

Lessons from the Samarco Disaster¹

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I. INTRODUCTION

On 5 November 2015, a tailings dam in Brazil collapsed, unleashing the equivalent of 20,000 Olympic swimming pools² of mining waste, mud and industrial chemicals on villages downstream. At least 17 people died in the flood of tailings waste and millions of lives were adversely impacted. Significant, irreversible damage occurred to 600 kilometres of the river and well into the ocean. Shares of Vale S.A. and BHP Billiton Brazil Ltda., parent companies of the mine operator company operating the mine, Samarco Mining S.A. (the Companies), plummeted dramatically in the wake of what is widely viewed as the worst environmental disaster in Brazil's history.³

In March 2016, the Companies and the Brazilian government reached an agreement for remediation and compensation. However, a Brazilian court subsequently suspended the settlement. One of the primary reasons for the suspension of the settlement was the lack of opportunities for communities most affected by the disaster to participate in the settlement negotiations. This piece takes a brief look at the events that unfolded in the so-called 'Samarco disaster', and the importance of the right to participation which is reflected in the court's suspension of the settlement.

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² UN Human Rights Office of the High Commissioner, 'Brazilian Mine Disaster: "This is not the Time for Defensive Posturing" – UN Rights Experts' (25 November 2015), <http://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=16803&LangID=E> (accessed 6 October 2016).

³ 'BHP Billiton Shares Fall After UN Accusations on Dam Spill', *Financial Times* (26 November 2015), <http://www.ft.com/cms/s/0/9f6e7c4c-9430-11e5-b190-291e94b77c8f.html#axzz3sRz4sncK> (accessed 6 October 2016); 'BHP Shares Plunge as Brazil Files Suit Against Dam Owners', *Wall Street Journal* (30 November 2015), <http://www.wsj.com/articles/BT-CO-20151130-704139> (accessed 6 October 2016).

II. THE ‘WORST ENVIRONMENTAL DISASTER IN BRAZIL’S HISTORY’

A. Events

On 5 November 2015, the Fundão dam securing around 60 million cubic meters of iron mine residue in the city of Mariana ruptured, unleashing the equivalent of 20,000 Olympic swimming pools⁴ of mud containing more than 50 million tons of iron ore tailings and an unknown quantity of industrial chemicals. The flood of tailings waste swept through the districts of Bento Rodrigues and Paracatu de Baixo within minutes, before inundating all 41 municipalities located in the Rio Doce Basin between the states of Minas Gerais and Espírito Santo, ultimately taking 18 lives and leaving one individual missing. Nearly two weeks after the dam collapsed,⁵ the mud had reached the Atlantic Ocean, after traveling 600 kilometres down the Rio Doce, one of the most crucial watersheds for the South-eastern region of the country.

It is the seventh time in the last 30 years that a tailing dam has failed in Minas Gerais.⁶ Yet this incident may constitute the worst ecological disaster in the history of Brazil. Eight hundred and fifty kilometres of soil, rivers and water system were polluted, 1,469 hectares of vegetation—including protected areas—were destroyed,⁷ several tons of fish and many other living organisms were killed, and the livelihoods of nearly 2.3 million people relying on the Rio Doce for key ecosystem services were damaged. Many no longer have access to their means of subsistence and suffer from severe psychological trauma.⁸

The handling of the incident by Brazilian authorities and the iron ore mining company responsible for the tailings dam, Samarco Mining S.A., stirred serious criticism. Samarco, a joint venture of BHP Billiton Brasil Ltda (BHP) and Vale S.A. (Vale), came under fire for failing to alert the affected communities when the breach occurred,⁹ forcing them to organize and evacuate themselves. The Brazilian government was condemned for its lack of involvement onsite, perhaps best illustrated by President Dilma Rousseff’s delayed visit to the disaster area. Public authorities and Samarco were also criticized for their lack of transparency¹⁰ in disclosing crucial information to the public relating to the unsafe nature of the Santarém dam and Selinha dike, and to the health risks posed by the elevated levels of manganese, arsenic, mercury and other toxic chemicals found in the Rio Doce.¹¹

⁴ UN Human Rights Office of the High Commissioner, note 2.

⁵ ‘Brazil Dam Toxic Mud Reaches Atlantic Via Rio Doce Estuary’, *BBC News* (22 November 2015), <http://www.bbc.co.uk/news/world-latin-america-34892237> (accessed 6 October 2016).

⁶ Ana Carolina de Oliveira Neves et al, ‘Neglect of Ecosystems Services by Mining, and The Worst Environmental Disaster in Brazil’ (2016) 14 *Natureza & Conservação* 25.

⁷ Graça Adjuto and Olga Bardawil, ‘Mariana Mining Disaster Spread Destruction Over More Than 660 km of Rivers’, *EBC Agência Brasil* (6 January 2016), <http://agenciabrasil.ebc.com.br/en/geral/noticia/2016-01/mariana-mining-disaster-spread-destruction-over-more-660-km-rivers> (accessed 6 October 2016).

⁸ Justiça Global, ‘Inside the Vale of Mud: A report on the tailings dam collapse in Brazil’, *issuu* (14 January 2016), https://issuu.com/justicaglobal/docs/inside_the_vale_of_mud (accessed 6 October 2016).

⁹ Paul Kiernan, ‘Remains of Samarco’s Collapsed Dam Unstable Because of Heavy Rains’, *Wall Street Journal* (27 January 2016), <http://www.wsj.com/articles/remains-of-samarcos-collapsed-dam-unstable-because-of-heavy-rains-1453926445> (accessed 6 October 2016).

¹⁰ Paul Kiernan, ‘Brazil Dam’s Failure Flooded Region With Toxic Waste, U.N. report says’, *Wall Street Journal* (25 November 2015), <http://www.wsj.com/articles/brazil-dams-failure-flooded-region-with-toxic-wastes-u-n-report-says-1448494712> (accessed 6 October 2016).

¹¹ UN Human Rights Office of the High Commissioner, ‘Joint Urgent Appeal From Special Procedures’, UA BRA10/2015 (24 November 2015).

The initial efforts of Samarco's parent companies to downplay their responsibility for the disaster¹² was ultimately not enough to keep their shares from dropping significantly,¹³ and some investors are currently suing BHP for inflating the price of its American depositary receipts by overstating its ability to manage safety risks prior to the dam bursts.¹⁴

B. Political and Economic Context

In examining the actions of the Government and actions of Samarco, BHP and Vale before and after the incident, it is important to bear in mind the political and economic context. Much of the events transpired during one of the darkest periods of economic recession and political instability in recent decades for Brazil. In August 2015, Brazil's economy officially fell into recession. While the economy shrank, inflation and unemployment rose rapidly, at 10 and 8 per cent respectively.¹⁵ A major contributor to the reversal of fortune for a once booming economy was falling commodity prices. Notable for Samarco's iron ore operations, the price of iron ore plummeted from US\$ 177 in August 2011 to US\$ 47 in November 2015.¹⁶

Politically, Brazil was rocked by corruption scandals. Corruption is a pervasive problem in Brazil, with the country ranking 76th out of 168 countries in terms of the perceived levels of public sector corruption.¹⁷ However, Brazil's political establishment was rocked by a corruption scandal involving *Petróleo Brasileiro S.A.—Petrobras* (Petrobras), the semi-public multinational oil, gas and petrochemical corporation. Brazilian politicians were reported to have taken US\$ 2 billion in kickbacks in exchange for awarding public contracts.

III. THE PATH TO AN EFFECTIVE REMEDY

On 2 March 2016, Samarco Mining S.A. and its parent companies Vale and BHP signed a 15-year agreement (the Agreement) with the Brazilian Federal Government and states of Minas Gerais and Espírito Santo, creating the Samarco Foundation, governed by the

¹² Paul Kiernan, 'Brazilian Judge Rules Vale Shares Responsibility for Catastrophic Dam Break', *Wall Street Journal* (21 December 2015), <http://www.wsj.com/articles/brazilian-judge-rules-vale-shares-responsibility-for-catastrophic-dam-break-1450731387> (accessed 6 October 2016).

¹³ Rhiannon Hoyle and Andrew Peaple, 'Financial Impact of Brazil Dam Catastrophe Weighs on BHP Billiton', *Wall Street Journal* (9 November 2015), <http://www.wsj.com/articles/dam-burst-costs-could-break-1-billion-analyst-says-1447043902> (accessed 6 October 2016); Jamie Smyth and Peter Wells, 'BHP Billiton To Take \$1.3 bn Charge Over Brazil Disaster', *Financial Times* (28 July 2016), <https://next.ft.com/content/2169af98-5482-11e6-9664-e0bdc13c3bef> (accessed 6 October 2016).

¹⁴ Jonathan Stempel, 'BHP Billiton Investors Sue in U.S. Over Brazil Dam Disaster', *Reuters* (25 February 2016), <http://www.reuters.com/article/us-bhpbilliton-lawsuit-dam-idUSKCN0VY03Y> (accessed 6 October 2016); *Jackson County Employees' Retirement System v BHP Billiton Ltd et al*, U.S. District Court, Southern District of New York, No. 16-01445.

¹⁵ Dom Phillips, 'Brazil's Economy Tanks as Multibillion-Dollar Corruption Scandal Expands', *The Washington Post* (16 September 2015), https://www.washingtonpost.com/world/the_americas/brazils-economy-tanks-as-multibillion-dollar-corruption-scandal-expands/2015/09/15/9ccbc882-5b0a-11e5-8475-781cc9851652_story.html (accessed 6 October 2016).

¹⁶ 'Iron Ore Spot Price (Any Origin): 58.00 USD/dmt for Sep 2016', *Ycharts*, https://ycharts.com/indicators/iron_ore_spot_price_any_origin (accessed 6 October 2016).

¹⁷ Transparency International, 'Corruption Perceptions Index 2015', <http://www.transparency.org/cpi2015> (accessed 6 October 2016).

companies to co-ordinate and fund programmes to repair and remedy damages caused by the collapse of the Fundão tailing dam.

Numerous concerns have been raised about the settlement agreement, both in terms of the substance of the settlement and participation of over 2,000,000 people in affected communities in the negotiation and potential implementation of the Agreement. In a joint communication to the Government of Brazil, a group of UN Special Rapporteurs on human rights note 'the Agreement appears to only guarantee a role of partial accountability for the implicated companies'.¹⁸ The next section looks at substantive and procedural shortcomings of the settlement, as well as the failure to effectively ensure non-recurrence.

A. Substance

1. Compensation and Remediation

In terms of compensation, the Agreement determines that the Companies are liable to pay a total estimated R\$ 20 billion (approximately US\$ 5.6 billion) in the next 15 years. The Agreement has the Companies developing and executing a total of 17 socio-environmental and 21 socio-economic programs in five 3-year periods between 2016 and 2031. The Agreement did not include any explicit clause designating the Companies as responsible for all costs necessary to provide reparation and compensation to all affected parties by the disaster, during or after the 15-year period.

Several stakeholders in Brazil, including federal prosecutors and the National Council for Human Rights, claim that the amounts determined in the Agreement are insufficient to provide complete reparation and compensation. Federal Prosecutor José Adércio Sampaio estimated the total cost of damages at R\$ 155 billion (approximately US\$ 44.35 billion).¹⁹ In response to the settlement, the Federal Public Prosecution Service filed suit on 3 May 2016, demanding a minimum of R\$ 155 billion in damages.²⁰

2. Participation in Implementation

Regarding the institutional makeup of the Foundation, no specific mechanisms or provisions were included to ensure the effective participation of the affected communities in the decision-making process of the design and execution of the programs envisioned in the Agreement.

A board of directors were to be the decision-making body of the Samarco Foundation, tasked to approve the plans, projects and programmes necessary to implement the Agreement. The board of directors is composed of seven members, of which six were to be appointed by the three companies (two seats per company) and one by the Interfederative Committee. It was not made clear in the Agreement whether consensus or non-consensus decision-making would apply.

¹⁸ UN Human Rights Office of the High Commissioner, 'Joint Urgent Appeal From Special Procedures', (July 2016).

¹⁹ 'MPF Cobra R\$ 155 bi para Reparar Danos do Rompimento da Barragem da Samarco', *EBC Agência Brasil* (3 May 2016), <http://agenciabrasil.ebc.com.br/geral/noticia/2016-05/mpf-cobra-r-155-bi-para-reparar-danos-do-rompimento-da-barragem-da-samarco> (accessed 6 October 2016).

²⁰ 'Brazil Files \$ 43.5bn Claim over Fatal Disaster', *BBC News* (4 May 2016), <http://www.bbc.com/news/business-36199607> (accessed 6 October 2016).

Affected communities were given three of 12 seats on the Interfederative Committee²¹ and five of 17 seats on the Advisory Council.²² Within these bodies, decision-making and other processes and procedures are not clearly defined, notably the participation of the affected individuals and groups. The Advisory Council were given more power than the ability to issue non-binding recommendations for the board's consideration, and the actual authority of the Interfederative Committee as a whole is entirely unclear, but appears to be severely limited at best. Moreover, the governance structure proposed by the Agreement lacks a mechanism to prevent and mitigate conflicts of interest and to ensure the independence and impartiality of remediation processes.

3. Procedural Concerns

Regarding the process by which the Agreement was negotiated between the public authorities and the Companies, there was minimal consultation with those impacted or affected by the catastrophe, in particular the communities living near the tailing dam rupture, those located downstream, and the indigenous populations living near the Rio Doce riverside. Several federal and state prosecutors of the task force investigating the initial spill were opposed to the negotiation process due to the lack of public participation and transparency in determining the terms.

The Agreement was reached in less than eight weeks, an extremely short time frame for an environmental disaster of this magnitude. By comparison, in the case of the 'Deepwater Horizon' disaster in the Gulf of Mexico, it took five years to reach a settlement. The settlement was reached almost six months before studies of what may have caused the collapse of the tailings dam concluded. Federal prosecutor Sampaio cautioned that studies were still unavailable about the full extent of the damages and that diagnostics are required 'for at least two water years in order to be certain of the damages'.²³

It is unclear what legal representation those affected by the collapse of the tailing dams were afforded during the negotiations. In addition, information regarding the development of the Agreement's terms was also not made available publicly to those adversely affected by the Samarco disaster, or to the international community.

Indeed, BHP Billiton and Vale do not deny the limited extent of the consultation carried out by themselves or government authorities. The companies have cited the considerable pressure exerted by the Government of Brazil to settle the public civil suit

²¹ The Interfederative Committee was designed to be dominated by representatives of the municipal, federal and state governments, tasked to determine objectives, validate projects and programmes, and review progress and achievements against the objectives of the remediation and compensation programmes. It will have 12 members, of which only three are to be representatives of the affected communities (two from Minas Gerais and one from Espírito Santo). The Agreement did not determine the appointment process of these three community members. Moreover, the available information suggests that there is no clear methodology for determining how key issues shall be identified and given priority for action, or whether consensus or non-consensus decision-making shall apply.

²² The Advisory Council will reportedly have 17 members, five of which will be assigned to the affected communities (three from the state of Minas Gerais and two from the state of Espírito Santo). The Advisory Council can only issue 'non-binding recommendations' (clause 218).

²³ *Ibid.*

filed in November 2015, in which Brazilian authorities sought up to R\$ 20 billion for remediation and compensation.²⁴

IV. CONCLUSION

Despite the public interest lawsuit submitted by the Federal Public Prosecutor on 3 May 2016, the lower court approved the Agreement on 5 May 2016. This initial judicial review process of ratification also reportedly did not include a participative and effective consultation process with the affected individuals and communities, in particular the indigenous populations (especially the Krenak indigenous peoples), the traditional groups (fishermen, small farmers, among others) and the urban population of the villages and cities affected by the disaster, who expressed interest in participating in the final judicial process regarding the Agreement's approval.

On review, the Superior Court ultimately suspended the settlement on 1 July 2016 and reinstated the R\$ 20 billion public civil lawsuit. BHP and Vale stated their intention to appeal the decision.²⁵ One of the primary reasons for the suspension of the settlement was the lack of participation of communities most affected in the negotiation of the settlement. The Judge stated in his opinion: 'Having regarded the magnitude of the damages resulting from the disaster in Mariana, it would be strongly recommended to provide ample public debate of any negotiated solution, including by holding public hearings with the participation of individuals, civil society, scientific community and representatives of the local communities affected.'

Many lessons are to be learned from the events before, during and after the Samarco disaster. Certainly events before and during the disaster illustrate many lessons for human rights due diligence and impact assessments, as well as the role of the financial sector. Perhaps the strongest lesson to date, given the considerable uncertainties and unknowns, is the duty and responsibility to ensure meaningful participation of affected communities in the process of arriving at an effective remedy.

The right to participation and remedy are closely linked and well-established principles of international law. The 1992 Rio Declaration on Environment and Development articulates that, 'Environmental issues are best handled with participation of all concerned citizens, at the relevant level ... States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.' Under the International Covenant on Civil and Political Rights, state parties have an obligation to ensure that any person whose rights or freedoms are violated has access to an effective remedy and that every citizen has the right and the opportunity to take part in the conduct of public affairs.

Moving forward, government authorities and responsible businesses should ensure meaningful participation in the design and implementation of an effective remedy for the 'worst environmental disaster in Brazil's history'.

²⁴ 'Brazil Prosecutors Could Scupper Samarco Dam Settlement', *Financial Times* (18 February 2016), <http://www.ft.com/intl/cms/s/0/6e51b9dc-d641-11e5-969e-9d801cf5e15b.html#axzz47116kmz> (accessed 6 October 2016).

²⁵ 'BHP, Vale to Fight Reinstated \$6 Billion Claim for Samarco Disaster', *Reuters* (1 July 2016), <http://www.reuters.com/article/us-bhp-billiton-samarco-claim-idUSKCN0ZH318> (accessed 6 October 2016).