarding Vale’s activities, Defendants were aware of the losses and damages alleged herein based upon Defendants’ regular review of Vale’s internal documents, which were made available to Defendants as part of their financing of Vale and the regular monitoring for their loans.<sup>101</sup> These documents described the damages and endangerment posed to Plaintiff and Class members as a result of Vale’s mining operations, as well as the environmental contamination and pollution caused by Vale’s operations. Defendants

---

<sup>98</sup> See *infra* section VII.A.3-4.

<sup>99</sup> *Why Vale deserves the award for Worst Corporation in the world*, Amazon Watch (Sept. 1, 2012), <https://amazonwatch.org/assets/files/vale-worst-corporation-reasons.pdf>.

<sup>100</sup> Ennes, Juliana, *After two collapses, a third Vale dam at ‘imminent risk of rupture’*, Mongabay (June 14, 2021), <https://news.mongabay.com/2021/06/after-two-collapses-a-third-vale-dam-at-imminent-risk-of-rupture/>

<sup>101</sup> See *infra* section VII.E.

simply did not, and do not, care. Defendants have kept their eyes squarely on the prize, profiting from Vale's destruction and even increasing their loans and their securities purchases to Vale as a result. While their profits have been enormous, those same investments violated Brazilian law and make them strictly liable for all of the damages to Plaintiff and the Class members claim in this litigation.

## **IX. THE FUNDING BY DEFENDANTS**

### **A. Defendants Funded Vale's Mining Subsidiary: Companhia Vale Do Rio**

125. At all times stated herein, Vale Overseas Limited also known as Companhia Vale do Rio Doce ("CVRD") was, and is, the wholly owned subsidiary of Vale S.A. By funding Vale, the Defendants funded CVRD's mining operations in Brazil, including in the Iron Quadrangle.

126. CVRD's main business purpose is the production of ferrous minerals and non-ferrous minerals.<sup>102</sup> CVRD details several risk factors involved in the business operations, which include usage, handling, disposing of and discharging hazardous materials into the environment.<sup>103</sup> CVRD's business and mining activities are regulated by Brazil's National Environmental Policy Act (NEPA), which holds a financial institution liable for the borrower's environmental degradation. CVRD uses the money from Defendants to fund its mining activities which, as stated above, have caused environmental damage in the Iron Quadrangle and are in violation of NEPA.

127. Further, through Vale, CVRD has kept the Defendants well-informed about its operations in Brazil. Vale prepares regular reports to Defendants, including in 2015, wherein it outlined various risk factors associated with its ventures in Brazil (Attached as **Exhibit G**). This annual report—called a Form 20F—specifically discussed Vale's mining activities as a basis for

---

<sup>102</sup> Form 6-K/A, SEC (Oct. 2007), [https://www.sec.gov/Archives/edgar/data/917851/000095010302000398/apr1702\\_6ka.pdf](https://www.sec.gov/Archives/edgar/data/917851/000095010302000398/apr1702_6ka.pdf).

<sup>103</sup> Form 20-F, SEC (May 25, 2006) <https://www.sec.gov/Archives/edgar/data/917851/000095012306006979/y21696e20vf.htm>.

Vale borrowing from Defendants, which are due in 2026. This report outlines for Defendants that Vale’s mining activities are subject to legislation and regulations in the jurisdictions where Vale maintains mining operations—such as the Iron Quadrangle in Minas Gerais. Because Vale has mining operations in Brazil and its operations have resulted in environmental damage, it is subject to NEPA and other Brazilian regulations, as are Defendants as lenders for funding such mining operations.

128. Because Vale’s conduct could not have caused such massive damage to the environment and to the Plaintiff without the billions of dollars provided by Defendants, the Banks function as an “indirect” polluter under NEPA and are strictly liable, jointly and severally, for any environmental damage caused by the mining operations they fund and the impact that environmental damage has had, and continues to have, on the Plaintiff.

**a. Defendants Issued Guaranteed Promissory Notes and Credit Facilities to Vale**

129. Between January 9, 2004, and June 7, 2023, Defendants loaned Vale the sum of \$12.2 billion dollars in corporate bonds, according to the SEC’s Edgar Database.<sup>104</sup>

130. Copies of the prospectus listed on Vale’s website, along with the SEC filings of those prospectus, are attached hereto as Exhibits to this complaint and incorporated herewith, and are as follows:

- i. **Exhibit H** is the January 9, 2004 prospectus wherein Defendants **Merrill Lynch & Co.** and **J.P. Morgan**, as joint managers and bookrunners issued promissory notes to Vale Overseas Limited, a Cayman Island Corporation, for the unrestricted general business corporate use of Vale, in the amount of \$500,000,000, 8.25% Guaranteed Notes due 2034. On page 7 of the attached **Exhibit H**, the Vale funders

---

<sup>104</sup> This does not include a \$400,000,000 corporate bond dated September 2, 2018 and issued to Vale Canada.

agree that New York law governs and consent to jurisdiction in New York (Sections 1.12 and 1.14).

- ii. **Exhibit I** is the November 3, 2009 prospectus wherein Defendant **J.P. Morgan**, as a Joint Lead Manager and Joint Bookrunner, issued promissory notes to Vale Overseas Limited, a Cayman Island Corporation, for the unrestricted general business corporate use of Vale, in the amount of \$1,000,000,000, 6.875% Guaranteed Notes Due 2039 and \$750,000,000, 6.875% Guaranteed Notes Due 2039 (the “2039 Notes”). An underwriter of said Exhibit is **J.P. Morgan**, who agreed to purchase \$333,333,000. On page S-1 and S-15, the Vale funders agree that New York law governs and consent to jurisdiction in New York.
- iii. **Exhibit J** is the September 8, 2010 prospectus wherein Defendant **J.P. Morgan**, as a Joint Lead Manager and Joint Bookrunner issued promissory notes to Vale Overseas Limited, a Cayman Island Corporation, for the unrestricted general business corporate use of Vale, in the amount of \$1,000,000,000 4.625% Guaranteed Notes Due 2020 (the “2020 Notes”) and \$750,000,000, 6.875% Guaranteed Notes Due 2039 (the “2039 Notes”). As an underwriter of said Exhibit, **J.P. Morgan Securities LLC** agreed to purchase \$500,000,000.
- iv. **Exhibit K** is the January 4, 2012 prospectus wherein Defendants **Citigroup** and **J.P. Morgan**, as Joint Lead Managers and Joint Bookrunners, issued promissory notes to Vale Overseas Limited, a Cayman Island Corporation, for the unrestricted general business corporate use of Vale, in the amount of \$1,000,000,000, 4.375% Guaranteed Notes due 2022 with publicly available prospectus regarding said notes attached hereto and incorporated herewith as **Exhibit K**. The underwriters of said



Exhibit are **Citigroup Global Markets Inc.** and **J.P. Morgan Securities LLC**, who agreed to purchase \$285,714,000 and \$285,714,000 respectively. According to the terms of the March 28, 2012 prospectus supplement, the parties agreed to the governing law of the State of New York, pages S-8 and S-15.

- v. **Exhibit L** is the March 28, 2012 prospectus wherein Defendants **Barclays Capital Inc.** and **Citigroup Global Markets Inc.** as Joint Lead Managers and Joint Bookrunners, issued a prospectus supplement to promissory notes to Vale Overseas Limited, a Cayman Island Corporation, on an original prospectus dated November 3, 2009, for the unrestricted general business corporate use of Vale, in the amount of \$1,250,000,000, 4.375% Guaranteed Notes due 2022. An underwriter of said Exhibit is **Citigroup Global Markets Inc.**, who agreed to purchase \$416,666,000, and \$416,666,000 respectively. According to the terms of the March 28, 2012 prospectus supplement, the parties agreed to the governing law of the State of New York, pages S-8 and S-15.
- vi. **Exhibit M** is the September 4, 2012 prospectus wherein Defendants **Citigroup** and **J.P. Morgan** as Joint Lead Managers and Joint Bookrunners, issued promissory notes to Vale S.A., a Cayman Island Corporation (a duly organized corporation of the Federative Republic of Brazil), for the unrestricted general business corporate use of Vale, in the amount of \$1,500,000,000, 5.625% Guaranteed Notes due 2042 which publicly available prospectus regarding said notes. The underwriters of said Exhibit are **Citigroup Global Markets, Inc.** and **J.P. Morgan Securities LLC**, who agreed to purchase \$300,000,000 and \$300,000,000 respectively. According

to the terms of the October 4, 2012 prospectus supplement, the parties agreed to the governing law of the State of New York, pages S-5 and S-15.

vii. **Exhibit N** is the July 3, 2012 prospectus wherein the Defendants **Barclays** and **Citigroup** as Joint Lead Managers and Joint Bookrunners, issued promissory notes to Vale S.A., (a duly organized corporation of the Federative Republic of Brazil) for the unrestricted general business corporate use of Vale, in the amount of €750,000,000, 3.750% Guaranteed Notes due 2023 which publicly available prospectus regarding said notes. According to the terms of the July 3, 2012 prospectus supplement, the parties agreed to the governing law of the State of New York, pages S-6 and S-14.

viii. **Exhibit O** is the August 3, 2016<sup>105</sup> prospectus wherein the Defendant **Citigroup**, as a Joint Manager and Joint Bookrunner, issued promissory notes to Vale Overseas Limited, a Cayman Island Corporation, for the unrestricted general business corporate use of Vale, in the amount of \$1,000,000,000, 6.250% Guaranteed Notes due 2026. An underwriter of said Exhibit is **Citigroup Global Markets Inc.** who agreed to purchase \$156,250,000. According to the terms of the August 3, 2016 prospectus supplement, the parties agreed to the governing law of the State of New York, pages S-6 and S-15. On page 8 of the attached **Exhibit O**, the Vale funders agree that New York law governs and consent to jurisdiction in New York (Sections 1.12 and 1.14).

---

<sup>105</sup> Please note that this promissory note and all following promissory notes are issued after the Mariana Dam Disaster, demonstrating that Defendants continued to issue loans even after Vale's dangerous business practices were revealed worldwide.

- ix. **Exhibit P** is the February 6, 2017 prospectus wherein the Defendant **J.P. Morgan**, as a Joint Lead Manager and Joint Bookrunner, issued promissory notes to Vale Overseas Limited, a Cayman Island Corporation, for the unrestricted general business corporate use of Vale, in the amount of \$1,000,000,000, 6.250% Guaranteed Notes due 2026. An underwriter of said Exhibit is **J.P. Morgan Securities LLC** who agreed to purchase \$185,185,000. According to the terms of the February 6, 2017 prospectus supplement, the parties agreed to the governing law of the State of New York, pages S-6 and S-15. On page 8 of the attached **Exhibit P**, the Vale funders agree that New York law governs and consent to jurisdiction in New York (Sections 1.12 and 1.14).
- x. **Exhibit Q** is the July 6, 2020<sup>106</sup> prospectus wherein the Defendant **Citigroup**, as a Joint Lead Manager and Joint Bookrunner, issued promissory notes to Vale Overseas Limited, a Cayman Island Corporation, for the unrestricted general business corporate use of Vale, in the amount of \$1,500,000,000, 3.750% Guaranteed Notes due 2030. An underwriter of said Exhibit is **Citigroup Global Markets Inc.**, who agreed to purchase \$250,000,000. According to the terms of the July 6, 2020 prospectus supplement, the parties agreed to the governing law of the State of New York, pages S-5 and S-15. On page 10 of the attached **Exhibit Q**, the Vale funders agree that New York law governs and consent to jurisdiction in New York (Sections 1.12 and 1.14).

---

<sup>106</sup> Please note that this promissory note and all following promissory notes are issued after both the Mariana Dam Disaster and Brumadinho Dam Disaster, demonstrating that Defendants continued to issue loans even after Vale's dangerous business practices were revealed worldwide.

xi. **Exhibit R** is the June 7, 2023 prospectus wherein the Defendants **Citigroup** and **J.P. Morgan** as Joint Lead Managers and Joint Bookrunners, issued promissory notes to Vale Overseas Limited, a Cayman Island Corporation, for the unrestricted general business corporate use of Vale, in the amount of \$1,500,000,000, 6.125% Guaranteed Notes due 2033. An underwriter of said Exhibit is **J.P. Morgan Securities LLC**, who agreed to purchase \$214,286,000. According to the terms of the July 6, 2020 prospectus supplement, the parties agreed to the governing law of the State of New York, pages S-5 and S-15. On page 10 of the attached **Exhibit R**, the Vale funders agree that New York law governs and consent to jurisdiction in New York (Sections 1.12 and 1.14).

131. On June 9, 2017, Vale S.A. (Vale) announced that it had successfully completed a \$2 billion syndicated revolving credit facility, which would be available for five years. The revolving credit facility was arranged by a banking syndicate comprised of 18 global banks, led by **Citigroup** among other banks.<sup>107</sup> The syndicate also includes Defendant **J.P. Morgan**.<sup>108</sup> The commitments received from the banks exceeded the amount originally requested by the company. According to the Vale press release, the revolving credit lines worked as a “buffer” and allowed more efficient cash management, consistent with Vale’s strategic focus on cost of capital reduction. The credit facility documents are not publicly available.

132. On December 26, 2019, just 11 months after the Brumadinho Dam Disaster, Vale SA (“Vale”) announced via a press release, that it had successfully completed a US \$3 billion

---

<sup>107</sup> *Vale secures US\$2B revolving credit facility*, S & P Global (June 12, 2017), <https://www.spglobal.com/marketintelligence/en/news-insights/videos/do-your-sustainability-commitments-add-up-to-net-zero>.

<sup>108</sup> *Id.*

syndicated revolving credit facility, which would be available for five years.<sup>109</sup> According to the Vale press release, the revolving credit line was arranged by a banking syndicate comprised of 16 global banks led by **Citigroup** among others. The syndicate also includes the following Defendant banks: **J.P. Morgan** and **Barclays**. According to the Vale press release, this revolving credit facility replaced the US\$ 3 billion line that was signed in 2015 with five years availability, which would be cancelled. Therefore, the total available amount in revolving credit facilities remains at US \$5 billion, as Vale already had an existing agreement for US \$2 billion in 2015. These facilities are liquidity sources for Vale and some of its wholly owned subsidiaries and can be drawn at any time throughout the life of the facilities (US \$2 billion until 2022 and US \$3 billion until 2024). The revolving credit line works as buffer and allows more efficient cash management, consistent with Vale’s strategic focus on cost of capital reduction and increased production. The credit facility documents are not publicly available, but upon information and belief, they likewise agreed that New York law “governs” the loan and the Parties “consented” to the jurisdiction of any New York U.S. federal or state courts.

**b. Defendants Violated the Equator Principles**

133. The Equator Principles were created to serve as a common baseline and risk management framework for financial institutions to identify, assess and manage environmental and social risks when financing Projects.

134. Defendants Barclays, Citigroup, and J.P Morgan agreed to only provide finances to projects in which their clients abided by the Equator Principles.<sup>110</sup> Instead, the Defendants violated that agreement and duty by providing unrestricted financial assistance to Vale, while possessing

---

<sup>109</sup> Weinman, Aaron, *Vale returns looking for low-cost debt after Brumadinho tragedy*, Reuters (Nov. 21, 2019), <https://www.reuters.com/article/vale-loans-idCNL2N2810R2>.

<sup>110</sup> *Members & Reporting*, Equator Principles <https://equator-principles.com/members-reporting/> (listing Defendants, Barclays, Citigroup, and J.P. Morgan as members).

knowledge that Vale's mining operations expansions plans carried with them well-documented and dangerous environmental risks, including risks to Plaintiff and Class members. Their conscious disregard of these dangers caused unprecedented, and in many cases permanent, irreparable environmental damage in the Iron Quadrangle, plus losses and damages to the Plaintiff.

135. Defendants used a facade of adherence to the Equator Principles to create a knowingly false image for their United States investors.<sup>111</sup> They provided the financial basis for Vale's mining operations' expansion while flagrantly violating both the spirit and the letter of the Equator Principles solely to reap profits, at great cost to the environment in the Iron Quadrangle and the Plaintiff and Class members.

136. Without relying on these misrepresentations, Plaintiff's damages would not have occurred. New York investors purchased equity in the Defendants, who subsequently used those funds to finance Vale's mining operations that have destroyed Plaintiff's environment, causing massive losses and damages to them.

**c. Defendants Are Foremost Institutional Investors**

137. In addition to serving as lenders, Defendants hold substantial equity shares in Vale, purchasing Vale securities and thereby facilitating Vale's dangerous development activities to attain dividends from the increasing value of their investments. Defendants thus make money from both the interest on their loans as well as Vale's increased stock value. All of this financial gain by Defendants, of course, comes as a result of the operation of Vale's dangerous dams causing losses and damages to Plaintiff.

---

<sup>111</sup> Lewton, Thomas, *As banks fund oil pipeline, campaigners question their environmental pledges*, Mongabay (Nov. 1 2022), <https://news.mongabay.com/2022/11/as-banks-fund-oil-pipeline-campaigners-question-their-environmental-pledges/>.

138. As both lenders and investors, Defendants sponsored and profited from Vale’s exploitation of the environment, supplying the resources for Vale’s irresponsible dam construction, without which the Plaintiff’s damages would not have occurred.

139. Two Defendants, in particular, have led the efforts to fund Vale’s disastrous projects: J.P. Morgan and Citigroup. As the first and third largest banks in America,<sup>112</sup> they have invested enormous funds into Vale. Indeed, in just the first seven months of 2023, J.P. Morgan purchased shares worth approximately \$240,850,250 USD<sup>113</sup> and Citigroup purchased shares worth \$346,462,410 USD.<sup>114</sup> These Defendants have continued their extraordinary investments in the corporate source of the Plaintiff’s suffering and losses. Below are just two examples of the many 6-K filings in the SEC database listing J.P. Morgan’s and Citigroup’s recent purchases of Vale shares:

Type of security	Characteristic of the security	Intermediate	Operation	Date	Quantity	Average price (Daily)	Volume (R\$)
Shares	VALE3 <sup>115</sup>	J.P. Morgan CCVM SA	Buy	05/02/2023	2.100.000	69,86167	146.709.509,00
Shares	VALE3	J.P. Morgan CCVM SA	Buy	05/03/2023	1.000.000	69,42109	69.421.089,00
Shares	VALE3	J.P. Morgan CCVM SA	Buy	05/04/2023	2.300.000	67,43549	155.101.617,00
Shares	VALE3	J.P. Morgan CCVM SA	Buy	05/05/2023	1.800.000	68,53676	123.366.173,00

<sup>112</sup> Federal Reserve, *Large Commercial Banks*, Federal Reserve Statistical Release, as of March 31, 2023, <https://www.federalreserve.gov/releases/lbr/current/>.

<sup>113</sup> [https://www.sec.gov/Archives/edgar/data/917851/000129281423002622/valecvm358may23\\_6k.htm](https://www.sec.gov/Archives/edgar/data/917851/000129281423002622/valecvm358may23_6k.htm);

[https://www.sec.gov/Archives/edgar/data/917851/000129281423000846/valecvm358feb23\\_6k.htm](https://www.sec.gov/Archives/edgar/data/917851/000129281423000846/valecvm358feb23_6k.htm);

<sup>114</sup> [https://www.sec.gov/Archives/edgar/data/917851/000129281423000399/valecvm358jan23\\_6k.htm](https://www.sec.gov/Archives/edgar/data/917851/000129281423000399/valecvm358jan23_6k.htm);

[https://www.sec.gov/Archives/edgar/data/917851/000129281423002188/valecvm358apr23\\_6k.htm](https://www.sec.gov/Archives/edgar/data/917851/000129281423002188/valecvm358apr23_6k.htm);

[http://www.sec.gov/Archives/edgar/data/917851/000129281423001455/valecvm358mar23\\_6k.htm](http://www.sec.gov/Archives/edgar/data/917851/000129281423001455/valecvm358mar23_6k.htm).

<sup>115</sup> <https://www.sec.gov/Archives/edgar/data/917851/000110465922046078/vale-20211231xex2.htm> (“[Vale’s] capital stock is composed of common shares and golden shares, all without par value. As of December 31, 2021 our share capital was represented by 4,839,616,924 common shares and 12 golden shares issued to the Brazilian government. Our common shares are publicly traded in Brazil on the B3, **under the ticker symbol VALE3**. Our common shares also trade on the LATIBEX, under the ticker symbol XVALO.”) (emphasis added).

Shares	VALE3	J.P. Morgan CCVM SA	Buy	05/08/2023	2.000.000	70,39274	140.785.481,00
Shares	VALE3	J.P. Morgan CCVM SA	Buy	05/09/2023	1.800.000	70,16477	126.296.593,00
Shares	VALE3	J.P. Morgan CCVM SA	Buy	05/10/2023	2.128.700	69,57943	148.113.733,00
Shares	VALE3	J.P. Morgan CCVM SA	Buy	05/11/2023	1.800.000	67,82306	122.081.501,00
Shares	VALE3	J.P. Morgan CCVM SA	Buy	05/12/2023	1.901.400	67,98326	129.263.375,00
Type of security	Characteristic of the security	Intermediate	Operation	Date	Quantity	Average price (Daily)	Volume (R\$)
Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/02/2023	604.800	89,56876	54.171.184,00
Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/03/2023	828.300	89,45641	74.096.746,00
Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/04/2023	1.000.000	88,75723	88.757.234,00
Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/05/2023	735.700	89,96502	66.187.267,00
Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/06/2023	1.000.000	92,04841	92.048.409,00
Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/09/2023	847.600	92,40029	78.318.484,00
Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/10/2023	525.800	93,41040	49.115.190,00
Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/11/2023	925.100	93,29158	86.304.044,00



Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/12/2023	547.400	93,62613	51.250.942,00
Shares	VALE3	Citigroup Global Markets Brasil CCTVM S/A	Buy	01/16/2023	701.00	91,66555	64.257.550,00

140. Upon information and belief, each of the Defendants has similar investments in Vale, demonstrating the reciprocal relationship guaranteeing Vale’s financial “success” and the continuance of its dangerous mining operations in Metropolitana de Belo Horizonte that have destroyed the environment and caused losses and damages to Plaintiff.

141. Since the collapse of the Fundão Dam, various criminal and civil proceedings have been commenced in Brazil. Vale has openly admitted fault and acknowledged the damage it caused, yet Defendants not only continue to substantially invest in the companies’ mining operations in Brazil, but they are doubling down on their decade’s old investments in Vale.

142. Both as lenders, to whom Vale owes an enormous debt, and as institutional investors, who reap enormous profits from the borrowers’ mining operations, Defendants claimed to adhere to principles requiring the investigation of the mining operations prior to investment. They did not.

143. They also had an ongoing duty to exercise significant control over Vale’s malfeasance and not fund a corporation which was causing such catastrophes. They did not.

144. Instead, Defendants purposefully ignored and continue to purposefully ignore the information that *Vale disclosed* concerning the danger and disruption to the environment that its tailings dams were causing, enabling Vale’s ongoing desecration of the environment inhabited by the impoverished Plaintiff’s communities in the name of profit.

**d. Defendants' Ratified Vale's Conduct by Continuing to Fund Vale's Mining Operations and Even Increasing Its Funding**

145. Following two major environmental disasters in the Iron Quadrangle, various criminal and civil proceedings have been commenced in Brazil against Vale. Vale has openly admitted fault and acknowledged the damage it caused.<sup>116</sup> Despite this, Vale continues its mining operations, using the same disastrous methods, in the Iron Quadrangle. Despite Defendants' knowledge of these disasters and Vale's admitted responsibility, Defendants continue to fund Vale's mining operations in the Iron Quadrangle. Some Defendants, like J.P. Morgan and Citigroup, have even increased their funding since 2018, purchasing new shares in Vale each year.<sup>117</sup>

**B. Vale's Mining Operations in Ouro Preto, the Class Representative**

146. The Class Representative, Ouro Preto, is a city in the Iron Quadrangle. It is located in the state of Minas Gerais, approximately 40 miles southeast of the capital of Belo Horizonte.<sup>118</sup> The city is bordered by the municipalities of Itabirito, Santa Barbara, Ouro Branco, Catas Altas da Noruega, Piranga, Itaverava, Mariana, Belo Vale, and Congonhas.

147. The city has an estimated population of approximately 75,000 people.<sup>119</sup>

---

<sup>116</sup> *Vale dam disaster: \$7bn compensation for disaster victims*, BBC (Feb. 4, 2021), <https://www.bbc.com/news/business-55924743>; *Brazilian Mining Company to Pay \$55.9 Million to Settle Charges Related to Misleading Disclosures Prior to Deadly Dam Collapse*, SEC (Mar. 28, 2023), <https://www.sec.gov/news/press-release/2023-63>.

<sup>117</sup> [https://www.sec.gov/Archives/edgar/data/917851/000110465918061495/a18-36600\\_26k.htm](https://www.sec.gov/Archives/edgar/data/917851/000110465918061495/a18-36600_26k.htm); see also *infra* section VII.A.3.

<sup>118</sup> *The Editors of Encyclopaedia Britannica, Ouro Preto*, Encyclopaedia Britannica (Aug. 16, 2012), <https://www.britannica.com/place/Ouro-Preto>.

<sup>119</sup> *Instituto Brasileiro de Geografia e Estatística, Ouro Preto*, IBGE (2020), <https://www.ibge.gov.br/en/cities-and-states/mg/ouero-preto.html?>.

148. Ouro Preto was “decreed a national monument and the surrounding region a national park, so that the city’s elaborate . . . public buildings, churches, and houses might be preserved or restored.”<sup>120</sup> The city has also been designated as a UNESCO World Heritage site.<sup>121</sup>

149. There are mine remnants spread throughout the city, particularly located in inhabited parts of the town, on both public and private property. There are currently 300 abandoned underground mines within the area, and eight that are open to tourists.<sup>122</sup> Within the city, there are also underground and open aqueducts, water dams, gold mud dams, plus shafts for ventilation, miners’ access, and ore extraction.<sup>123</sup>

150. The historic monuments, buildings, and mines once helped to bring in tourists and boost the local economy. But now that the population is gripped by fear that when these vital staples of Ouro Preto are destroyed by dam collapse, the citizens will be forcibly displaced, losing their homes, businesses, and the means by which they achieve their limited income and sustain the local economy. As a result of this constant threat, the property values are reduced to nearly zero and tourism is virtually non-existent.

**a. Vale’s Evacuation Process Pollutes the Air and Causes Significant Noise Pollution in the Proposed Class**

151. Vale owns and operates 10 tailings dams in Ouro Preto: Area IX, Dique de Pedra, Doutor, Forquilha I, Forquilha II, Forquilha III, Forquilha IV, Forquilha V, Grupo, and Timbopeba.<sup>124</sup>

---

<sup>120</sup> *Id.*

<sup>121</sup> *Id.*

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

<sup>124</sup> *Control and Management of Dams*, VALE, <https://www.vale.com/web/esg/control-and-management-of-dams>, updated May 10, 2023.

152. Vale has classified six of these dams as High Risk: Dique de Pedra, Doutor, Forquilha I, Forquilha II, Forquilha III, and Grupo.<sup>125</sup> These dams are included in this litigation. This classification demonstrates that a dam collapse is imminently threatening both the citizens of Ouro Preto and the environment. It also indicates that multiple citizens, and their homes, businesses, and public buildings are located in the direct path of destruction when one of these dams burst. Once again, the values of the properties have dropped precipitously, and locals are constantly in fear of the looming disaster and death. Their lives and livelihoods are suspended while they wait in fear.

153. Vale has started to relocate people from Self-Rescue Zones of both Level 2 and Level 3 dams, and this has had a jarring effect on all the citizens of Ouro Preto. The citizens are forced to leave their homes and businesses knowing that everything they own will be destroyed when the dam collapses. In short, these evacuations—which have become commonplace due to the constant risk of failure by Vale’s dams in the area—completely disrupt their lives. Vale’s warning sirens leave locals in daily terror of dam failure, and they regularly are forced to evacuate. These evacuations cause major social and economic disruption to their communities.

154. Daily blaring evacuation horns and other noise pollution from the evacuation process disrupt the day-to-day lives of residents of the proposed class. Municipalities respond in kind with necessary social services to aid residents under the barrage of the evacuation process.

155. Air pollution from the mining process and large equipment incidental to both the mining and evacuation process harass and barrage the municipalities in the proposed class, also disrupting the daily lives of residents. Roads and other municipal infrastructure in the proposed class have suffered significant degradation as a direct result from Vale’s mining process.

---

<sup>125</sup> *Id.*

156. The Doutor Dam in the Ouro Preto neighborhood of Antônio Pereira exemplifies the hardships that citizens of Ouro Preto and other municipalities have had to deal with due to Vale's dams. In response to the turmoil brought by the rising risk of the Doutor Dam's rupture, the State Public Ministry of Minas Gerais adopted measures to deal with the impact. The government did so to deal with Vale's ongoing decommissioning process and in recognition of the significant socio-environmental and economic effects caused by the failure of Vale's other tailings dams (Fundão in Mariana, 2015, and B-I, B-IV and B-IVA, at Córrego do Feijão Mine, in Brumadinho, 2019). The State Public Ministry of Minas Gerais adopted measures in anticipation of new disasters of the same nature.

157. Among these measures, the government filed Public Civil Action No. 5000435-60.2019.8.13.0461, which detailed objectives for the decommissioning of the Doutor Dam and preparation for its probable collapse. The Public Prosecutor's Office filed the Request for Precautionary Protection No. 5000885-66.2020.8.13.0461 after it became necessary to remove families living in the Self-Rescue zones of the Doutor Dam.<sup>126</sup>

158. The decommissioning of the Doutor Dam, which will not be completed until 2029,<sup>127</sup> is already causing atrocious conditions. Many families have been forcibly displaced, even from the Self-Rescue Zone, while thousands remain in danger of injury and death. Once again, the values of the properties have dropped to nothing, and locals are constantly in fear of looming disaster and death.

159. At the request of the Brazilian government, two different companies have established work plans to properly evaluate damages to the community within the district of

---

<sup>126</sup> See Ação Civil Pública Nº 5000435-60.2019.8.13.0461 (dealing with decommissioning and decharacterization of the Doutor Dam).

<sup>127</sup> Instituto Guaicuy, *Plano De Trabalho De Assessoria Técnica às Pessoas Atingidas Pela Barragem Doutor, De Propriedade Da Empresa Vale S/A, Localizada No Distrito De Antônio Pereira, Ouro Preto/MG*, p. 17 (2021).

Antonio Pereira.<sup>128</sup> This community has been harshly affected by the dangerous conditions and Vale's deficient plans to decommission the Doutor Dam. These work plans detail the efforts that must occur to address the community's issues and then calculate the monetary value of damages to the area, the local community, and the Municipality. Vale, of course, has objected to these plans and denied any responsibility for their cost. The mining company must save its money for further ore production....

160. The Instituto Guiaicy, for example, presented the "Work Plan for Technical Assistance to People Affected by the Doutor Dam" for the District of Antonio Pereira and summarized the budget for execution of this Work Plan. The cost totaled \$5,411,093.84 USD, to be spent over 30 months.

161. In addition, Grupo de Estudos e Pesquisas Socioambientais ("GEPSA"), the multidisciplinary technical entity responsible for preparing the Comprehensive Damage Reparation Plan for people affected just in the district of Antonio Pereira, released another work plan encompassing other costs to execute a repair plan for the community. Over 24 months, the total projected cost of that project will be \$8,006,621.53 USD.

162. These Work Plans only begin to demonstrate the cost that Plaintiff has had to incur in order to prepare for dam ruptures and react to relocation efforts. Other costs have been anticipated in the mental anguish of its citizens. For example, the Municipality of Ouro Preto will also spend \$2,887,228.74 USD on designated projects to improve the mental health of its citizens in peril from the impending dam ruptures.<sup>129</sup> The horrors of living in constant fear plague the

---

<sup>128</sup> Instituto Guiaicy, *Plano De Trabalho De Assessoria Técnica às Pessoas Atingidas Pela Barragem Doutor, De Propriedade Da Empresa Vale S/A, Localizada No Distrito De Antônio Pereira, Ouro Preto/MG* (2021); Grupo de Estudos e Pesquisas Socioambientais, *Comprehensive Damage Reparation Plan* (2023).

<sup>129</sup> See *Ações De Redução De Danos Em Saúde Mental Em Antônio Pereira: Implementação de ações emergenciais em atenção psicossocial no distrito de Antônio Pereira, Município de Ouro Preto- MG*, June 18, 2021, p. 9; see also

citizens within the municipalities represented in this complaint. The imminent ruptures of these dams have uprooted their lives and created huge issues that are now borne by the municipalities.

163. This Work Plan demonstrates some of the costs owed to the Plaintiff due to Vale's dams that are funded by Defendants. Defendants' investments and loans to Vale are directly linked to the Plaintiff's costs as the Plaintiff would not need to resettle citizens or pay for such Work Plans but for Defendants' continuous funding of Vale's operations. If Defendants had recognized their obligations as United States lenders and investors, they would have restricted or curtailed their loans and investments to financially force Vale to redirect its resources to restoring the environment and preparing the citizens for potential dam collapses—thereby avoiding all of these losses and damages to Plaintiff.

164. Out of the current dams Vale owns and operates in Ouro Preto, at least four of them have at some point in their history failed to be confirmed or certified as stable, or experienced notable stability concerns, as identified by an independent engineer.<sup>130</sup>

165. Six of the dams located in Ouro Preto (the Area IX, Doutor, Forquilha I, II, III, and Grupo dams) employ an “upstream design.”<sup>131</sup> As the upstream dams may burst at any moment, they pose an imminent danger to nearby citizens, just like the 2015 Mariana Dam Disaster and the 2019 Brumadinho Dam Disaster. Thus, this threat to Plaintiff has been funded by Defendants for eight years. What have Defendants done during these eight years to impose financial restrictions on Vale to force constructive change? Nothing.

---

Secretaria Municipal de Sa.de de Ouro Preto-MG, *Projeto de Atenção Biopsicossocial de Antônio Pereira Ações de Prevenção, Promoção e Recuperação em Saúde pelo Risco de Rompimento da Barragem do Doutor – Grau II*, p. 21.

<sup>130</sup> Casey, J.P., *Independent Auditors Raise the Warning Level of Three Vale Dams*, MINING TECHNOLOGY (Mar. 29, 2019), <https://www.mining-technology.com/mining-safety/independent-auditors-raise-the-warning-level-of-three-vale-dams>.

<sup>131</sup> *Id.* at 19-20.

166. Within Ouro Preto, Forquilha I and Forquilha III were reclassified as Level 3 in March 2019.<sup>132</sup> The reclassifications as a result of new mining safety laws that were established by ANM in February 2019.<sup>133</sup> These new laws “bann[ed] the construction of new upstream tailing dams” and “raised the standard to which mining operations must comply in order to be deemed safe.”<sup>134</sup> Forquilha I and Forquilha III were two of the three dams that independent auditors informed Vale did not meet the new regulations.<sup>135</sup> While Forquilha I has recently been lowered to a Level 2 emergency, Forquilha III remains a Level III, in ever present risk of rupture.<sup>136</sup>

**b. Vale’s Tailings Dams in and Around Ouro Preto Present Continuing Danger of Further Environmental Damage and Have Already Polluted Local Waterways**

167. The environmental degradation that the Defendants funded continues to occur and its impact on Ouro Preto worsens every day.<sup>137</sup> As one citizen poignantly stated, Vale and its dams “are destroying the environment to the point they are destroying lives.”<sup>138</sup>

168. Vale dams have caused widespread water pollution to Ouro Preto’s main river basins. The Rio Das Velhas is one of the main tributaries to the Sao Francisco River Basin.<sup>139</sup> It begins in the municipality of Ouro Preto and is responsible for approximately 60% of the water supply of the metropolitan region of Belo Horizonte.<sup>140</sup> Rio Das Velhas also supplies water for

---

<sup>132</sup> *Id.*; *Press Release – Vale Informs on Stability Condition Declarations*, VALE 1, 2 (Apr. 1, 2020), [http://www.vale.com/EN/investors/information-market/Press-Releases/ReleaseDocuments/0401\\_Declarações%20de%20Estabilidade\\_i.pdf](http://www.vale.com/EN/investors/information-market/Press-Releases/ReleaseDocuments/0401_Declarações%20de%20Estabilidade_i.pdf).

<sup>133</sup> *Id.*

<sup>134</sup> *Id.*

<sup>135</sup> *Id.*

<sup>136</sup> *See* Exhibit A.

<sup>137</sup> MacDonald, Alistair & Samantha Pearson, *Deadly Mining Disaster Still Tests Vale Three Years Later*, Wall Street Journal (Jan. 29, 2022), <https://www.wsj.com/articles/deadly-mining-disaster-still-tests-vale-three-years-later-11643464803>.

<sup>138</sup> Pearson, Samantha, & Jeffrey T. Lewis, *Around 200 People Missing, Seven Dead, After Dam Bursts in Brazil*, Wall Street Journal (Jan. 25, 2019), <https://www.wsj.com/articles/dam-bursts-at-vale-mine-in-brazil-11548434014>.

<sup>139</sup> *The Rio das Velhas Watershed*, CBH Rio das Velhas, <http://cbhvelhas.org.br/a-bacia-hidrografica-do-rio-das-velhas/>.

<sup>140</sup> *Vale admits cracks in dam that threatens 93 people in Minas Gerais*, R7 (Dec. 13, 2019), <https://noticias.r7.com/minas-gerais/vale-admite-trincas-em-barragem-que-ameaca-93-pessoas-em-minas-18122019>.



industries, mining, irrigation, and is important for power generation, and the protection and preservation of aquatic communities, tourism, leisure and navigation.<sup>141</sup> Moreover, the Doce River Basin is formed from the juncture of the Rio Piranga (located in Ressaquinha) and the Rio Carmo (located in Ouro Preto), near Ouro Preto. Four years after the Mariana Dam Disaster, the Rio Doce is “still largely unfit for human consumption in 90% of monitoring stations.”<sup>142</sup> Furthermore, “the torrent of water” from the dam collapse “stirred up the heavy metals buried in the sediment on the bottom of the river.”<sup>143</sup>

169. Although damages for the 2015 Mariana Dam Disaster or the 2019 Brumadinho Dam failure are not sought by the Plaintiff in this litigation, they provide examples of the environmental contamination that will occur when another of these tailings dams inevitably collapse—as well as the significant environmental risk associated with the pollutants held at these tailings dams.<sup>144</sup> Moreover, the Mariana Dam Disaster and Brumadinho Dam Disaster illustrate the knowledge that Vale, Defendants, and Plaintiff each have relating to the significant environmental damage that will occur based on the mining operations, and Defendants’ funding of such operations. They likewise illustrate that Vale and Defendants are aware of the precautions they should have taken years ago to ensure these tailings dams do not collapse—none of which they have taken. As was predicted, evacuations near these tailings dams regularly occur because their eventual failure is certain. Moreover, there has been no emergency planning to prepare the population or the Municipalities for the massive emergency event that will accompany the dam failure.

---

<sup>141</sup> Instituto Mineiro de Gestão das Águas (2007), [www.igam.mg.gov.br](http://www.igam.mg.gov.br).

<sup>142</sup> Watts, Jonathan, *The River is Dying: The Vast Ecological Cost of Brazil’s Mining Disasters*, THE GUARDIAN (Jan. 2019), <https://www.theguardian.com/world/2019/jan/29/the-river-is-dying-the-vast-ecological-cost-of-brazils-mining-disasters>.

<sup>143</sup> *Id.*

<sup>144</sup> *Id.*

### C. What Defendant Banks Knew: Vale's Admission of Its Environmental Damage to The Iron Quadrangle

170. A decade ago, in a public Form 20-F Vale filed with the United States Securities and Exchange Commission on April 17, 2012, Vale listed the risk factors that relate to their business, and informed each of the Defendants that the funding they continued to supply to Vale was directly financing a company that was destroying the environment in and around the Iron Quadrangle, as well as the significant negative impact on Plaintiff's and Class members' well-being.<sup>145</sup> Relevant risks they listed include:<sup>146</sup>

Our business is subject to environmental, health and safety incidents or accidents.

Our operations involve the use, handling, discharge and disposal of hazardous materials into the environment and the use of natural resources, and the mining industry is generally subject to significant risks and hazards, including the potential for fire or explosion, gas leaks, escape of polluting substances or other hazardous materials, rockfall incidents in underground mining operations and incidents involving mobile equipment or machinery. **This could occur by accident or by a breach of operating standards, and could result in a significant incident, including damage to or destruction of mineral properties or production facilities, personal injury or death, environmental damage, delays in production, monetary losses and possible legal liability.** (Emphasis added) Vale has health, safety and environmental standards in place to mitigate the risk of such incidents or accidents. Notwithstanding our standards, policies and controls, our operations remain subject to incidents or accidents, which could adversely affect our business or reputation.

Environmental, health and safety regulation, including regulation pertaining to climate change, may adversely affect our business.

**Nearly all aspects of our activities, products, services and projects around the world are subject to environmental, health and safety regulation,** which may expose us to increased liability or increased costs. (Emphasis added) Such regulations require us to obtain environmental licenses, permits and authorizations for our operations, and to conduct environmental impact assessments in order to get approval for our projects and permission for initiating construction.

---

<sup>145</sup> Form 20-F, SEC (2012), [https://www.sec.gov/Archives/edgar/data/917851/000104746912004389/a2208810z20-f.htm#ca75401\\_risk\\_factors](https://www.sec.gov/Archives/edgar/data/917851/000104746912004389/a2208810z20-f.htm#ca75401_risk_factors).

<sup>146</sup> *Id.* at 6-7 (emphasis added).

Additionally, all significant changes to existing operations must also undergo the same procedures.

171. Furthermore, Vale warned Defendants that the significant risks associated with their mining operations may not be fully insurable: “*We may not have adequate insurance coverage for some business risks.*”<sup>147</sup>

172. In another Form 20-F filed with the Securities and Exchange Commission on April 18, 2019, Vale lists Health, Safety, and Environmental Risks their business poses, including potential incidents.<sup>148</sup> These include:<sup>149</sup>

Our operations involve the use, handling, storage, **discharge and disposal of hazardous substances into the environment** and the use of natural resources, resulting in significant risks and hazards, including fire, explosion, **toxic gas leaks, spilling of polluting substances or other hazardous materials, rockfalls, incidents involving dams, failure of other operational structures**, as well as activities involving mobile equipment, vehicles or machinery and **other potentially fatal incidents and accidents**. (Emphasis added) Incidents may occur due to deficiencies in identifying and assessing risks or in implementing sound risk management, and once these risks materialize, **they could result in significant environmental and social impacts, damage to or destruction of mines or production facilities, personal injury, illness and fatalities, involving employees, contractors or community members near our operations, as well as delays in production, monetary losses and possible legal liability**. (Emphasis added) Additionally, in remote localities, our employees may be exposed to tropical and contagious diseases that may affect their health and safety. Notwithstanding our standards, policies, controls and monitoring procedures, our operations remain subject to incidents or accidents that could adversely impact our business, stakeholders or reputation.

173. Further, in Vale’s most recent 20-F filed with the SEC on April 12, 2023, Vale states the following:

We own a significant number of dams and other geotechnical structures. Some of our tailing’s storage facilities were built **using the upstream raising method**, which may present higher stability risks, especially related to liquefaction. **The collapse of any of these structures could cause loss of life and severe**

---

<sup>147</sup> *Id.* at 7.

<sup>148</sup> Form 20-F, SEC (2019), <https://www.sec.gov/Archives/edgar/data/917851/000104746919002391/a2238479z20-f.htm>.

<sup>149</sup> *Id.* at 31.

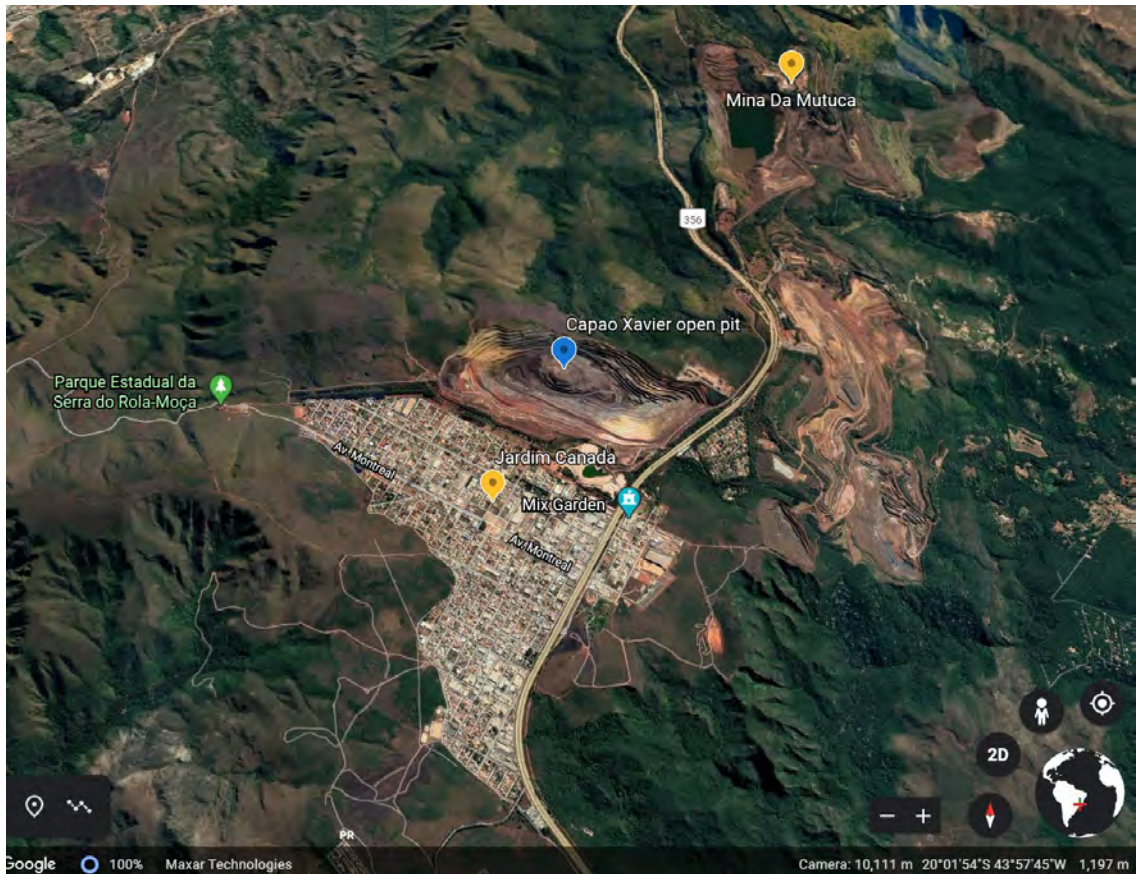
**personal, property and environmental damages, as well as negative social impact, and could have adverse effects on our business and reputation, as evidenced by the consequences of the dam collapse in Brumadinho and Samarco's dam collapse in Mariana.** Some of our joint ventures and investees, including Samarco and Mineração Rio do Norte S.A., also own dams and similar structures, including structures built using the upstream raising method.<sup>150</sup>

174. Given the above published statements by their customer, over the last decade it is impossible for Defendants to claim in this litigation that their executives and Boards of Directors did not know that their Banks were funding a corporate pariah whose malfeasance had already resulted in multiple deaths and utter catastrophes, with more to come.

175. Vale's continual reclassification of dams into higher risk categories illustrates that Vale and Defendants knew and still know that the dams located in the Iron Quadrangle will continue to injure residents, their communities, and the environment. This knowledge is further reinforced by the regular evacuations of communities near these tailings dams in the Iron Quadrangle, as Vale determines the risks of failure to reach critical levels. Despite this knowledge, Vale has refused to address the underlying issues, Defendants have not required these issues to be addressed as a requirement of their loans, and Defendants *continue to* finance Vale's mining operations. Defendants have placed profit above all else, endangering Plaintiff's and Class members lives and livelihoods, and the environment in the Iron Quadrangle.

---

<sup>150</sup> Form 20-F, SEC (2023), p. 22, [https://www.sec.gov/ix?doc=/Archives/edgar/data/917851/000129281423001516/valeform20f\\_2022.htm](https://www.sec.gov/ix?doc=/Archives/edgar/data/917851/000129281423001516/valeform20f_2022.htm).



#### **D. Defendants' Funding Enabled the Violations at Vale's Mining Operations in the Municipalities**

176. In early 2019, a Brazilian court ordered Vale to suspend operations at its Minervino, Cordao Nova Vista and Ouro Preto dams, demanding proof that the structures were stable.<sup>151</sup>

177. Earlier in September 2017, a court ordered Vale to stop all activities at the Onça Puma mine in Pará immediately, until it had fulfilled all the legal requirements regarding compensation to the affected indigenous communities. However, Vale was found to still be operating the mine, despite the order. In November 2018, the Federal Public Prosecutor's office found that Vale's Onça Puma mine in Pará failed to comply with environmental protection

---

<sup>151</sup> *Brazilian Court Suspends Operations at 2 More Vale Dams*, REUTERS (Mar. 18, 2019), <https://www.voanews.com/a/brazilian-court-suspends-operations-at-2-more-vale-dams/4836747.html>.

regulations and that it contaminated the Rio Cateté with heavy metals, which negatively impacted the Xicrin indigenous people.<sup>152</sup>

178. Currently, Vale is constructing the Belo Monte dam in Amazonia. Its construction will require the eviction of 40,000 locals, located approximately 100 kilometers along the bank of the Rio Xingu. Vale of course, has not offered more than meager compensation for those forcibly removed from their land. Once again, Defendants' funding of Vale's operations makes this mass eviction inevitable.

179. As Defendants fund each dam, they enable Vale's continuing malfeasance and the resulting harm and damages to Plaintiff while they, as major investors in Vale, continue to garner huge profits from the increased stock values generated by Vale's dangerous construction, maintenance, and improper storage practices that have injured Plaintiff. Their only hope is for the success of this litigation.

## **X. CAUSES OF ACTION**

### **A. Strict Liability as Polluters Under Brazilian Law**

180. Plaintiff incorporates all preceding paragraphs as if they were fully restated herein.

181. Defendants are polluters within the meaning of Article 3 (IV) and are *strictly liable*, jointly and severally, pursuant to Article 14, Paragraph 1 of Brazilian National Environmental Policy Act (6.938/1981).

182. For purposes of the above articles, a person or legal entity may be treated as responsible, directly or *indirectly*, for activity resulting in environmental damage by reason of funding activity which led to the environmental damage.

---

<sup>152</sup> *Vale ordered to pay tribes \$26.8 mn over river contamination*, Phys (Nov. 17, 2018), <https://phys.org/news/2018-11-vale-tribes-mn-river-contamination.html>.

183. Defendants have financed Vale's activities through debt securities with Vale or Vale's financing arm, Vale Overseas, Ltd.

184. Vale's mining operations in the Iron Quadrangle, as financed by Defendants, have caused the Plaintiff's environmental degradation, affecting the surface and groundwater which is used for public supply, and is a substantial source of heavy metal contamination, including mercury and arsenic, injuring the human and animal population represented by Plaintiff.

185. Defendants financed the severe environmental harm that Vale's mining activities have caused, and continue to cause, in the Iron Quadrangle.

186. Without the funding Defendants have provided to Vale, the hazardous contamination of the environment in the Iron Quadrangle would not have occurred because Vale would have been denied the resources it utilized to cause permanent injury, harm, and loss to the Plaintiff's environment and to them.

187. As a direct and proximate result of Defendants' funding of Vale's mining activities, Plaintiff and the Class members have suffered and will continue to suffer injuries to themselves, a reduction or elimination of their property values, a reduction in their interests in and use and enjoyment of their real and personal property, and a collapse of their businesses/livelihoods which continues to be deleterious to their health and well-being. Plaintiff and the other members of the Class are entitled to recover compensatory damages in amounts to be ascertained at trial.

**B. Violation of the Brazilian Constitutional Rights to Security, Property, and Social Well-Being**

188. Plaintiff incorporates all preceding paragraphs as if they were fully restated herein.

189. Article 5 of the Brazilian Constitution provides that all individuals have a right "to security and to property."

190. Article 193 of the Brazilian Constitution provides that “social well-being and justice” are to be preserved.

191. Vale’s mining operations, which are funded by Defendants, violate Plaintiff’s and Class members’ rights to security, property, and social well-being.

192. Defendants were aware, or otherwise should have been aware, that they were funding Vale’s mining operations in the Iron Quadrangle. Further, Defendants were aware, or otherwise should have been aware, that these operations posed significant dangers to Plaintiff and Class members, particularly because two tailings dams under Vale’s control had previously failed, leading to widespread devastation.

193. The omnipresent dangers associated with Vale’s mining operations, of which Defendants are aware, pose risks to Plaintiff’s and Class members’ security, to their property, and to their well-being.

194. As a direct result of the wrongful acts described here, Plaintiff and Class members are entitled to recover damages caused by these violations.

## **XI. DAMAGES**

195. Damages have been calculated for Plaintiff according to judicial decisions in Brazil and government-authorized plans which evaluated the economic losses owed to Plaintiff.<sup>153</sup> These damages are not individualized, but rather represent the total economic losses that Plaintiff’s Class has accumulated due to Defendants’ financial underpinning of Vale. Plaintiff seeks monetary losses that have been previously calculated as appropriate by judicial decisions and seek economic relief based on those figures, past, present, and future. Moreover, Defendants’ customer has already been informed of the economic assessments of the losses of the Class through the Brazilian

---

<sup>153</sup> See *supra* section VII.B.a.



judicial process. Plaintiff seeks a single award for punitive damages that is commensurate with Defendants' intentional acts that Defendants knew would cause the severe economic losses claimed in this action.

**A. The City of Ouro Preto, Minas Gerais, Brazil**

196. The City of Ouro Preto is under siege. Its citizens are forced by their economic circumstances to stay in the city with its polluted air and water, plus the constant fear of an imminent dam collapse that has caused them injuries and loss and will further damage their lives, livelihood, and properties.

197. Municipal Plaintiff has also experienced nearly complete loss of their property values because of the threat of the collapse of the substandard mining dams which fill the Iron Quadrangle.

198. Daily disruption to the lives and health of citizens has impacted business, education, and recreating, damaging Ouro Preto's economy. The diminishing property values and constant threat of collapse has forced citizens who have the economic means to relocate to safer municipalities to do so, causing further harm to the city's economy and revenue loss.

199. The threat of collapse and the damage caused to the environment has stagnated the tourism industry—an important revenue source for the city.

200. Not only does dam construction, operation, and failure interrupt normal societal functioning such as to cause significant material and economic losses to the Municipality, but it also causes significant damage to the environment and the health of the population located within the Municipality.

201. Ouro Preto has spent millions of reais in water, food, healthcare, and shelter costs to assuage the damage done to its thousands of its affected citizens, to repair the damage Vale's

dams have caused to its infrastructure plus the crippling tax and revenue loss to the Municipality. These conditions have caused the Municipalities losses, harm, and destroyed their citizens' well-being.

**B. “Moral Damages” under Brazilian Law**

202. Plaintiff's economic loss claims are governed by the federal procedural rules of the class actions. As to the substantive law, Plaintiff seek recovery under the Brazilian environmental law cited and reviewed in Section V, paragraph 44 to 63. Under Brazilian law, Plaintiff Class members are entitled to a broad scope of claims for damages, divided into two categories: (1) moral damages, related to anguish, pain and suffering, and (2) damage to property, which comprehends not only the compensatory or actual damages (e.g., an immediate, concrete, proven injury or loss, including the damage arising out of a willful misconduct) but also the loss of profit (i.e., the foreseeable earnings, proven with reasonable certainty, that the injured party would have received in the ordinary course of events if the harmful conduct had not occurred).

203. Plaintiff Class Members are entitled to recover compensatory damages for the property damage and value loss to homes and businesses within their municipality, loss of profit because of the loss of business within their municipality plus interest on the compensatory damages and loss of profits caused by Defendants' enabling of the “direct” polluter, Vale, by providing billions of dollars in loans and the purchase of stock. Without the massive funding of the Defendants over the last two decades, Vale could not have built and operated the dams that now are causing damages and loss to each Plaintiff Class Member d.

204. Additionally, Plaintiff Class Members are entitled to recover, as a result of the environmental devastation, the amount required to restore and repair the environmental damage

the Defendants funded, plus including costs of this suit the expert costs and attorneys' fees for bringing this action.

**C. Specific Damages as to each Class Member**

205. As to Ouro Preto and its Class, the following damages and losses have occurred and are ongoing:

1. Plaintiff and Class members have suffered loss and damage by the Defendants for which they are entitled to be compensated pursuant to one or more of the causes of action set out above.
2. Under Brazilian law, causation is generally treated as a question of fact. A loss is recoverable if there is a reasonable connection between the relevant act or event and the consequence in respect of which compensation is claimed. There are no special rules in relation to causation under Brazilian law.
3. Under Brazilian law, the general principle of damages is *restitutio ad integrum*. Damages are classified as either patrimonial damages or moral damages.
4. Patrimonial damages are compensation for pecuniary losses and include both past and future losses. Patrimonial losses are recoverable under Article 402 of the Brazil Civil Code which provides that: "Except where otherwise expressly provided for by law, the losses and damages owed to the creditor cover, in addition to what he has effectively lost, that which he reasonably failed to profit."
5. Moral damages are those damages which are not capable of pecuniary calculation. Moral damages are not defined in Brazil's Civil Code, but they include: all losses no specifically enumerated herein.

6. Punitive damages are available as “moral damages” pursuant to Brazilian law. Plaintiff members seek a single award for punitive damages of sufficient amount to punish the Defendants for purposely ignoring the information provided to them regularly describing the corporate malfeasance of their customer, Vale, in its construction, operation, and expansion of the dams in the Iron Quadrangle that are causing damages and losses to the Plaintiff members daily.

206. As to the Municipalities and its Class, the following damages and losses have occurred and are ongoing:

1. Each of the Municipalities has suffered and/or is suffering ongoing loss and damage for which it is entitled to be compensated, either on its own behalf or in respect of its citizens or the community, under one or more of the following categories:
  - a. Damage to the Municipality’s property;
  - b. Damage to the environment;
  - c. Damage to cultural heritage, landscape and tourism;
  - d. Damage to quality of life of its citizens;
  - e. Increased expenditure incurred or to be incurred pursuant to the Municipalities’ duties, rights and powers;
    - i. restoring the environment; and/or
    - ii. the safeguarding and/or repair and/or installation of infrastructure maintained by the Municipality; and/or
    - iii. the provision of public amenities; and/or
    - iv. administration; and/or
    - v. the provision of health services; and/or

- vi. the provision of social services;
- vii. the cost of any and all preparations for a potential dam disaster within its borders
- f. Lost investment by the Municipality;
- g. Loss arising from a fall in the Municipality's share of CFEM (Compensação Financeira pela Exploração Mineral) and/or CFURH (Compensação Financeira pela Utilização de Recursos Hídricos) pursuant to its entitlement;
- h. Loss arising from a fall in the Municipalities' receipt and/or redistributed share of IPTU, ITBI, ISS, ICMS, IPI and/or any other relevant tax;

**XII. EXCEPTION**

207. No person will be eligible to receive any compensation in this litigation if that person has had a claim or is presently making any claim pursuant to any other scheme of compensation or has made any claim for compensation for losses of any type because of either the Mariana (2015) or the Brumadinho (2019) dam collapse.

**XIII. REQUEST FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests the Court to:

- a. Enter judgment in favor of each of the Plaintiff and the members of the Class on all counts of the Complaint;
- b. Declare that Defendants violated Brazilian law;
- c. Award Plaintiff and the members of the Class damages, including compensatory damages and moral damages in the full amount of the losses, past, present and future, plus the remediation costs of the environmental damages alleged herein, in an amount greater than \$75,000;

d. Award the Class a single award of punitive damages to punish the Defendants for knowingly and willfully causing the destruction of the environment and communities of the Plaintiff's Class;

e. Award the Plaintiff and the members of the Class the costs of suit including reasonable attorneys' fees and;

f. Award the Plaintiff and the members of the Class such other and further relief as the Court deems just under the circumstances.

Respectfully submitted,

The **CITY OF OURO PRETO**, on behalf of itself and all others similarly situated, **PLAINTIFF**

**BY:**

---

ALEX STRAUS (Fed. Bar No. 5175419)  
MILBERG COLEMAN BRYSON  
PHILLIPS GROSSMAN, PLLC  
280 SOUTH BEVERLY DRIVE, PENTHOUSE  
BEVERLY HILLS, CALIFORNIA 90212  
T: (866) 252-0878  
[astraus@milberg.com](mailto:astraus@milberg.com)

ROY L. MASON\*  
OF COUNSEL  
MILBERG COLEMAN BRYSON  
PHILLIPS GROSSMAN, PLLC  
100 GARDEN CITY PLAZA  
GARDEN CITY, NEW YORK 11530  
T: (866) 252-0878  
[rmason@milberg.com](mailto:rmason@milberg.com)

GLENN PHILLIPS\*  
MILBERG COLEMAN BRYSON  
PHILLIPS GROSSMAN, PLLC  
1420 FIFTH AVE, SUITE 2200  
SEATTLE, WASHINGTON 98101  
T: (866) 252-0878  
[gphillips@milberg.com](mailto:gphillips@milberg.com)

GREG COLEMAN\*  
MILBERG COLEMAN BRYSON  
PHILLIPS GROSSMAN, PLLC  
800 S. GAY STREET, SUITE 1100  
KNOXVILLE, TENNESSEE 37929  
T: (866) 252-0878  
[gcoleman@milberg.com](mailto:gcoleman@milberg.com)

*\*denotes counsel who will seek  
pro hac vice admission*

**DEMAND FOR JURY TRIAL**

Plaintiff demands a trial by jury on all issues so triable.

---

**ALEX STRAUS**