



Rio de Janeiro, July, 2015

**Vale response to allegations in the
2015 Unsustainability Report**

To whom it may concern,

The benefits of Vale operations for Brazil are long term and long lasting and have allowed the development and integration of remote areas into the country. Vale's activities have made a significant contribution to GDP, allowing mining regions to improve their HDI over the last 70 years in the State of Minas Gerais and over the last 30 years in the North of Brazil. There is no questioning that mining activities in Brazil have had a positive impact at the national and local levels. Numerous studies conducted by different specialists offer evidence to this end. One of them was conducted by Oxford Policy Management, ICMM and IBRAM and can be accessed on ICMM's website: <http://www.icmm.com/document/5423>. Two other reports about the positive impacts of mining in Brazil worth mentioning are: www.fjp.mg.gov.br/index.php/noticias-em-destaque/1974-fundacao-joao-pinheiro-divulga-o-pib-dos-municipios-de-minas-gerais; www.mdic.gov.br/sitio/interna/interna.php?area=2&menu=208.

In Mozambique and other countries where it operates, Vale is committed to achieving similar results and contributing to local and national development.

Although there is significant progress, we recognize there is still room for improvement, and Vale is committed to continuously advancing its sustainability performance. That said, it is important to clarify that the allegation that Vale's activities have had negative impacts in Brazil, Mozambique are based on two reports that have partial and misleading information: the 2012 Public Eye and the 2015 Unsustainability Report.

We worked on the clarification and rectification of the main allegations made against Vale in both Reports. We are confident that our document will bring more light into the issues covered and give you a more balanced perspective.

We remain available for further clarification.

Vale S. A.

Ethics and Conduct Office
Av. Graça Aranha, 26, 20° andar
20030-900 Rio de Janeiro, RJ - Brasil
Vale S.A.



I. Response on the allegations related to the Public Eye Award

Our response, posted in 2012, is available at <http://business-humanrights.org/en/documents/public-eye-nominations-2012-company-responses-non-responses>.

II. Response on the allegations related to the 2015 Unsustainability Report

Please find below the positioning for the main allegations mentioned in the 2015 Unsustainability Report.

1) Companhia Siderúrgica do Atlântico (TKCSA)

Text of 2015 Unsustainability Report

Original Portuguese text: “TKCSA: Sem licença para operar, com permissão para poluir. Desde 2010, a Companhia Siderúrgica do Atlântico (TKCSA), com 27% de participação da Vale e investimentos públicos de R\$ 5 bilhões, opera em sua unidade de Santa Cruz apenas com o Termo de Ajustamento de Conduta (TAC). Em 2014 este Termo foi renovado, o que significa que a empresa, que ganhou fama por elevar em 76% as emissões de CO2 na cidade do Rio de Janeiro e por causar uma “chuva de prata” em seu entorno, causando doenças na população vizinha, continuará funcionando de forma ilegal. Mais de 200 famílias impactadas continuam aguardando que a Justiça julgue as ações com pedidos de indenizações contra esta empresa.

Chuva de prata da TKCSA em Santa Cruz, causando danos graves a saúde das pessoas, elevando em 76% a emissão de gás carbônico (CO2) de toda a cidade, além da destruição de cerca de 8 mil postos de trabalho gerados pela pesca na Baía de Sepetiba.

TKCSA: Desde 2010, a Companhia Siderúrgica do Atlântico (TKCSA), opera em sua unidade de Santa Cruz sem licença de operação, apenas com o Termo de Ajustamento de Conduta (TAC).”

English version: “TKCSA: without a license to operate, but with permission to pollute. Since 2010, Companhia Siderúrgica do Atlântico (TKCSA), in which Vale holds a 27% stake, and involving public investments of R\$5 billion, has been operating its Santa Cruz facility with just a Conduct Adjustment Agreement (known by Portuguese acronym TAC). In 2014 this agreement was renewed, meaning that the company – which won fame by raising CO2 emissions by 76% in the city of Rio de Janeiro and generating “silver rain” around it, causing diseases among the neighboring population – will continue to operate illegally. More than 200 affected families continue to wait for the courts to judge their lawsuits demanding compensation from this company.

TKCSA’s silver rain in Santa Cruz, causing serious health problems among people, raising CO2 emissions across the city by 76%, and destroying around 8,000 jobs generated by fishing in Sepetiba Bay.



TKCSA: Since 2010, Companhia Siderúrgica do Atlântico (TKCSA) has been operating its Santa Cruz facility without an operating license, but with just a Conduct Adjustment Agreement (TAC).”

Vale’s Response

Vale is a minority shareholder, with 27% stake at ThyssenKrupp Companhia Siderúrgica do Atlântico (TKCSA).

TKCSA clarifies that it has one of the lowest carbon emission rates among the world’s steelmakers due to its modern technology to reuse gases and steam to generate power, ensuring greater environmental efficiency for the plant.

TKCSA is in compliance with the environmental licensing process. On April 16, 2014, the company signed an addendum to its Conduct Adjustment Agreement (TAC) with the Rio de Janeiro State Environment Secretariat (SEA-RJ), the State Environmental Monitoring Commission (CECA-RJ) and the State Environment Institute (INEA-RJ), and it has complied with 92% of the requirements. Through this document, which is valid for 24 months, the company will continue with its industrial investments, in accordance with the environmental authorities’ recommendations concerning opportunities for improvements identified by independent auditors.

Finally, air quality in Santa Cruz is monitored in real time by three automatic environmental air quality monitoring stations located around the plant. The Rio de Janeiro State Environment Institute (INEA) has access to this data via the internet, 24 hours a day, 365 days a year. At no time since the start of operations have legal air quality standards in the region been breached.

2) Accusation of espionage

Text of 2015 Unsustainability Report

Original Portuguese text: “Vigilância da Vale denunciada: em Março de 2013 um ex-funcionário da Vale denunciou ao Ministério Público e ao Senado Federal, o funcionamento da área de vigilância e inteligência da empresa. Espionagem dos próprios funcionários: as informações revelam ações de espionagem da Vale sobre os próprios funcionários, jornalistas, comunidades impactadas e movimentos sociais críticos aos projetos da empresa. Propina e acesso a dados restrito: levantamento de dados biográficos a partir de acesso a dados do sistema Infoseg e da Receita Federal mediante o pagamento de propina a funcionários públicos. Escuta telefônica interna: grampos telefônicos internos utilizados sem informar ao empregado e depois usados nas demissões por justa causa; rastreamento de computadores; quebra de sigilo bancário. Escuta externa sem autorização legal: grampos não autorizados pela justiça, em telefones externos (chamados besouros); Acesso a extratos de contas telefônicas de pessoas fora da Vale, como a jornalista Vera Durão, do jornal Valor Econômico, em novembro de 2010.

English version: “Vale’s surveillance denounced: In March 2013, a former Vale employee submitted allegations to the Public Prosecution Ministry and Federal Senate regarding the functioning of the company’s surveillance and intelligence area. Spying on its own employees: The information reveals that Vale has spied on its own employees, journalists, affected communities and

social movements critical of its projects. Bribery and access to restricted data: Collection of biographical data based on access to data from the Infoseg system and Federal Revenue Service through payment of bribes to public employees. Internal phone tapping: Internal wiretaps used without informing employees and subsequently used in terminations for cause; tracking of computers; breach of banking secrecy. External phone tapping without legal authorization: wiretaps not authorized by the courts, on external phones (so-called bugs); access to itemized phone bills of people outside Vale, such as journalist Vera Durão, of the Valor Econômico newspaper, in November 2010”.

Vale's Response

Upon conclusion of the investigation, the competent Criminal Court in Rio de Janeiro dismissed the case based on the opinion of the Public Prosecutor Office.

3) Licensing of Carajás Railroad (EFC) Expansion Project

Text of 2015 Unsustainability Report

Original Portuguese text: “Duplicação da EFC: A Fragmentação do Licenciamento. Desde 2012 está em andamento uma Ação Civil Pública (ACP) que contesta a legalidade do processo de licenciamento das obras de duplicação da Estrada de Ferro Carajás (EFC). A ACP questiona ainda o fato de que as obras vêm sendo analisadas e licenciadas de forma fragmentada e por meio de um procedimento simplificado e expedito, fato que inviabiliza as análises dos impactos sinérgicos, acumulativos e indiretos. A Vale propôs, e o Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Ibama) aprovou, que esse processo de licenciamento tramitasse segundo um rito simplificado, que isenta a empresa da elaboração de EIA-RIMA, audiências públicas e da realização de consulta para indagação sobre o consentimento prévio, livre e informado das comunidades tradicionais impactadas. Após 45 dias de embargo judicial das obras de duplicação da EFC, por conta de uma liminar da 8ª. Vara Federal no Maranhão, a Vale S.A. conseguiu retomar os trabalhos por meio de uma decisão do presidente do Tribunal Regional Federal da 1ª Região (TRF-1), que considerou que apesar da ilegalidade, as obras deveriam ir adiante porque sua paralisação causava grave lesão à ordem e à economia públicas. As entidades proponentes da ACP recorreram da decisão e o recurso deverá ser apreciado em breve pelo Superior Tribunal de Justiça (STJ), com possível nova determinação para a paralisação das obras.”

English version: “Expansion of EFC: fragmentation of licensing. Since 2012 a public civil lawsuit has been underway that contests the legality of the licensing process for the work to expand the Carajás Railroad (EFC). The public civil lawsuit also questions the fact that the construction work has been analyzed and licensed in a fragmented manner and through a simplified, fast procedure, making it impossible to analyze synergistic, cumulative and indirect impacts. Vale proposed, and the Brazilian environmental regulator (Ibama) approved, simplifying the licensing process, thereby exempting the company from the need for an environmental impact assessment (EIA-RIMA), public hearings and a consultation regarding inquiries about the prior, free and informed consent of impacted traditional communities. Following a 45-day legal shutdown of the EFC’s expansion work,



resulting from an injunction issued by the Eighth Federal Court of Maranhão, Vale S.A. managed to resume the work through a decision by the president of the Federal Regional Court of the First Region (TRF-1), who deemed that despite its illegality, the work should go ahead because the shutdown was causing serious problems for public order and the economy. The entities that filed the public civil lawsuit appealed this decision and the appeal should be heard soon by the Superior Court of Justice, which may order the construction work to be halted once more.”

Vale's Response

Vale clarifies that the environmental licensing of the Carajás Railroad (EFC)'s expansion was based on the legal standards of the federal, state and municipal spheres. All the social and environmental studies, plans and programs developed to mitigate the impacts caused by the work were properly submitted and compiled in the Basic Environmental Plan (PBA). With regard to indigenous and quilombola communities, anthropological diagnoses, impact matrices and specific recommendations have been developed for each affected community. All these steps had the participation of indigenous communities, reflecting an intense process engagement and consultation, offering access to information about the enterprise before the implementation had begun, discussing their worries and demands and working on short and long term mitigation programs

Vale acted in line with legal provisions, holding a public and transparent process, with special concern for technical studies regarding indigenous peoples and quilombola communities, and extensive dialogue with them. Communication with communities near the railroad is permanent. Public meetings were held with the affected communities on July 9, 10, 12 and 13, 2012, in addition to meetings dedicated exclusively to quilombola and indigenous communities. These public meetings and hearings complied with the terms of CONAMA Resolution 09/86, which provides for procedures for public participation within the scope of environmental licensing.

Due to the regularity of the studies and the entire public consultation process, Vale obtained the respective environmental licenses to install the project, and obtained approval from FUNAI and the Palmares Foundation to expand the railroad.

Concerning the Free, Prior, and Informed Consent procedure for indigenous and traditional populations, although Brazil abides by ILO Convention 169, through Legislative Decree 143/2002, the regulations stipulating procedures and the scope of rules is still under discussions.. Regardless of this, the constant and transparent dialogue established between Vale and the traditional communities along the EFC, as well as the provision of all necessary information related to the project previous of its implementation to these communities, in-person, and the consultation on which and how the mitigations plans should be developed and implemented meet the essential objective of ILO Convention 169.

The regularity of the environmental licensing process was reaffirmed in a court ruling of the Federal Regional Court (TRF), which recognized that the measures taken by Vale are in full compliance with the requirements of the competent technical and environmental authorities. Note that the work does not involve building a new railroad or double-tracking the entire length of the existing one, but merely connecting existing railroad yards along the original track, which will generate benefits for general cargo and passenger transportation, besides the iron ore. Accordingly, Vale has been investing heavily in local manpower training and social and environmental programs to boost the local development of the region and its population.

4) Train-hopping children

Text of 2015 Unsustainability Report

Original Portuguese text: “Os clandestinos meninos do trem. Não há mineração sem desastre. No Pará e no Maranhão, meninos e meninas, a maioria oriundos dos municípios de Marabá e Parauapebas, arriscam suas vidas viajando clandestinamente nos trens de carga ou nos trens de passageiros da Vale. Em busca de uma vida melhor ou fugindo de suas famílias, eles tentam chegar a São Luís em situações de extrema precariedade, perigo para suas vidas e absoluta falta de dignidade. As crianças e os adolescentes se escondem dentro do minério de ferro, deixando somente a cabeça para fora, ou utilizando a parte superior de uma garrafa de refrigerante como funil para respirar. O próprio acesso aos vagões de minério, enquanto o trem está em movimento, é extremamente arriscado e leva, em vários casos, a ferimentos ou mutilações. Relatos revelam ainda casos de violência física e ameaças aos meninos por parte dos seguranças da Vale. Operando há três décadas na região, a Vale não admite que este é um impacto causado pela mineração e justifica ser uma consequência dos problemas socioeconômicos existentes. Em seu percurso da mina ao porto, os trens da Vale atravessam mais de cem comunidades tradicionais e indígenas, dentre outros grupos sociais.”

English version: “Train hopping children. There is no mining without disaster. In Pará and Maranhão, boys and girls, mostly from the municipalities of Marabá and Parauapebas, risk their lives by traveling clandestinely on Vale’s freight or passenger trains. In search of a better life or escaping from their families, they try to reach São Luís in a state of extreme vulnerability, danger to their lives and utter lack of dignity. These children and teenagers hide among the iron ore, with only their heads appearing, or using the upper part of a soft drink bottle as a funnel through which to breathe. Climbing into the iron ore railcars while the train is moving is extremely dangerous, leading in many cases to injury or mutilation. Cases of physical violence and threats against the children by Vale’s security guards have also been reported. Operating for three decades in the region, Vale does not admit that this is an impact caused by mining and claims it is a consequence of existing socioeconomic problems. In their journey from mine to port, Vale’s trains cross more than 100 traditional and indigenous communities, among other social groups.”

Vale’s Response

The phenomenon known as the “train hopping children” consists of the practice of children and teenagers covertly entering the railcars of the Carajás Railroad (EFC), on journeys from Parauapebas in Pará to São Luis in Maranhão, or vice versa.

The EFC extends for 892 km and crosses 27 municipalities (four in Pará and 23 in Maranhão), passing around 100 communities.

The Maranhão State Public Prosecution Ministry filed a public civil lawsuit in 2011, and in the following year a partial agreement was made to produce a Safety Plan to be implemented following analysis and discussion between the parties.

On March 16, 2012, the Maranhão State Public Prosecution Ministry, together with several public authorities, deputies, representatives of public defender offices, the Pará State Public Prosecution



Ministry and organized civil society, held a public hearing in the auditorium of the Maranhão Legislative Assembly to discuss this “phenomenon” of socioeconomic nature.

In line with the partial agreement, the Maranhão State Public Prosecution Ministry appointed a railroad engineer from the Canadian government’s transport regulator to conduct an analysis of the Plan submitted by Vale. This professional’s fees were paid by the company.

At the invitation of the Pará State Public Prosecution Ministry, Vale attended the public hearing held on February 25 2015 in Marabá, where it presented to the Ministry and other stakeholders the safety study produced by the company and watched the presentation of the study conducted by a consultant working for the Maranhão State Public Prosecution Ministry.

Train hopping by children and teenagers on freight trains is a social phenomenon, which according to research and studies arises mainly out of vulnerable situations in the municipalities of origin.

In line with this situation, in 2015 the Maranhão State Public Prosecution Ministry, the Pará State Public Prosecution Ministry and Vale signed an agreement to implement measures to eliminate or mitigate clandestine access by children and teenagers to freight trains, and for the Public Prosecution Ministries to take steps to ensure that child welfare councils, municipalities and other entities meet their obligations, as part of a collective, multi-sector process to guarantee an effective social welfare policy that protects the rights of children and adolescents.

5) Silting of water sources, cracks, vibrations, pedestrian collisions and removals related to the EFC

Text of 2015 Unsustainability Report

Original Portuguese text: “Ao longo da Estrada de Ferro Carajás as comunidades sofrem com o assoreamento de suas fontes hídricas, rachaduras nas estruturas de suas casas, atropelamentos de pessoas e animais, violação do direito de ir e vir das comunidades e remoções.”

Contudo, apesar de registrar as mortes de trabalhadores por acidentes do trabalho, a Vale ainda não divulga no seu relatório as mortes por atropelamento em suas ferrovias.

English version: “Along the Carajás Railroad, communities suffer from the silting up of their water sources, cracks in their houses, people and animals being run over by trains, the violation of communities’ right to come and go, and removals.

However, despite recording the deaths of workers due to work accidents, Vale’s report still does not disclose deaths due to people getting run over on its railroads.”

Vale’s Response

The Carajás Railroad (EFC)’s safety strip is designed to prevent accidents involving railroad operations in areas near the tracks. Communities are informed about the existence of this safety strip and instructed not to construct buildings in this area.

In the case of buildings constructed illegally inside this strip, the owners are notified of the need for their removal, in order to guarantee their own safety and that of the community, passenger transport and railroad freight operations.

Vale's Community Relations and Business Security teams undertake constant awareness-raising activities among the people who live near the railroad to ensure safe coexistence. Accordingly, periodic inspections are carried out throughout the railroad to preserve the railroad safety strip.

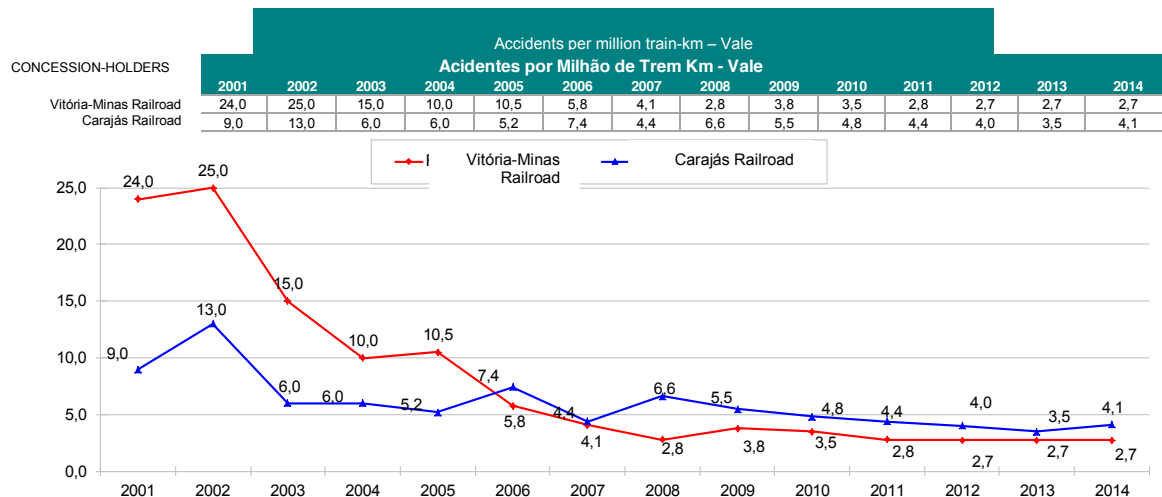
With regard to records of cracks in houses resulting from the impacts of railroad transportation, Vale adopts mechanisms to inspect and survey these houses. In the case of railroad crossings, Vale conducts periodic inspections to regularize or remove illegal crossings. To regularize them, the company counts the number of vehicles that use them in order to identify the need for signage and crossing adjustments, or to install a road bridge.

Official railroad crossings are those that have been approved and recognized by Vale, and they receive proper signage and maintenance. The Carajás Railroad has 126 official railroad crossings along its 892-km length, with an average distance between crossings of around 7 km.

According to the National Association of Railroad Transportation Companies (ANTF), the EFC is now considered one of Brazil's leading railroads, not only due to its freight volumes, but also because it uses cutting-edge technology in its operations, making it highly productive, efficient and safe. To guarantee maximum operational safety and high productivity for its customers, the EFC continuously invests in maintaining and expanding its assets, including by acquiring locomotives and specialist railcars to transport a variety of goods.

Despite presenting continual improvements in the internationally adopted indicator of accidents per million train-km (mTKm), which takes into account accidents in line with the number of trains and distance travelled, we know we still need to do more. We run a series of initiatives to mitigate impacts and have teams dedicated to managing, monitoring, tracking and responding to incidents.

Our mitigation initiatives include educational and awareness-raising campaigns in communities near the railroad, modernization and expansion of signaling systems, the identification of critical stretches in terms of environmental risks, weather monitoring, and expansion of the number of simulators and train operation training courses. We have also developed systems to block failures, standardize operations, and carry out periodic maintenance of track and rolling stock.





During the work to expand the Carajás Railroad, Vale is carrying out a variety of initiatives to prevent the project from having any impacts on nearby water bodies. Control systems are implemented in all phases of the project. These measures are provided for in the Construction Environmental Plan, which was analyzed and approved by the competent environmental authority responsible for granting the EFC expansion's installation license.

The different measures used include the placement of stone block barriers in order to reduce the speed of water flows in rainy periods and retain particulate matter that could be carried by the drainage system. We periodically run campaigns to monitor the quality of water bodies along the Carajás Railroad.

Drainage structure maintenance programs, together with programs to identify, control, monitor and treat erosion processes, reduce or impede any silting of water bodies along the railroad.

6) Leakage of acidic effluents in New Caledonia

Text of 2015 Unsustainability Report

Original Portuguese text: : “Na região de Nova Caledônia, território francês onde a Vale tem uma mina de níquel, uma onda de protestos estourou em abril de 2014, após mais um vazamento de efluentes ácidos ter ocorrido na unidade localizada no sul do arquipélago. Os atos realizados pela população contra a empresa culminaram com o incêndio de veículos e edifícios da empresa e a interrupção da produção por três semanas. A sustentabilidade do projeto é questionada por diversas organizações não governamentais que temem impactos sobre um conjunto de lagoas consideradas Patrimônio da Humanidade pela Unesco. Desde 2009, elas contabilizam ao menos cinco vazamentos, alguns envolvendo ácido sulfúrico.”

English version: “In the region of New Caledonia, a French territory where Vale has a nickel mine, a wave of protests broke out in April 2014, following another leakage of acidic effluents at the facility located in the south of the archipelago. The acts carried out by the population against the company culminated in company vehicles and buildings being set on fire and a three-week production shutdown. The project's sustainability is questioned by various NGOs, which fear impacts on a group of lakes with UNESCO World Heritage Site status. Since 2009, at least five leaks have been recorded there, some involving sulfuric acid.”

Vale's Response

Vale has signed a Pact for Sustainable Development of the Deep South in New Caledonia on September, 27th 2008. It is an agreement between Vale New Caledonia and the indigenous communities south of the Grand for a period of 30 years.

Through the Pact, both the Customary Environmental Advisory Committee (CCCE) and the association of reforestation were created. These structures are active and support socio-economic and cultural community projects in the area Djubea Kapume.



In 2014, there was a spill of industrial effluent from our operations in New Caledonia, which reached the North Bay Creek in the Southern Province. The leak was contained within a few hours by neutralizing the effluent and pumping it back to safe storage. There were no significant lasting impacts to the environment or to local indigenous populations.

Following the spill, demonstrations ensued by some residents of local communities that resulted in damages to Vale property and delays in resuming production.

The CCCE has been mandated by customary chiefs to take a leadership role in the mediation process with all community stakeholders involved. A mediation process was set up through the subsequent months and more than 60 meetings occurred with a variety of stakeholder groups (communities' representatives, South Province authorities, municipalities, customary Senate, unions, tribal chiefs, NGOs, Government, among others). These wide consultations allowed the local population to follow the implementation of corrective and preventive actions defined by experts from the South Province and VNC. The result of that process was to restore and normalize the relationship between Vale and local communities.

Since the resumption of operations at VNC, the Community Relations team has intensified its interactions with local communities and held several meetings with local tribes to initiate structuring projects for communities. A Sustainability Department has been created to better promote social and environmental projects. Moreover, monthly reports about VNC's environmental performance are shared with the local communities.

Vale New Caledonia has implemented a set of action plans to secure the site that cover the areas of safety, organization, environment and quality. These plans were established together with the South Province authorities as part of a legal act requiring implementation of measures to protect the environment. These action plans include:

- Sealing the site and setting up alarm systems at all outfall points of the plant
- Standardization and reinforcement of technical inspection management
- Review of the safety management system
- Improved emergency measures training for personnel
- Conformity analysis of site retention system

7) Particulate emissions in Vitória

Text of 2015 Unsustainability Report

Original Portuguese text: “Porto de Tubarão, Grande Vitória/ES: Do Porto de Tubarão e oito usinas de pelletização da Vale causam o fenômeno do pó preto do minério que invade as casas, ruas e os pulmões dos moradores de todos os municípios da região metropolitana.”

English version: “Port of Tubarão, Greater Vitória, Espírito Santo: Vale's Port of Tubarão and eight pelletizing plants cause the phenomenon of black ore dust, which invades homes, streets and the lungs of residents in all the municipalities of the metropolitan region.”

Vale's Response

Ethics and Conduct Office
Av. Graça Aranha, 26, 20° andar
20030-900 Rio de Janeiro, RJ - Brasil
Vale S.A.



Vale announces that, as part of its Environmental Commitment Agreement, it supported the development of the “Dust DNA” study. This study was carried out by UFES under the technical coordination of IEMA, and was completed in 2011. Material was collected between April 2009 and January 2011 at nine monitoring stations in Greater Vitória. As a result, it was seen that the atmospheric quality standards defined by the National Environment Council are being complied with, and that the contribution of industries is only predominant at the Senac Hotel station, on Boi Island. At the Enseada do Suá and Carapina stations, the industrial contribution is of the same magnitude as the contribution called “human activities” (re-suspension of soils and streets, vehicles and burned objects). At the other stations, the industrial contribution is not predominant, with a share varying from 10% to 25% of total contributions.

The available study, however, did not consider the environmental improvements implemented at Tubarão Complex in recent years, as it was completed before the measures provided for in the Environmental Commitment Agreement were taken. As a result, for Vale it is essential to carry out new studies to update and expand the data, to determine the share of different sources in the composition of the “black dust” in each region of Greater Vitória and enable strategic management of the region’s air quality.

The company is participating in new studies in partnership with the State Public Prosecution Ministry and the State Environment and Water Resources Institute.

Between 2007 and 2013, the company invested R\$700 million in environmental controls. As a result of these investments, Vale’s entire production system at Tubarão Complex, from the arrival of iron ore until its loading onto ships, is equipped with the most modern environmental control technologies.

This investment includes the following: the installation of wind fences, pioneering structures in Brazil that reduce the wind speed around piles of iron ore and pellets, cutting the amount of dust carried into the air by 77%; the application of dust polymers and suppressants, products that prevent dust emissions in piles of iron ore and pellets; the use of new longer chutes on ship loaders to direct products into vessel holds; the enclosure of areas where products are transferred from one conveyor belt to another; and the operation of 25 electrostatic precipitators, equipment that is 99% efficient in controlling emissions in smokestacks.

Tubarão Complex also has an Environmental Control Center, which uses a CCTV system composed of 22 continuously operating cameras to monitor Vale’s operations, in order to preventively guarantee the effectiveness of environmental controls. This enables immediate decision making, with agility and efficiency, in the event of operational deviations.

Vale reiterates its commitment to the environment and the communities of Greater Vitória.

Vale is fully willing to collaborate with the Parliamentary Commission of Inquiry about black dust instigated by the Legislative Assembly of Espírito Santo in order to investigate particulate emissions and their effect on the health of Greater Vitória’s people, and it reiterates that it is always open to dialogue with society.

8) Death of two workers in Sudbury, Canada

Text of 2015 Unsustainability Report

Ethics and Conduct Office
Av. Graça Aranha, 26, 20° andar
20030-900 Rio de Janeiro, RJ - Brasil
Vale S.A.



Original Portuguese text: “Na província canadense de Ontário, o governo entrou com uma ação na Justiça imputando nove acusações de violações da lei de saúde e segurança ocupacional da província pelo óbito de dois trabalhadores na Mina de Níquel Stobie, em Sudbury.”

English version: “In the Canadian province of Ontario, the government has filed a lawsuit featuring nine accusations of violations of the province’s occupational health and safety law leading to the death of two workers at Stobie Nickel Mine in Sudbury.”

Vale’s Response

Jordan Fram and Jason Chenier were killed at Vale’s Stobie Mine in Sudbury, Ontario, Canada on June 8, 2011 following an uncontrolled run of material (muck) underground. Vale was not charged criminally as a result of this incident, but did receive charges under the Ontario Occupational Health and Safety Act. In On September 17, 2013, Vale and Crown prosecutors representing the Ministry of Labor agreed to a resolution of charges out of court and as part of this resolution, Vale entered a guilty plea on three counts and agreed to a fine of CAD\$1,050,000 plus a 25% surcharge.

Since the incident occurred there has been a tremendous amount of work completed to ensure a similar tragedy isn’t repeated in our mines. Following Vale’s own internal investigation into this incident, an action plan of action, including more than 420 recommendations, was put in place to address the contributing factors and improve control measures to protect the health and safety of our employees.

These recommendations include actions already in progress in the fields of water management, operational controls, hazard identification, and risk assessment, among others. These actions and their 420 recommendations sub-items are aimed at avoiding any similar developments in our operations.

In addition, a Coroner’s Inquest was held in April 2015 with all relevant stakeholders participating – including the Crown, the provincial Ministry of Labor, Vale, the United Steelworkers Union and the families. This process resulted in a number of additional recommendations – many of which were put forward together by the Company, the Union and the Fram and Chenier families.

We continue to put in place measures to make our plants and mines as safe as possible. Nothing we can say or do can ever turn back the clock and bring Jason and Jordan back, but we will continue to honor their memories through our unwavering focus on safety and reaching zero harm in our workplace.

9) Dispersion of particulate matter, lack of prior consultation and impact on fishing in Peru

Text of 2015 Unsustainability Report

Original Portuguese text: “Comunidades vizinhas doentes. A Vale S.A. causa graves impactos negativos à saúde dos que vivem próximos aos seus projetos. Em Piura, norte do Peru, a empresa possui uma mina de extração de fosfato para a produção de fertilizantes utilizados pelo agronegócio brasileiro. A dispersão de material particulado no ar e na água, no momento da embarcação do fosfato nos navios para serem exportados, causa severos problemas respiratórios



na população que vive próxima ao porto e desequilíbrio no sistema marinho, afetando a saúde e a sobrevivência dos pescadores locais.

Em 2011, uma denúncia foi feita contra a empresa pelo sindicato dos trabalhadores da PetroPeru, que atuam em um terminal a 300 metros das embarcações da Vale. Ela resultou na aplicação de uma multa à empresa imposta, em 2013, pelo Órgão de Avaliação e Fiscalização Ambiental (Oefa), do Peru. Em dezembro de 2014, a Vale foi denunciada à relatora da Organização das Nações Unidas (ONU) na Cumbre de Los Pueblos, em Lima. O representante da Frente de Defesa da Comunidade de San Martín de Sechura, Augusto Chapilliquen, denunciou “que as jazidas minerais estão em terras comunitárias privatizadas em 2005 pela Vale que iniciou a exploração em 2010, sem consulta prévia, descumprindo o Convênio 169 da OIT.

No Peru, na Baía de Sechura, a eutrofização – processo que provoca o crescimento excessivo de biomassa e o empobrecimento da diversidade, devido ao aumento de nutrientes em um ecossistema – causada pelo embarque do pó do fosfato afeta diretamente a geração de renda de grande parte da população local que vive da pesca.”

English version: “Sick neighboring communities. Vale S.A. is causing severe negative impacts on the health of people who live near its projects. In Piura, in northern Peru, the company has a phosphate extraction mine to produce fertilizers used in Brazilian agribusiness. The dispersion of particulate matter in the air and water at the moment when the phosphate is loaded onto ships for export is causing severe respiratory problems among people who live near the port, and imbalances in the marine system, affecting the health and livelihood of local fishermen.

In 2011, a complaint was made against the company by members of the PetroPeru workers’ union, who work at a terminal 300 meters from Vale’s vessels. This complaint resulted in the company being fined in 2013 by Peru’s Environmental Evaluation and Inspection Agency (Oefa). In December 2014, Vale was reported to the United Nations rapporteur in Cumbre de Los Pueblos, Lima. A representative of the San Martín de Sechura Community Defense Front, Augusto Chapilliquen, alleged that ‘the mineral deposits are on community land privatized in 2005 by Vale, which began exploration in 2010, without prior consultation, in breach of ILO Convention 169.’

“In Sechura Bay in Peru, eutrophication – a process that provokes excessive growth of biomass and the impoverishment of diversity due to an increase in nutrients in an ecosystem – caused by the loading of phosphate powder directly affects the livelihoods of a large share of the local people who make a living from fishing.”

Vale’s Response

Sechura Bay in Peru, located near Vale subsidiary Mineradora Miski Mayo, is constantly monitored by Peru’s environmental inspector, OEFA, which has found that the particulate matter arising from the loading of phosphate rock in the mining company’s truck loading area is below the limits permitted by law.

Other competent institutes in the country, such as the Production Technology Institute (ITP) and Peruvian Sea Institute (IMARPE), have stated that the factors that are contaminating Sechura Bay are not related to mining activity.

In addition, the phosphate transportation process takes place using conveyor belts in a completely enclosed structure, which prevents contact between the product and the air. The aforementioned



measure is part of the continuous improvement action plan put into practice by Miski Mayo since 2011.

The company reinforces its commitment to preserving the environment in the regions where it is present. In 2012 it invited the authorities and other companies in the Piura region to join forces to improve sanitation in Sechura Bay. As a result, in 2014 Supreme Resolution 288-2014-PCM was issued, and participatory meetings and monitoring have taken place within the scope of this initiative.

With regard to prior consultation in San Martín de Sechura, the process is not conducted by the party responsible for the investment project, but rather the competent government entity, which in the case of the mining sector in Peru is the Ministry of Energy and Mines.

At the time of Miski Mayo's start-up licensing in 2010, the laws and regulations implementing the prior consultation procedure were not yet implemented in Peru. Even if they were, they would not apply to the community San Martín de Sechura, The Culture Ministry's Department of Inter-Cultural Affairs, which is the competent authority for recognizing indigenous peoples in Peru, does not recognize the presence of indigenous peoples in the department of Piura, where the community of San Martín de Sechura is located. It is important to mention that the Implementation of such regulations did not occur until 2011, after Miski Mayo's start-up, and did not affect this determination.

Nevertheless, the relationship with host communities is permanent, providing information about the project, answering questions and supporting the process of community complaints and grievances, essential for the good social impact management of the enterprise. Moreover, The Company keeps and respects the community agreements in which financial transfer and other products donations have been established.

10) Impact on fishing and tourism at Teluk Rubiah Terminal, Malaysia

Text of 2015 Unsustainability Report

Original Portuguese text: "Terminal marítimo de Teluk Rubiah impactou atividades econômicas tradicionais da região, tais como a pesca e o turismo. Moradores denunciaram a falta de transparência sobre os estudos de impacto ambiental, bem como os planos de mitigação dos impactos sociais, econômicos e ambientais."

English version: "Teluk Rubiah Maritime Terminal has impacted the region's traditional economic activities, such as fishing and tourism. Residents have complained about the lack of transparency regarding environmental impact studies and mitigation plans for social, economic and environmental impacts."

Vale's Response

In 2011, Vale's DEIA – Detailed Environmental Impact Assessment – was approved by the Department of Environment (DOE) for the construction and operation of its onshore and offshore

Ethics and Conduct Office
Av. Graça Aranha, 26, 20° andar
20030-900 Rio de Janeiro, RJ - Brasil
Vale S.A.



facilities in Teluk Rubiah, Lumut, Perak. The study fulfilled all social, economic and environmental requirements from DOE, including consultations with local communities and technical panels with civil society stakeholders and government departments.

After the DEIA approval process and having obtained all necessary licenses and permits, Vale started the construction of its iron ore distribution centre in Teluk Rubiah. The Centre began its operations in November 2014. The company received the top honours award in the 'EIA Project Category' from the DOE in 2012 for its compliance with environmental legal requirements, monitoring records and impact management initiatives. Vale also received the Social Service Award at Asia-Pacific Enterprise Leadership Awards (APELA) 2013. The Award is a third party endorsement of our company's role as a catalyst of social development and reinforces our commitment in promoting a constructive dialogue with the local communities in the Manjung District.

Since the beginning of its activities in Teluk Rubiah, Vale has been implementing a thorough social dialogue, socio-economic diagnosis and community development program involving all community stakeholders, with special focus given to the fishermen and business communities of Pulau Pangkor, Seri Manjung and Teluk Batik.

Only in the construction phase Vale invested around USD10 million in social and environmental projects that were developed and implemented in partnership with local fishermen community groups, such as the Fishermen Associations of Pulau Pangkor and Manjung Selatan, and government agencies and departments – Marine Department of Malaysia (LKIM), Fishery Department of Malaysia, Manjung Municipal Council and District Office.

Vale has also undertaken in partnership with the Sustainable Mining Institute (CSRM) from The University of Queensland an in-depth socio-economic diagnosis of the Manjung District together with the local communities. As an outcome of this process, Vale is now implementing a long-term CSR program, called the Community Development Plan (CDP) in partnership with local NGOs (such as Global Environment Centre, Malaysian Nature Society, Outward Bound School, UniKL MIMET and UniKL UBis) and fishermen groups.

In terms of local job generation, from its 350 direct employees in Teluk Rubiah, more than 90% are locals and 55% of them have joined the company as apprentices who have gone through a 2-year training program organized by Vale in partnership with a local university, UniKL MIMET which included theoretical and on-the-job trainings in Malaysia and Brazil. Around 50 employees are the children of the local fishermen communities of Pulau Pangkor and Manjung and have joined the company as junior apprentices.

In addition, only in the construction phase more than 60% of the total investments were channeled to local suppliers, generating a positive socio-economic spillover effect in the region.

Vale has also invested in the preservation of the natural environment in Teluk Rubiah. About 60% of the area owned by Vale is maintained by the company as a protected forest area, known as the Teluk Rubiah forest. Vale has recently opened an Eco Park in partnership with the Malaysian Nature Society inside the forest area for community engagement and environmental education purposes.

In addition, Vale has also proactively engaged in other environmental initiatives, such as the implementation of the "Green Belt" along the shoreline within the site in Teluk Rubiah and other environmental management activities. They include management of water, air and noise. We also have a regular environment monitoring system which covers air, noise, water and marine ecology (Plankton and Coral).

As of today, Vale has been continuously fulfilling and complying with the DEIA conditions as stated and all the mitigation and controls are well in place.

Ethics and Conduct Office
Av. Graça Aranha, 26, 20° andar
20030-900 Rio de Janeiro, RJ - Brasil
Vale S.A.

11) Resettlement in Mozambique – Cateme and 25 de Maio

Text of 2015 Unsustainability Report

Original Portuguese text: “Em Moçambique, a Vale é conhecida pelas péssimas condições em que reassentou mais de 1.300 famílias, retiradas de suas terras ocupadas há gerações para dar lugar ao projeto de extração de carvão da empresa na província de Tete. As famílias vivem com dificuldade de acesso à água, terra, energia, em terras impróprias para a agricultura, e não receberam, até o momento, as indenizações integrais a que têm direito. As casas, construídas pela própria Vale, já passaram por reformas ao menos três vezes devido às rachaduras, aos vazamentos e à erosão que abala a estrutura das casas. Vários protestos já foram realizados pelas famílias reassentadas, alguns com o bloqueio das estradas que dão acesso à mina da Vale. As famílias denunciam as precárias condições de vida a que estão sujeitas desde o final de 2009 e até o momento não houve nenhuma resposta satisfatória da empresa. “Nos prometeram dois hectares de terra, só deram um, e uma terra ruim que não rende nada”, João Salicuchepa Gimo, que mora com a mulher e sete filhos no assentamento de Cateme.”

English version: “In Mozambique, Vale is known for the terrible conditions in which it resettled more than 1,300 families, removed from their lands occupied for generations to make way for the company’s coal mining project in Tete province. The families live with difficult access to water, land and energy, on land unsuited to farming, and they have not yet received the full compensation to which they are entitled. The houses, built by Vale itself, have already undergone renovations at least three times due to cracks, leaks and structural erosion. The resettled families have held various protests, in some cases blocking the roads that provide access to Vale’s mine. The families have complained about the poor living conditions to which they have been subjected since the end of 2009, and so far there has been no satisfactory response from the company. ‘They promised us two hectares of land but they only gave us one, and it’s poor land that doesn’t produce anything,’ said João Salicuchepa Gimo, who lives with his wife and seven children in the Cateme settlement.”

Vale’s Response

Despite presenting significant progress, Mozambique is a country that still poses challenging socioeconomic conditions for businesses. Vale in Mozambique, given its scale and status as an important project for the country’s economy, also assumes the commitment to contribute to the development of local communities and improvements in their social indicators.

To implement Moatize Coal Mine, which started up in 2011, it was necessary to carry out a detailed resettlement program for the families who lived in the industrial and mining areas. Following procedures and guidelines established by the company based on respect for human rights and in line with international standards, this program began in 2006 and involved social dialogue with the government and communities. The family transfer stage was completed in 2010, with the resettlement of 1,365 families into two new settlements: Cateme, with rural characteristics; and 25 de Setembro, with urban characteristics.

In May 2012, Human Rights Watch carried out a field survey in Tete province, Mozambique, to evaluate the new settlements in Moatize district resulting from Vale's and Rio Tinto's coal mining activities. Based on the findings of this research and analysis of national and international human rights safeguards, we identified practical recommendations of greatest relevance to potential resettlement resulting from various development projects that may occur in Mozambique in the coming years.

The fact that Human Rights Watch based its research on concrete data and its problem-solving attitude made this engagement process a rich learning experience for Vale and highly beneficial for the resettled families.

In its report, Human Rights Watch recognized Vale's efforts to solve the problems presented by the resettled people and stressed that Vale and the government of Mozambique signed a memorandum of understanding, and almost all of the actions in this agreement have now been implemented.

Vale in Mozambique has been working continuously to improve the new settlements and is striving to take measures to support these families, together with the spheres of government and based on dialogue with these communities.

The process of producing the Resettlement Action Plan involved extensive engagement and public participation, consisting of three public hearings, 20 theater performances in the predominant local language (Nyungwe), 110 meetings with the community and its leaders using tools such as illustrated materials, 4,927 home visits to families and leaders for mobilization and social assistance purposes, and 639 social consultations until the start of resettlement.

As part of the process of implementing the Moatize Coal project, the following infrastructure was built or renovated for the community in the Cateme and 25 de Setembro areas: an elementary school, library, teachers' houses, school principal's house, high school, information technology room, laboratory, health and maternity center, police station, streets, and electric power facilities.

In the neighborhood of Cateme, for example, Vale built two schools within the scope of the national education system. One of them is Cateme Elementary School, which can accommodate up to 1,200 students, with 18 classrooms and a library. Cateme High School, in turn, is designed for up to around 650 students and has 12 classrooms, a library, accommodation for 270 students, and an information technology room.

On July 6, 2012, Vale and the central government signed a memorandum of understanding in order to establish coordinated actions between the public sphere, the company and community representatives to maintain the existing infrastructure and improve the quality of life of the communities of Cateme and 25 de Setembro.

The following actions have been carried out: maintenance of public drains and streets, improvements to the water supply system, expansion of the power grid, construction of sports facility, investments in agriculture, development of solutions to support public transport, and investments in health, such as the delivery of the 25 de Setembro Health Center and donation of an ambulance.

Actions are being developed to establish alternative income generation sources, such as the following:

- Production and sale of chickens to increase families' income. This project has supported 197 poultry farmers (109 women and 88 men) who are in full production, making a profit of US\$250 to US\$350 per batch.
- Vegetable program, which is designed to increase families' income by growing and selling vegetables (tomatoes, lettuces, kale, cabbages, eggplants, cucumbers, peppers and



carrots). So far, 61 kits drip-feed irrigation systems have been installed in the families' yards (39 belonging to women and 22 to men).

- Cash crop program, benefiting 176 families involved in growing sesame seeds and peanuts. These families receive technical assistance from Vale.
- Home orchard program, aimed at increasing families' income by producing and selling fruit, while encouraging fruit consumption to improve the community's diet. This program benefited 57 families, by acquiring 2,892 fruit trees (including mango, guava and lemon).
- Development of poultry and horticulture value chain in Cateme, through the installation of a slaughterhouse and vegetable packing house.
- Holding of vocational training courses on electricity, IT and construction for 150 young people in Cateme.

In order to reinforce community dialogue and engagement, and promote civic and citizenship activities, Vale has set up a number of community centers. Among other purposes, these centers are designed to share information, interests and expectations, build mutual trust, improve knowledge of local reality and support the community in finding solutions to demands raised during meetings between the company and residents. The community centers involve the collaboration of community agents, who are members of the community hired by Vale to facilitate community dialogue.

The actions conducted by Vale in region include the following:

- Implementation of a community radio station: In partnership with the Social Communication Institute, Vale has established a community radio station in Cateme to produce programs aimed at community development.
- Health: Construction of "Mothers' Waiting House," a building designed to receive pregnant women awaiting birth. The Cateme Health Center, which includes the Mothers' Waiting House, serves communities located within a 20-km radius.
- Road building: As a way of supporting the communities and improving Cateme's accessibility, Vale built an 8-km paved road, including two bridges.
- Expansion of power grid: In response to community requests, Vale funded the expansion of the power grid, to cover all the new neighborhoods of Cateme.
- Increase in water storage capacity: Vale has built two dams in Cateme, raising the water storage capacity to supply crops and livestock. It has also distributed drums to facilitate water transportation, reducing the amount of time spent on this activity.
- Promotion of livestock farming: Vale donated 150 cattle to 50 families. Each family received three animals (two oxen to be used as draft animals and one cow for reproduction). The company also donated 25 Brahman bulls to improve the genetics of local cattle.
- Training on rural finance: Around 800 families have done training on savings and credit, leadership, management and business development, and how to establish and run associations. This training culminated in the formation of eight associations and two unions in the community of Cateme. The aim of this training was to ensure food security by promoting entrepreneurial capabilities and skills to create and manage small self-sufficient enterprises to generate income.



Vale in Mozambique remains keen to enhance its relations with the local authorities and community, in order to continue with its social investments, which are generating sustainable development. The company is engaged in improving its management of community demands.

12) Atmospheric pollution in Mozambique

Text of 2015 Unsustainability Report

Original Portuguese text: “Em Moçambique, na província de Tete, no distrito Moatize, onde se encontra uma das maiores reservas de carvão do mundo, a Vale S.A. explora carvão mineral a céu aberto. Na área de carregamento e descarregamento, há uma alta concentração de poeira, que causa a perda da vegetação na região e coloca em risco a saúde dos habitantes. A partir de um estudo realizado, o Instituto de Estudos Sociais e Económicos Moçambicano (Iese) alertou que Moatize poderá enfrentar graves problemas de poluição atmosférica, devido às minas de carvão, além de constatar que a presença no ar de poluentes, como o dióxido de enxofre, óxidos de nitrogénio e monóxido de carbono, poderá ser prejudicial para a saúde da população em longo prazo.”

English version: “In the district of Moatize, in Tete province, Mozambique, home to one of the world’s largest coal deposits, Vale S.A. is engaged in open-pit coal mining. In the loading and unloading area, there is a high concentration of dust, causing a loss of vegetation in the region and endangering the health of its inhabitants. A study carried out by the Mozambican Social and Economic Study Institute (Iese) warned that Moatize may suffer serious atmospheric pollution problems due to its coal mines, and found that the presence in the air of pollutants such as sulfur dioxide, nitrogen oxides and carbon monoxide may be harmful to the population’s long-term health.”

Vale’s Response

With regard to air quality, we have a real-time monitoring network with stations located inside and outside the concession area, measuring emissions levels. To gauge possible emissions arising from the concession area, in April 2015 we set up a station within the community (in the boundary with the concession area). We follow air quality legal standards. We monitor SO₂, NO₂, O₃, PTS, PM₁₀ and PM_{2.5}. These parameters record concentrations below the standards at our monitoring station located between the mining concession and the community, indicating a low impact of mining activity. On the other hand, the monitoring station located inside the town of Moatize presents high levels of particulate matter, indicating the influence of other activities on these concentrations. The concentrations recorded so far at the station in the boundary of the community and the concession area may be associated with the effectiveness of the environmental particulate control measures in place at the mine, namely fixed sprinkler systems in the stockyard, mist cannons at the run of mine (ROM) pad, sprinkling of temporary access roads, and the application of a bitumen-based biodegradable emulsion called “Dust-a-Side” on permanent access roads to reduce particulate matter emissions.

Ethics and Conduct Office
Av. Graça Aranha, 26, 20° andar
20030-900 Rio de Janeiro, RJ - Brasil
Vale S.A.



Vale has a grievance mechanism that includes a call center, among other means. This mechanism is audited annually by an independent consulting institution and the government authorities. We do not have a history of complaints associated with air quality.

13) Harassment and under-reporting of work accident numbers and work hours

Text of 2015 Unsustainability Report

Original Portuguese text: “No Canadá, Minas Gerais e Parauapebas, sindicatos denunciam a subnotificação dos acidentes de trabalho, o aumento da jornada de trabalho, elevado número de horas extra cobrado, aumento da pressão e do assédio moral dentro da empresa, cooptação sindical e perseguição a líderes sindicais.

Em seu Relatório de Sustentabilidade, de 2013, são mencionados alguns acidentes ocorridos dentro das áreas de operações da empresa. Contudo, a Vale não se responsabiliza pelos acidentes e nem pelas sete mortes ocorridas. Negando, deste modo, sua própria negligência e os impactos da intensificação da extração mineral na saúde do trabalhador. Para piorar, a empresa costuma culpabilizar as vítimas.

No processo de intensificação da jornada de trabalho, a Vale conseguiu anular a jornada de turno rodízio de seis horas. Este turno garante, minimamente, que, diante de um trabalho desgastante, decorrente do revezamento da jornada entre os períodos diurno e noturno, além de perigoso e insalubre como o da mineração, os trabalhadores consigam algum tipo de bem-estar e tenham tempo livre fora das minas. O aumento da jornada de trabalho para oito horas resulta em mais acidentes, mais afastamentos por problemas de saúde e no aumento de uma doença que vem assolando os trabalhadores mineiros: a depressão.”

English version: “In Canada, Minas Gerais and Parauapebas, labor unions denounce the under-reporting of work accidents, increase in length of working days, high amount of overtime demanded, increase in pressure and harassment within the company, co-opting of unions, and persecution of union leaders.

Its 2013 Sustainability Report mentions some accidents that occurred within its operational sites. However, Vale does not take responsibility for these accidents, nor for the seven deaths that occurred. In this way, it denies its own negligence and the impacts of intensification of mineral extraction on workers’ health. To make things worse, the company continues to blame victims.

As part of the working day intensification process, Vale has managed to end the six-hour rotating shift working day. This system ensures that, given the stress involved in taking turns doing day and night shifts, as well as the dangerous and unhealthy nature of mining work, workers obtain some kind of wellbeing and have free time away from the mines. The increased length of working days to eight hours is resulting in more accidents, more leave due to health problems, and growing cases of a disease that has been ravaging mining workers: depression.

Vale's Response

With regard to harassment, in 2013 we created the Vale Ombudsman, the Ethics and Conduct Office, in order to guarantee internal and external stakeholders a proactive, transparent, independent and impartial communication channel for treating allegations and complaints.

Concerning the allegation about the under-reporting of accidents, it is important to clarify that our policies, communications and training all encourage reporting of all accidents to ensure that workers receive proper medical attention and to guarantee that each accident is investigated and preventative and corrective measures are put in place. We have regular processes and meetings to analyze accidents and ensure lessons learned are shared. We also routinely promote the Ombudsmen "Hot Line" to provide a channel for worker concerns. We emphasize that all allegations are fully investigated.

There are absolutely no incentives or punishments in place that could promote the under-reporting of accidents, on the contrary, we routinely talk about the value of reporting as a core part of our continuous improvement journey.

Regarding alterations to working hour systems, there are six-hour and eight-hour shifts in our mining operations. Where there are eight-hour shifts, there is also a collective work agreement, which was extensively discussed with the unions, containing clauses that together meet the interests of both the company and workers.

14) Work-related lawsuit in Maranhão in 2013 and fatal accident at Fábrica Nova Mine in 2015

Text of 2015 Unsustainability Report

Original Portuguese text: "Em 2013, por exemplo, ela foi condenada pela Justiça do Trabalho do Maranhão a pagar uma indenização de R\$ 18,9 milhões por danos morais coletivos movida pelo Ministério Público do Trabalho por desrespeitar diversas normas de meio ambiente e segurança do trabalho, o que ocasionou a morte de cinco funcionários na capital maranhense.

Já no início deste ano de 2015, um trabalhador de 43 anos teve sua vida roubada, vítima de um acidente fatal na Mina de Fábrica Nova (Mariana/MG), fruto do aumento da carga de trabalho e da pressão sobre os trabalhadores para aumentar a produção da empresa.

English version: "In 2013, for example, it was sentenced by the Labor Court of Maranhão to pay compensation of R\$18.9 million for collective moral damages in a lawsuit brought by the Public Prosecution Ministry's Labor Branch ("Ministério Público do Trabalho") for breaching various environmental and workplace safety regulations, leading to the death of five employees in the state capital of Maranhão.

At the start of 2015, a 43-year-old worker had his life stolen as the victim of a fatal accident at Fábrica Nova Mine in Mariana, Minas Gerais, due to an increase in working hours and pressure on workers to increase the company's production."



Vale's Response

Unfortunately, on February 19th, 2015, one of our workers passed away while performing the assembly and calibration of an off-highway truck tire, using a forklift, when the tire fell on him.

In a fatal incident, our immediate action is to offer support to the families, followed by analyses in order to establish corrective action plans, which are monitored through completion. To prevent recurrences, the lessons learned from incidents are discussed in forums with leaders and widely disseminated to employees and contractors. In addition, the Incident Management process was reviewed in 2014 to be applicable in all business units, with the adoption of criteria similar to those used by other world-class mining companies

Concerning the 5 fatal accidents that occurred from 2007 until 2012, the Public Prosecution Ministry's Labor Branch ("Ministério Público do Trabalho"), through the Regional Public Prosecutor's Office for Labor Cases of the 16th Region (State of Maranhão), proposed a public civil lawsuit through which it intends to: (a) oblige, including through an injunction, Vale S/A to meet 38 (thirty-eight) obligations related to the area of health, safety and the working environment; and (b) condemn Vale S/A to "... pay compensation for collective moral damages to implement social projects to benefit the population of the state of Maranhão or successively to be returned to the Workers' Support Fund (Fundo de Amparo ao Trabalhador)."

Vale filed appeals, which are pending Judgment. As the same time, it is complying with the 38 obligations.

15) Freedom of collective association

Text of 2015 Unsustainability Report

Original Portuguese text: "Apesar do que a Vale propagandeia, trabalhadores e comunidades relatam a inexistência de diálogo, práticas de intimidação e uma política permanente de cooptação do movimento sindical e de seus representantes na busca por controle das críticas. O sindicato Metabase Inconfidentes, em Minas Gerais, por exemplo, acusa a Vale de engessar as ações dos sindicatos e criar empecilhos às tentativas de garantir melhores condições de vida e trabalho. Um dos mais recentes casos foi a perseguição a dirigentes, que culminou com a demissão do diretor sindical Vander Luis Ferreira, em junho de 2014, sem qualquer justificativa razoável. Na época, estavam ocorrendo várias manifestações de trabalhadores e da população em geral que reivindicavam condições básicas de trabalho, segurança, saúde e transporte nas localidades em que a Vale e outras mineradoras atuam. O diretor foi penalizado por ter ousado criticar a empresa diante da imprensa. Este tem sido o padrão histórico de atuação da Vale, tanto no Brasil como no exterior. Em 2008, o Sindicato dos Trabalhadores nas Indústrias Petroquímicas (Sindiquímica), do Paraná[8], encaminhou uma queixa sobre as práticas antissindicalistas da Vale para a Organização Internacional do Trabalho (OIT).

Na operação em Voisey's Bay, Labrador, Canadá, a relação entre a Vale e o sindicato não foi totalmente reparado, e o legado da greve de 18 meses (2009-2011) continua. Há relatos de que, após o fim da greve, a Vale continua com as práticas de gestão arbitrária no local de trabalho. A Vale continua a dificultar a vida dos trabalhadores através da busca por acordos nos casos de processos e arbitragem. O estilo de gestão da empresa Vale é muitas vezes interpretado como uma estratégia para minar sutilmente a força dos sindicatos, e isolar a liderança sindical eleita democraticamente.



Desrespeito à livre associação e cooptação. O Sindicato Metabase Carajás, no Pará, é o maior sindicato mineiro do país e por se localizar no coração da principal mina da Vale possui um papel estratégico para a empresa. A prática de cooptação da Vale no sindicato veio à tona em 2014, quando, após 20 anos, um grupo de trabalhadores conseguiu inscrever uma chapa para concorrer à presidência do sindicato sem ser derrotada nos bastidores. Durante essas duas décadas, a empresa e o próprio movimento sindical cooptado alegavam a inexistência de oposição entre os trabalhadores, abafando a permissiva influência da empresa e a insatisfação dos trabalhadores.”

English version: “Contrary to Vale’s claims, workers and communities report a non-existence of dialogue, intimidating practices and a permanent policy of co-opting the labor movement and its representatives in order to control criticism. The Metabase Inconfidentes union in Minas Gerais, for example, accuses Vale of stifling the actions of unions and creating obstacles to attempts to guarantee better living and working conditions. One of the most recent cases was the persecution of leaders, which culminated in the dismissal of union director Vander Luis Ferreira in June 2014, without any reasonable grounds. At the time, various protests were taking place among workers and the general public to demand basic working, safety, health and transport conditions in the locations where Vale and other miners operate. The director was penalized for having dared to criticize the company in the press. This has been Vale’s standard conduct over time, both in Brazil and abroad. In 2008, the Petrochemical Industry Workers Union (Sindicância) in Paraná[8] submitted a complaint about Vale’s anti-union practices to the International Labor Organization (ILO).

At the operation in Voisey’s Bay, Labrador, Canada, relations between Vale and the union were not completely repaired, and the legacy of the 18-month strike (2009-2011) remains. There are reports that following the end of the strike, Vale continues to have arbitrary management practices in the workplace. Vale continues to hinder workers’ lives by pursuing agreements in cases of lawsuits and arbitration. The company’s management style is often interpreted as a strategy to subtly undermine unions’ power and isolate democratically elected union leaders.

Disrespect for free association and co-opting of union. The Carajás Metabase Union in Pará is the largest mining union in the country, and because it is located at the heart of Vale’s main mine, it has a strategic role for the company. Vale’s practice of co-opting the union came to light in 2014, when after 20 years a group of workers managed to register a team of candidates to compete for the union’s presidency without being defeated behind the scenes. Throughout these two decades, the company and the co-opted union movement itself alleged a lack of opposition among workers, stifling the company’s permissive influence and workers’ dissatisfaction.”

Vale’s Response

Vale rigorously complies with legislation and respects union freedom and collective bargaining. We enter into collective agreements with all the unions that represent our employees and the decisions of workers’ assemblies are sovereign and fully respected by the company. We do not interfere in any way in internal union processes and unions’ legitimate relations with workers.

In line with our code of ethics, Vale does not tolerate any kind of discrimination, including with regard to union membership.

Our collective work agreement contains a clause related to “Respecting and Valuing Employees: preventing bullying.” This important item, negotiated with all unions in Brazil, has improved our

reporting channel. Allegations are sent directly to the company's Ethics and Conduct Office, which reports to the chairman of Vale's Board of Directors. Cases such as those involving harassment of any kind, including regarding unions, may be reported, and they will be responded to without any interference from other parts of the company.

With regard to the dismissal of the mentioned union leader, the company announces that a process was conducted to investigate a breach of internal regulations according to the Brazilian Law.

The collective agreement also contains a clause to allow union leaders to enter company operations in order to carry out unionization campaigns. Unions have used this option and no union entities or employees have suffered any interference in doing so.

Our health and safety systems are also discussed with the unions. Once every six months, we hold a workshop attended by representatives of all unions, as well as representatives of central union organizations. At these events, the company presents its workplace safety systems and control mechanisms in a very transparent manner. Information about accidents, including their causes, and ways of responding to and preventing them, is transparent and easy to interpret. Unions can have access to this information whenever they consider this necessary.

16) Water: Apolo Project, São Luiz Mine, Samarco, and Voisey's Bay

Text of 2015 Unsustainability Report

Original Portuguese text: "A mineração compromete não apenas o uso, mas o acúmulo e a renovação das águas, provocando o fim das nascentes. Além dos impactos ambientais, há um aumento crescente do uso de grandes volumes de água como insumo gratuito pelas grandes mineradoras, especialmente no que se refere aos minerodutos.

A água é o principal insumo do setor da mineração, sendo utilizada no processamento e transporte do minério. Os impactos desta atividade sobre as águas são extremamente graves, englobando a destruição de lençóis de água no subsolo; piora na qualidade da água no momento de sua devolução, em relação à sua retirada; diminuição da sua disponibilidade; e contaminação de rios, mares e nascentes com rejeitos químicos, entre outros. Desse modo, a mineração compromete não apenas o uso, mas o acúmulo e a renovação das águas, provocando o fim das nascentes. Além dos impactos ambientais, há um aumento crescente do uso de grandes volumes de água como insumo gratuito pelas grandes mineradoras, especialmente no que se refere aos minerodutos. Em apenas uma hora de funcionamento, eles utilizam água suficiente para abastecer ao menos uma cidade com 500 mil habitantes no mesmo período de tempo. Em 2012, houve mais outorgas para o uso de água na mineração do que para a indústria no Brasil.

No Canadá, o projeto de extração de níquel Voisey's Bay, da Vale, é bastante polêmico devido à contaminação do Lago Sandy, que possui um ecossistema único. Utilizado como local para despejo de rejeitos, o lago foi convertido em uma bacia com mais de 400 mil toneladas de dejetos, de acordo com denúncias de organizações locais. Além da Vale ser ré na maior Ação Civil Pública da história do Canadá por problemas ambientais, ela foi condenada, em 2010, ao pagamento de cerca de C\$ 36 milhões (dólares canadenses) em indenização para mais de sete mil moradores de Port Colborne, em Ontário.

Em Minas Gerais, berço da criação da Vale, são inúmeros os casos de conflitos entre o uso da água para as operações da empresa e o abastecimento da população. Em Catas Altas, a Vale

extraí minério de ferro da mina São Luiz, no distrito de Morro da Água Quente. A expansão desta mina aconteceu em 2007, e a cava foi realizada muito perto da comunidade e da fonte de abastecimento do distrito. Os moradores já notam que algumas nascentes estão assoreadas e que a vazão dos cursos d'água diminuiu consideravelmente, além dos problemas decorrentes da poeira da mina e da poluição do ar também terem se agravado muito. Mesmo assim, a Vale planeja reabrir a mina Tamanduá, que estava fora de atividade há cerca de quinze anos. Esta mina localiza-se ainda mais próxima da comunidade do Morro da Água Quente, e perigosamente perto da fonte de água que abastece a sede do município de Catas Altas. Ou seja, as duas fontes de abastecimento da cidade estão em risco devido às operações da Vale. Trata-se da segurança hídrica de mais de cinco mil pessoas.

Outro grave conflito de uso da água pela Vale se encontra no modal de escoamento dos minerodutos, onde a polpa do minério de ferro é bombeada através da água durante 24 horas por dia. A Samarco (empresa em que a Vale detém 50% das ações) opera três minerodutos em Minas Gerais, que saem da mina Alegria, em Mariana, e vão até o porto do Ubu, em Anchieta, no Espírito Santo. Cada um deles possui mais de 400 km de extensão. Os três minerodutos gastam uma média de 4.400m³/hora. Depois de décadas destruindo os mananciais dos municípios de Mariana e Ouro Preto, a empresa precisou captar água para os minerodutos e as usinas da Samarco no Rio Conceição, localizado no distrito de Brumal, na cidade de Santa Bárbara. A adutora construída para estes fins utiliza 82% do potencial hídrico do rio. Moradores da região informam que na época da estiagem o rio termina, literalmente, no ponto de captação para o duto. É importante ressaltar que, em 2010, um dos minerodutos da Samarco rompeu no município de Espera Feliz, causando um grave desastre ambiental.”

Destruição da Serra do Gandarela e de seus recursos hídricos

Há 7 anos o Movimento pela Preservação da Serra do Gandarela, do qual participam diversas organizações e cidadãos de Minas Gerais e de todo o Brasil, atua no enfrentamento às pretensões minerárias da Vale. A Serra do Gandarela abriga a última grande área intacta do quadrilátero ferrífero-aquífero e o mais importante aquífero e mananciais de água de alta qualidade da região, afluentes das bacias hidrográficas dos rios das Velhas (Bacia do Rio São Francisco) e Piracicaba (Bacia do Rio Doce). Por esses motivos, a sociedade civil organizada solicitou a criação de um Parque Nacional e de uma Reserva de Desenvolvimento Sustentável (RDS). Desconsiderando a enorme relevância ambiental, paisagística, científica e cultural da região, assim como o amplo debate social sobre o tema e sua tramitação no âmbito técnico do Instituto Chico Mendes de Conservação da Biodiversidade (ICMBio), o Ministério do Meio Ambiente (MMA) encaminhou e a presidente Dilma Rousseff criou, através de decreto em 13 de outubro de 2014, o Parque Nacional da Serra do Gandarela[33], sem contemplar em sua demarcação as áreas que reúnem o maior número de atributos que justificam a criação da Unidade de Conservação federal. Assim, colocaram sob ameaça esse inestimável patrimônio socioambiental, comprometendo irremediavelmente mananciais essenciais para as cidades vizinhas, como Caeté, Nova Lima, Raposos, Rio Acima, Santa Bárbara e Barão de Cocais, além da última reserva estratégica de água para o abastecimento de Belo Horizonte e sua região metropolitana. Em um período em que há graves ameaças ao abastecimento de água e conflitos de uso na própria região Sudeste, não faz nenhum sentido criar um Parque Nacional excluindo de seus limites áreas de extrema relevância ambiental e hídrica. Muito menos permitir nesta área a exploração mineral pretendida, principalmente pela Vale com os projetos Apolo, Piacó e Baú. A Vale fez gestões para reduzir a área do Parque Nacional. Desde 2007, a empresa insiste em concretizar seus empreendimentos minerários na região e, para isso, já foram diversas as suas tentativas para ter a Mina Apolo licenciada. Esta empresa, portanto, não respeita a relevância da Serra do Gandarela, nem sequer no sentido da garantia de água para milhões de pessoas.”

English Version: “Mining harms not just the use of water, but also its accumulation and renewal, causing an end to springs. Besides the environmental impacts, increasingly large amounts of water are used as a free input by large miners, especially in ore slurry pipelines.

Water is the mining sector’s main input, and it is used in processing and transporting ore. The impacts of this activity on water are extremely serious, including the destruction of underground water tables, deterioration of water quality when it is returned compared to when it was extracted, a reduction in its availability, and contamination of rivers, seas and springs with chemical waste, among other things. Thus, mining harms not just the use of water, but also its accumulation and renewal, causing an end to springs. Besides the environmental impacts, increasingly large amounts of water are used as a free input by large miners, especially in ore slurry pipelines. In just one hour of operation, these pipelines use enough water to supply a city of at least 500,000 inhabitants during this period. In 2012, there were more permits for water use in mining than in industry in Brazil.

In Canada, Vale’s Voisey’s Bay nickel mining project is very controversial due to the contamination of Sandy Pond, which had a unique ecosystem. Used as a dumping ground for waste, the pond was converted into a basin containing more than 400,000 metric tons of waste, according to complaints from local organizations. As well as Vale being the defendant in the largest public civil lawsuit in Canada’s history for environmental problems, in 2010 it was sentenced to pay around C\$36 million (Canadian dollars) as compensation to more than 7,000 residents of Port Colborne in Ontario.

In Minas Gerais, Vale’s birthplace, there are numerous cases of conflicts between the use of water for the company’s operations and to supply the population. In the municipality of Catas Altas, Vale extracts iron ore from São Luiz Mine in the district of Morro da Água Quente. This mine was expanded in 2007, and mining has since taken place very near the community and the district’s water supply source. Residents have noted that some springs are silting up and that the flow of watercourses has reduced considerably. In addition, problems arising from the mine’s dust and air pollution have also become much worse. Despite this, Vale plans to reopen Tamanduá Mine, which was inactive for around 15 years. This mine is located even closer to the community of Morro da Água Quente, and dangerously near the water source that supplies the main town in the municipality of Catas Altas. In other words, the town’s two water sources are jeopardized by Vale’s operations. The water security of more than 5,000 people is at stake.

Another serious conflict regarding Vale’s water use is found in its ore slurry pipelines, in which iron ore slurry is pumped using water for 24 hours a day. Samarco (a company in which Vale has a 50% stake) operates three ore slurry pipelines in Minas Gerais, from Alegria Mine in Mariana to the Port of Ubu in Anchieta, Espírito Santo. Each of these pipelines is more than 400 km long. The three pipelines consume an average of 4,400 m³ of water per hour. After decades destroying springs in the municipalities of Mariana and Ouro Preto, the company needed to extract water for Samarco’s ore slurry pipelines and plants from the Conceição River, located in the district of Brumal, in the municipality of Santa Bárbara. The water pipe built for this purpose uses 82% of the river’s water potential. Residents of the region say that in the dry season, the river literally dries up completely at the water pipe’s inflow point. It is important to note that in 2010, one of Samarco’s ore slurry pipelines burst in the municipality of Espera Feliz, causing a major environmental disaster.

Destruction of Gandarela Hills and their water resources

For seven years, the Movement to Preserve the Gandarela Hills, featuring the involvement of various organizations and citizens from Minas Gerais and across Brazil, has been fighting against Vale’s mining plans. The Gandarela Hills are home to the last large intact area of the ‘iron-aquifer

quadrangle' region and the most important aquifer and springs of high-quality water in the region, feeding the basins of the Velhas River (São Francisco River Basin) and Piracicaba River (Doce River Basin). For these reasons, organized civil society requested the creation of a National Park and a Sustainable Development Reserve. Disregarding the region's enormous environmental, landscape, scientific and cultural relevance, as well as extensive social debate about the topic and its processing within the technical scope of the Chico Mendes Institute for Biodiversity Conservation (ICMbio), the Environment Ministry submitted plans for, and President Dilma Rousseff created, through a decree on October 13, 2014, the Gandarela Hills National Park[33], without including within its boundaries the areas with the largest number of attributes that justified the creation of the federal Conservation Unit. Thus, they endangered this priceless social and environmental heritage, irreparably harming essential water sources for neighboring municipalities, such as Caeté, Nova Lima, Raposos, Rio Acima, Santa Bárbara and Barão de Cocais, as well as the last strategic water reserve to supply Belo Horizonte and its metropolitan region. At a time when there are serious water supply threats and usage conflicts in Brazil's Southeast region, it does not make any sense to create a National Park whose boundaries exclude areas of extreme environmental and water resource relevance. It makes even less sense to permit mining exploration there, especially that planned by Vale through its Apolo, Piacó and Baú projects. Vale made efforts to reduce the National Park's area. Since 2007, the company has been insisting on implementing its mining projects in the region, and to this end it has made various attempts to get Apolo Mine licensed. This company, therefore, does not respect the importance of the Gandarela Hills, not even to guarantee water for millions of people."

Vale's Response

Apolo Project

Vale began studies for the Apolo Project around 2006, conducting hydrogeological studies that supported the respective Environmental Impact Assessment in its diagnosis and prognosis of the project's impacts on the region's water resources. The results of these studies indicate that the Apolo Project will not harm the water supply of Belo Horizonte and adjacent cities, and any impacts will be duly mitigated in line with prevailing environmental legislation and demands by the environmental licensing authority.

The Apolo Project's area is home to the water supply sources for the cities of Barão de Cocais and Caeté, and part of the city of Belo Horizonte. The main allegation against the project among organized civil society is that there are several springs in its area of influence and that this is likely to affect the water supply of part of the local population.

Also regarding water supply issues, considering the study to evaluate water availability in the basins of the upper stretches of the Velhas and Paraopeba rivers, which are home to springs that feed the metropolitan region of Belo Horizonte, COPASA's water extraction facility from the Velhas River is located around 7 km upstream from where it is joined by the Prata Stream, which is the watercourse influenced by the Apolo Project's implementation area.

Therefore, we clarify that the project's area of influence is not related to the water extraction points used for the water supply in question. In addition, all water withdrawal points that currently supply the metropolitan region of Belo Horizonte are located in areas of influence of mining projects, but no impacts by these projects on water stocks allocated for public supply have ever been detected or forecast. We also stress that in our environmental controls, we have also created an extensive network to monitor indicators, such as the quality and flow of watercourses.



Accordingly, the studies carried out have concluded that the Apolo Project will not harm the water supply of Belo Horizonte and adjacent cities, and any impacts will be duly mitigated in line with prevailing environmental legislation.

The Environmental Impact Assessment in question was officially submitted to the Regional Environmental Regularization Superintendent's Office (SUPRAM CM) on October 9, 2009. However, on November 23, 2010, through Official Letter 1994/2010, SUPRAM CM reported the suspension of technical analysis for the Apolo Project's licensing process due to ICMBio's proposal to create the Gandarela National Park.

On October 13, 2014, the decree creating the Serra do Gandarela Hills National Park was published. Since then, the project has not moved forward. It is currently suspended.

It is important to note that Vale will only start implementing the Apolo Project once its environmental license has been duly approved, and in accordance with prevailing environmental legislation.

Catas Altas

In 2010, Vale obtained an operating license to expand its activities at São Luiz Mine.

Vale clarifies that its activities do not interfere with water extraction points used to supply the district of Morro da Água Quente and Catas Altas, which are found upstream from the mine's operations. The company monitors the flow and quality of water in the watercourses located around the project. The results of this monitoring have been in accordance with the parameters determined by legislation.

With regard to particulate matter emissions, the company takes measures to control dust and it has an air quality monitoring network to measure particulate levels in the area around the operation. The monitoring results have been within the limits determined by legislation.

All this monitoring work is officially registered with the environmental authority, in accordance with the operating license's conditions.

Samarco

The water resource management is a fundamental issue on Samarco's operations and plans. Several studies and projects have been developed in order to adopt more sustainable practices. This work is oriented by the aims of optimize and rationalize the water use, reduce the need of make-up water, increase recirculation water rate and ensure the water quality discarded to environment.

It's important to highlight that Samarco does not withdraw water specifically to feed the pipelines. The water to the transport came from iron ore processing withdraw. So, regardless the pipeline, the withdraw water is necessary due the industrial process nature. Part of water is treated and returns to water bodies close to company with quality level according the law requirements. About 90% of water demanded by Samarco is recycled and the part used on pipeline is separated and used again in the pelletizing process in Espírito Santo. Those initiatives avoid, in large scale, the need of new withdraw out of the environment. Nowadays Samarco uses 1632m³/h of water to transport ore pulp and not 4400m³/h as described.

All Samarco's withdraw is conducted according the standards established by the authorizations issued for the competent environmental agency after conducted studies attesting the viability. Samarco has permits in five different places in order to avoid water stress in a particular place.

The water withdrawal on Santa Bárbara river is part of its strategy and started with the third concentration plant operation launched on April 2014. The information about the use of 82% of the river capacity is unfounded. According to the IGAM Ordinance nº49/2010, article 5º, §1º, "The maximum limit of consumption withdraws to be permitted in the portion of water basing limited for a considered section, in natural conditions, will be 30% of Q7,10 (minimum flow rate in 7 (seven) days and 10 (ten) years of recurrence) being assured downstream of the withdraw minimum residual flows equal of 70% of the Q7,10". So, the water used by Samarco doesn't restrict others withdraws in different points of Santa Bárbara river. As established by the law above on that specific point would be allowed withdraw of 3467m³/h and Samarco is allowed to withdraw up to 2050m³/h, as the flow rate defined by the permit – "Portaria de Outorga N°01323/2001".

It should also be noted that in 2012 was published the Resolution SEMAD-IGAM nº1548, March 29th, 2012 changing the permitted withdraw flow rate to 50% of Q7,10. On this conditions would be allowed to withdraw 5778m³/h on that point of Santa Bárbara river.

The Federal law 13199/99 (National law of waters) item I, Art. 3º established "the right of access of all to water resources, priority to public supply and ecosystem maintenance". So the Samarco's withdraws do not compete with human supply. In 38 years of pipelines operation there is no records of conflicts for water use in the neighborhood of company operations.

Related to the pipeline leaking in 2010 it should be noticed this is a localized occurrence identified and treated by the company with agility and transparency.

Samarco, immediately after the identification of the occurrence informed and involved the competent authorities and took care of all work to rehabilitate the area. The action was properly followed by the competent authority and received the municipality formal recognition for the company responsibility and especially for the way of conduction the actions related to the fact.

Voyces Bay

Vale is committed to long term sustainable development – Vale's approach to sustainability entails balancing environmental, social and economic factors from a macro perspective to achieve a result that prioritizes the greater good and the best interests of the communities in which it operates. The outcomes of the Sandy Pond and Port Colborne legal matters demonstrate Vale's respect for the environment and record of compliance with prevailing laws and regulations.

Sandy Pond

The "Sandy Pond Alliance for the Protection of Canadian Waters" filed an Application in the Federal Court of Canada in June 2010 asking that the Metal Mining Effluent Regulations ("MMER") under the Fisheries Act, which permit the use of a lake or pond as a Tailings Impoundment Area ("TIA"), be declared void and unlawful. The Application does not seek a specific remedy or order against Vale but rather named the Government of Canada and challenged the Government decision to enact certain MMER provisions. The Sandy Pond Alliance position was that the Fisheries Minister and the Cabinet were not authorized under the Fisheries Act to enact regulations which permit the use of a fish habitat (i.e., a lake or pond) for tailings, the result of which is the destruction of freshwater aquatic life in the habitat.



The Court dismissed the Sandy Pond Application on 31 October 2013 (meaning, the Court determined that MMER are not unlawful). The status of this matter is that the Sandy Pond Alliance application was rejected by the Court without impact to Vale.

The Sandy Pond site emerged as the clear and most responsible selection after detailed examination and comparison of several possible sites for the RSF. A requirement related to the use of Sandy Pond is the protection of fish and fish habitat under the Fisheries Act of Canada. The Department of Fisheries and Oceans (DFO) operates on the “No Net Loss” principle: any loss of productive fish habitat has to be offset in an acceptable manner so that there is no net loss in capacity. Fish habitat can be altered only if authorized by the Minister of Fisheries. Such authorization is granted only if an acceptable Fish Habitat Compensation Plan is in place and a binding agreement is reached on its implementation.

Vale has legally relocated the freshwater aquatic life from Sandy Pond and continues to responsibly use Sandy Pond as a residue storage site for Vale’s Long Harbour processing plant operations. This is all in accordance with prevailing laws and regulations. The Sandy Pond residue storage facility (RSF) is one of 19 authorized impoundment areas in Canada.

PCR Class Action Lawsuit

A class action lawsuit in Ontario court alleged that historic emissions from Vale’s Port Colborne refinery had resulted in elevated nickel levels in the soil and adversely affected property values of neighboring properties. Vale acknowledged that there is nickel in the soil and that the majority of it came from the historical (pre-1960) operation of the nickel refinery in Port Colborne. Vale put forward the position that the refinery was at all times operated in compliance with the environmental regulation of the day and that the level of nickel in soil was below the standards set to protect human health.

At trial, the judge awarded damages to the Class Action plaintiffs in the amount of CDN\$36 million plus legal costs. This decision was subsequently reversed by the Ontario Court of Appeal, accepting all of Vale’s positions. Thus no payment by Vale to the Plaintiffs was required.

Vale recognizes the historical soil contamination and has worked to undertake Risk Assessments (RAs), as required by the Ontario Ministry of the Environment (MOE). The RAs evaluated human health risk, ecological risk and risk to agricultural crops. The studies provided further evidence that the level of soil contamination does not represent a health risk to the community. The MOE’s review of Vale’s RAs is ongoing. Vale continues to implement its risk management plan to address areas with higher nickel soil contamination.

17) Xikrin: compensation programs

Text of 2015 Unsustainability Report

Original Portuguese text: “No Pará, o povo Xikrin realizou diversos protestos em 2014. Em um deles, a entrada do empreendimento Onça Puma, da Vale, na região de Ourilândia do Norte, foi bloqueada e a produção paralisada. Os indígenas denunciam que a extração de níquel está causando diversos danos à saúde da população e afetando o Rio Cateté, que serve à comunidade. Segundo o MPF, apesar dos impactos na saúde dos Xikrin, a Vale não iniciou nenhum programa de compensação e não cumpriu nenhuma das condicionantes previstas. Outro projeto da Vale, o Salobo, de extração de cobre, também causa consequências negativas neste mesmo povo Xikrin,



ao atingir áreas de castanhais utilizadas para a coleta dos indígenas. Por esta razão, Salobo é objeto de inquérito civil público em andamento na Procuradoria da República em Marabá (PA).”

English version: “In Pará, the Xikrin people carried out several protests in 2014. During one of them, the entrance to Vale’s Onça Puma project in the Ourilândia do Norte region was blocked and production halted. The indigenous people allege that nickel mining is causing extensive harm to people’s health and affecting the Cateté River, which serves the community. According to the Federal Prosecution Ministry, despite the health impacts on the Xikrin people, Vale has not begun any compensation program and has not complied with any of the established conditions. Another Vale project, the Salobo copper extraction project, is also causing negative consequence for this same people, by affecting areas where they collect nuts. For this reason, Salobo is the object of a public civil inquiry under way at the Federal Prosecutor’s Office in Marabá, Pará.”

Vale’s Response

Onça Puma

All the stages of the Onça Puma project were planned so as to prevent and safeguard the indigenous people and their territories from any negative consequences that may arise from its implementation or during its operational phase.

Vale also understands that, following the completion of the Xikrin do Cateté Ethno-Ecological Studies, which detailed the impacts on these indigenous areas more directly, and proposed mitigating actions, strategies and measures for them, any detailed information needed for the Environmental Impact Assessment (EIA-RIMA) has already been supplied. Based on the impacts identified in this study, a Basic Environmental Plan featuring appropriate mitigation programs was produced with the indigenous community participation. However, the indigenous people are not allowing the programs that were defined, with their participation and decision, to be implemented within their indigenous land. They want extra financial resources to be paid by the company for their consumption needs. The mitigation plan is established to have the financial resources being applied in environmental conservation, health, safety improvement, land securing and monitoring, cultural strengthening and productive activities, in an equitable way. They are not supposed to pay for costing and acquisition of consumer goods that have no correlation with the impacts and often generate new negative impacts to these populations, including their socio-cultural aspects and health. The direct financial transfer is not either equitably distributed by them. Therefore, some get more resources than others, generating new internal ruptures. The simple increase of resources poses more threat to these people. A strong long term sustainable plan with good governance and management is needed. Vale has been conducting all the activities outside the indigenous land defined in the Basic Environmental Plan, including the following: (i) Monitoring of water quality in the Xikrin do Cateté indigenous land (monitoring of concentrations of heavy metals that could affect the indigenous people’s health); and (ii) Actions to mitigate the silting of the Cateté River (proposal for structures to control this silting). This monitoring work has shown no change in turbidity that could influence the water body’s visual characteristics. Regarding heavy metals, the anomalies found (higher concentrations) are related to regional and/or local geology, including hydro-chemical processes, water-rock interactions, the time that water spends in the aquifer, and speed of infiltration.

It should also be noted that since 1982 Vale has provided support to the Xikrin do Cateté indigenous people, complementing the primary responsibility of the Brazilian state, providing

financial transfers to support health, education, productive activities and territorial protection, as well as medical and dental care for all members of the Xikrin do Cateté ethnic group.

Salobo

The Salobo copper project is around 60 km from the nearest indigenous village. The project is fully situated inside the Tapirapé-Aquiri National Forest, a conservation unit protected by the competent environmental authority, and human occupation in the location is prohibited. Due to the considerable distance between the project and the indigenous villages where the Xikrin do Cateté people live, as well as the strict environmental control systems inherent to the project, these circumstances allow us to affirm that there are no significant impacts on the physical, biotic and socioeconomic environment affecting the indigenous land. Discussions have been held with the Xikrin do Cateté people since the start of the Salobo Project. Although they did not use the project's area before it began, their use of this area has since been facilitated, thereby expanding their options for collecting nuts – a traditional activity that the company now supports annually on a voluntary basis.

18) Mãe Maria Indigenous Land

Text of 2015 Unsustainability Report

Original Portuguese text: “Em 2015, o MPF pediu à Justiça Federal que obrigue a mineradora Vale a voltar imediatamente a dar apoio à saúde dos indígenas da Terra Indígena Mãe Maria, em Bom Jesus do Tocantins, no sudeste do Pará. A empresa suspendeu o atendimento de saúde aos indígenas após uma manifestação realizada próxima à EFC. Este corte do amparo à saúde, efetuado pela Vale, consiste em nítida violação aos direitos humanos, afetando crianças, adultos e idosos, alguns em tratamento intensivo ou de câncer, outros que necessitam de acompanhamento médico periódico e contínuo, indígenas que tomam remédios controlados e outros pacientes que estão em Centros de Terapia Intensiva (CTI).”

English version: In 2015, the Federal Prosecution Ministry made a request to the federal courts to oblige mining company Vale to immediately resume its support for the health of the indigenous people of the Mãe Maria Indigenous Land, in Bom Jesus do Tocantins, southeast Pará. The company suspended its health care for the indigenous people following a protest held near the Carajás Railroad. This health service cut by Vale is a clear violation of human rights, affecting children, adults and elderly people, including some undergoing intensive or cancer treatment, others requiring periodic and continuous medical care, indigenous people taking prescription drugs, and other patients in intensive care centers.

Vale's Response

The Agreement between Vale and the Gavião community established that Vale would pay R\$14 million per year to the tribes and provide complementary health services as long as the Gavião community did not interrupt Vale's operations. Due to the shutdown of the Carajás Railroad by such

community on February 25 and 26, 2015, Vale denounced the Agreement, suspending the financial aid health services provided through the health care plan for the Gavião people of the Mãe Maria indigenous land. Nevertheless, it maintained emergency services for the indigenous people as well as treatments under way and high-complexity or high-cost specialist treatments. This fact contradicts the claim that the measure has affected “children, adults and elderly people, including some undergoing intensive or cancer treatment, others requiring periodic and continuous medical care, indigenous people taking prescription drugs, and other patients in intensive care centers.” At the moment, six of the nine villages of the Gavião people have renewed the Agreement with Vale. As a result, they have had their health services fully reestablished, as well as financial transfers to support activities. The three villages without Agreements in place are receiving urgent and emergency services, as well as high-complexity or high-cost specialist treatments, reflecting Vale’s commitment to respect the communities it interacts with, in order to promote the development of lasting and healthy relations with the Gavião people. At no time has Vale refused to engage in dialogue with the Gavião people, and we have always respected their culture and social organization.

19) Biopalma

Text of 2015 Unsustainability Report

Original Portuguese text: “Seguindo a lógica do marketing verde, em 2011, a Vale comprou 70% da empresa Biopalma da Amazônia S.A. Reflorestamento Indústria e Comércio (atualmente denominada Biovale), que produz óleo de palma, com o argumento de reduzir suas próprias emissões de CO2. A destinação principal do óleo é a produção de biodiesel pela Vale para alimentar sua frota de locomotivas, máquinas e os equipamentos de grande porte das operações no Brasil. No entanto, a Biovale é denunciada por conflitos territoriais, desmatamento e contaminação por agrotóxicos de igarapés, que alimentam inúmeros rios da região. Em 2014, o Instituto Evandro Chagas comprovou a contaminação por agrotóxico em plantações de dendê, registradas em um relatório de perícia feita nos municípios de São Domingos do Capim, Concórdia do Pará, Bujaru e Acará. Além disso, desde 2008 quilombolas de Concórdia, no Pará, acusam a empresa de pressionar agricultores para venderem suas terras, ameaçando-os com desapropriações e índios Tembê do território Turé-Mariquita denunciam os impactos das atividades da empresa em suas terras, através da contaminação por agrotóxicos, tendo os índios apreendido, em protesto, em 2014, oito carros e tratores da Biopalma. Ou seja, por trás da imagem de empresa sustentável, responsável e preocupada com as futuras gerações, esconde-se a mesma velha prática de usurpação e descaso com os territórios e comunidades. Em relação ao preço dos alimentos, apesar de existirem fatores como situações de sazonalidade, quebra de safra e entraves na comercialização, o supervisor técnico do Departamento Intersindical de Estatística e Estudos Socioeconômicos (Dieese), do Pará, Roberto Sena, avalia que existe uma relação entre o avanço do dendê e a alta dos alimentos. O problema da agricultura familiar é que falta política de produção; deixaram de fomentar mandioca em troca do dendê”, afirma.”

English version: “Following the logic of green marketing, in 2011 Vale bought a 70% stake in Biopalma da Amazônia S.A. Reflorestamento Indústria e Comércio (now called Biovale), a company that produces palm oil, based on the argument that it would cut its own CO2 emissions. The oil is mainly used by Vale itself to make biodiesel to supply its fleet of locomotives and large

machinery and equipment in its Brazilian operations. However, Biovale has been denounced for territorial conflicts, deforestation and pesticide contamination of streams feeding the region's numerous rivers. In 2014, The Evandro Chagas Institute found pesticide contamination in palm tree plantations, as recorded in a report by a specialist produced in the municipalities of São Domingos do Capim, Concórdia do Pará, Bujaru and Acará. Furthermore, since 2008 members of a quilombola community in Concórdia, Pará, have accused the company of pressuring farmers to sell their lands, threatening them with expropriation, and Tembê indigenous people in the Turé-Mariquita territory have complained about the impacts of the company's activities on their lands, through pesticide contamination. In 2014, these indigenous people seized eight cars and tractors belonging to Biopalma in protest. In other words, behind the image of a company that is sustainable, responsible and concerned about future generations, there lies the same old practice of usurping and neglecting territories and communities. With regard to food prices, notwithstanding factors such as seasonal situations, crop failures and sales obstacles, the technical supervisor of the Pará Inter-Union Department of Statistics and Socioeconomic Studies (Dieese), Roberto Sena, believes there is a relationship between the advance of palm trees and the rise in food prices. The problem of family farming is the lack of a production policy; people have stopped growing cassava in favor of palm trees,' he says."

Vale's Response

Biopalma operates strictly according to labor and environmental legislation, and it clarifies that it has had access to the "Technical report to evaluate surface water and bottom sediment located in areas potentially impacted by palm oil tree cultivation in the municipalities of Concórdia do Pará and Bujaru," produced by the Evandro Chagas Institute. This document does not contain any evidence of pesticide-contaminated surface water, and its analyses of sediments detected residues of DDT and Endossulfan – products that are not used by Biopalma.

The company emphasizes that it does not have any activities inside the indigenous territory in question. Despite this, it carries out sustainable projects to support the indigenous community, focused on education, health, food security, basic sanitation, maintenance, and access infrastructure. For example, the company has equipped a health center and installed micro water supply facilities, among other things, all in accordance with the ethno-environmental report produced in 2011 and updated in August 2012, and under Funai's supervision.

It should be noted that despite the actions taken by Biopalma to support the indigenous community of the Turé Mariquita territory, on December 24, 2014 indigenous person Lucinho Tembê began to lead a series of illegal actions against the company, including the unlawful seizure of vehicles, interruptions of activities, threats to company employees, and theft of objects and fuel. In exchange for the seized goods, the indigenous people presented a series of demands, which included, among other materials items, a monthly transfer of cash unconnected to any actions. The goods were only recovered by Biopalma following a court ruling by the judge of the Second Federal Court of Belém. We emphasize that there is no proof of any impacts caused by Biopalma's activities on the indigenous territory. In addition, the study conducted by the Evandro Chagas Institute did not cover the municipality of Tome Açu, where the indigenous community in question is located.

Thus, the Federal Prosecution Ministry filed Injunction in order to investigate the alleged contamination of the indigenous territory. Biopalma was summoned and it presented its defense. Following the legal procedures, the lawsuit was dismissed by the judge of the Ninth Federal Court of Belém.

Even though the lawsuit was dismissed, Biopalma started to hold meetings with the indigenous community and FUNAI with the aim at reaching an agreement to ensure good relations with the parties involved. The indigenous leaders have presented their claims and Biopalma is evaluating their pertinence in relation to their areas of activity, namely education, health, food security, basic sanitation, maintenance, and access infrastructure. At the moment there are no direct conflicts.

Regarding the allegation of deforestation, it should be noted that the Biopalma project has a zero rate of deforestation, as it is exclusively planting palm trees in areas already altered, in line with the obligations arising from environmental legislation and the company's objectives and principles to conserve the biodiversity and ecosystem around it. As a result, the company is maintaining natural areas of habitat, thereby contributing to environmental balance and the conservation of natural resources in the region.

In the last six (6) months, it was identified that the company's areas allocated for "Reserva Legal" sites (legally mandated minimum areas of native habitat) and/or considered Permanent Preservation areas have been systematically invaded for illegal logging, especially in the municipalities of Acará, Tomé Açú and Concórdia do Pará.

In order to reduce incidents of illegal logging, Biopalma filed crime reports at the police station in the municipality where each property in question is located, and made a request to the Pará Specialist Environmental Police Department (DEMA) to launch a police inquiry to put a definitive end to such actions, which harm not only the company, but society as a whole. Biopalma has also reported these cases to the environmental authorities. As a result of the measures taken by Biopalma, the Civil Police have already carried out two operations in the region, culminating in the seizure of illegally extracted timber.

Regarding the aforementioned territorial conflicts, Biopalma states that at no time has it made any kind of threats to rural farmers located in the region to sell their lands, and it has certainly not undertaken any planting work and/or acquired properties belonging to the indigenous territory in question. As stated before, Biopalma has been planting in already degraded areas.

With regard to the conflict with the quilombola community, it should be noted that the request to demarcate the Amarqualta quilombola territory was filed in 2011, after Biopalma acquired the properties. As soon as it became aware of the request for quilombola demarcation, the company suspended the planting of palm trees in the contested area and began to monitor the demarcation process with the Pará Land Institute (ITERPA), the body responsible for the process of demarcating quilombola territory. Alongside the administrative process under way at ITERPA, the State Public Prosecution Ministry instigated a public civil inquiry to investigate the claims made by the members of the quilombola community regarding the activities of palm tree-growing companies, particularly in terms of land conflicts involving an area that is awaiting land title. Because of these administrative processes, Biopalma has had several meetings with ITERPA, the quilombola communities and the State Public Prosecution Ministry to resolve the situation through negotiation. At the moment, the validity of the land titles for overlapping properties claimed by Biopalma and ITERPA is being evaluated.

Launched in February 2010, Biopalma's Family Farming Program consists of a partnership to produce palm oil fruit with rural farming families in northeast Pará. The farmers are funded via Banco da Amazônia, Banco do Brasil and Banco do Estado do Pará (Banpará), with credit lines supplied by the National Program to Strengthen Family Farming (PRONAF – ECO DENDÊ), a federal government program to acquire saplings, maintain plantations and grant financial support for subsistence needs in the first three years after planting until the first crops are harvested.

Around 650 families are partners of this Biopalma program, dedicating part of their lands to palm tree plantations and receiving technical assistance, as well as guaranteed purchases of raw

materials for 30 years of production. Farmers already at the harvesting stage, i.e. at least three years after planting, have seen a significant increase in their purchasing power, which is also resulting in growth in the acquisition of goods and services in the program's areas of influence.

At the same time, to strengthen family farming among the producers served by the program, Biopalma conducts monitoring and provides technical support needed for the families to develop their agricultural production, given that they also grow other crops on the same property.

One of the ways used to encourage families to plant a variety of crops is the "Productivity Trio," a program formalized through a partnership between Biopalma and Embrapa that involves a combination of three components of a cassava production system and their application at the family properties in question.

The Productivity Trio has the capacity to use the spaces between the rows of palm trees to grow cassava roots without harming the perfect plant development of the palm trees. The Productivity Trio has been implemented in cleared areas where the slash and burn technique had previously been usual. By using the Trio system, it has been possible to double cassava yields without using fertilizer, by focusing on using the best spacing to plant seedlings, clearing the areas and selecting cassava seedlings. As the planted palm trees take three years to begin producing fruit, and given that cassava crops are the foundation of family farming in the area, cassava is grown between the rows of palm trees, in line with the following principles:

- Non-encouragement of monoculture in family farming;
- Diversification of production, given that many other crops besides cassava may be intercropped (including corn, rice, beans and watermelon), provided that technical spacing criteria are followed, as guided by Biopalma's technical team;
- Guaranteed food security for the families benefited by Biopalma's Family Farming Program;
- Guaranteed income even before oil palm fruit production begins, given that the palm trees complement income produced by other food crops (beans, corn, rice and fruits).

Biopalma is a company with the mission to produce palm oil and byproducts in a sustainable manner. Our operational excellence makes us a leading company in the market, and this recognition has only been possible thanks to work performed with respect for safety and the environment.

20) Belo Monte

Text of 2015 Unsustainability Report

Original Portuguese text: "Um dos projetos mais polêmicos em que a Vale está envolvida, na sua crescente busca por energia, é a construção da usina hidrelétrica de Belo Monte na Volta Grande do Rio Xingu, no estado do Pará. O projeto tem sido alvo de intensas críticas por provocar grande destruição social, ambiental e econômica[30]. Ao menos 20 processos judiciais são movidos pelo Ministério Público Federal, do Pará, devido a problemas no licenciamento, descumprimento de condicionantes, impactos irreversíveis, etc. Mesmo assim a obra está sendo implementada. Em

dezembro de 2013, a Vale vendeu metade de suas ações da Norte Energia S.A. (Nesa), o consórcio responsável pelo projeto, reduzindo sua participação de 9% para 4,4%. As motivações para a redução da sua participação no Nesa não são totalmente claras. Os grandes atrasos na construção e as constantes atualizações de custos evidenciam que Belo Monte não é economicamente viável, como os movimentos sociais apontam há décadas.”

English version: “One of the most controversial projects in which Vale is involved, in its growing pursuit of energy, is the construction of the Belo Monte hydroelectric plant in the Volta Grande (“Big Bend”) of the Xingu River, in the state of Pará. The project has been the target of intense criticism for causing great social, environmental and economic destruction [30]. At least 20 lawsuits have been filed by the Federal Public Prosecution Ministry in Pará due to licensing problems, breaches of conditions and irreversible impacts, among other things. Nevertheless, the construction work continues. In December 2013, Vale sold half of its interest in Norte Energia S.A. (Nesa), the consortium responsible for the project, reducing its stake from 9% to 4.4%. The reasons for this reduction are not entirely clear. Major delays in construction and constant cost increases demonstrate that Belo Monte is not economically viable, as social movements have been saying for decades.”

Vale’s Response

In March 2015, Vale transferred its 9% stake in Norte Energia Participações S.A. (the Belo Monte hydroelectric power plant) to Aliança Norte Energia Participações (Aliança Norte), a joint venture between Vale and Cemig Geração e Transmissão S.A. (Cemig GT).

Vale now indirectly holds a 4.59% interest in Belo Monte, while Cemig GT has a 4.41% stake in the project through Aliança Norte. This reduction in Vale’s interest in Belo Monte is in line with its global strategy to focus on its core business, without harming the availability of electric power for its operations.

Through Aliança Norte, Vale appoints one member and a respective alternate member to Norte Energia’s Board of Directors, with the right to one vote at meetings, where subjects need to be approved by a vote of at least eight members. Vale and Cemig GT alternately appoint Aliança Norte’s member of the Board of Directors every three years, as determined in Aliança Norte’s shareholders agreement.

Environmental and social issues, among other strategic topics, are discussed by the Environmental Advisory Committee, whose members are appointed by Norte Energia’s shareholders. Vale, through Aliança Norte, appoints one representative to this committee and a respective alternate member until the end of the Belo Monte hydroelectric project’s implementation phase. Starting from the operational phase, Cemig GT and Vale will then alternately appoint their representative every three years. The committee’s main objective is to analyze social and environmental subjects and recommend whether or not to approve measures to Norte Energia’s Board of Directors, which is composed of 12 members appointed by shareholders

Norte Energia provides frequent information on their site. It is important mentioning that over the course of its planning, the plant’s design was profoundly modified in order to restrict its potential impacts on the environment and the region’s population. The flooded area was reduced by 60% compared with the original plan. The plant’s complex, which includes reservoirs, roads,

transmission lines, camps and other auxiliary structures, will occupy 559 km². Of this total, it will be necessary to deforest 156 km² (27%), because the remainder of the area consists of the riverbed and non-native vegetation formations, such as pastureland, areas of crops, and mineral extraction sites.

The Belo Monte project has taken necessary precautions not to flood any indigenous lands and to avoid impacts in implementing the construction of sites, access roads, dam and other engineering structures needed to build the project. There are also no plans to resettle villages, in line with the project's commitment to reduce its impacts on the surrounding area and local communities.

During its implementation phase, the project is investing around R\$4.23 billion in social and environmental initiatives, of which R\$2.74 billion had been spent by February 2015 (64% of the total planned amount). The management of social and environmental aspects is guided by the Basic Environmental Plan, which is being implemented through 117 programs, plans and projects, encompassing social, indigenous, land-related and physical-biotic investments, aimed at compensating for and mitigating the potential impacts identified in the environmental viability studies.

Social investments in local municipalities and indigenous communities represent around 60% of the budget, covering social, cultural, economic and infrastructure aspects.

They include initiatives to monitor and improve health, education, training, income generation and appreciation of cultural and intangible heritage. Of these investments, 108 projects have been completed to build or renovate schools, basic health centers and hospitals (in rural and urban areas), and by the end of the project there should be 136 new facilities. In programs for indigenous people, more than R\$226.3 million of the planned R\$358.7 million has already been invested.

As part of social and environmental requirements related to the creation of Belo Monte's reservoir, work is under way to comply with the National Solid Waste Plan, which has involved remediating existing dumps, completed in October 2012, and implementing sanitary landfills, in operation since early 2013, for the municipalities of Altamira and Vitória do Xingu, benefiting a population of approximately 120,000 people.

Also in 2013, work began on building these municipalities' entire water and sewage systems, involving investments of around R\$500 million and completed in late 2014, significantly improving the way urban waste is disposed of in the region, where conditions used to be much worse than in Brazil as a whole.

As the reservoir is formed, the urban population living in areas of "palafitas" (houses on stilts) in the city of Altamira is being resettled in new neighborhoods. In all, 4,100 houses have been built in areas equipped with comprehensive basic and leisure infrastructure to improve the people's quality of life.

The implementation of the Basic Environmental Plan also involves actions for the physical-biotic environment, including research, monitoring and environmental conservation activities. These mitigation and compensation initiatives include a Conservation Unit Implementation and Management Action Support Project, an Action Plan to Conserve Endangered and Endemic Fauna and Flora Species in the Lower and Middle Xingu Region, and an agreement with the Chico Mendes Institute for Biodiversity Conservation (ICMbio), encompassing more than 90 conservation initiatives. Other notable measures include the implementation of a tree nursery, the restoration of degraded areas, water quality monitoring and control, and encouragement for sustainable fishing.

To meet the commitments provided for in the environmental licenses, the programs defined for the Basic Environmental Plan – Indigenous Component (PBA-CI), overseen by the National Indian Foundation (FUNAI), establish thematic areas of activity that consider the indigenous people's

expectations identified in consultation meetings held before the issuing of the environmental licenses. These programs cover Territorial Management, Special Indigenous People's Health, Indigenous People's School Education, Material and Intangible Cultural Heritage, Institutional Strengthening, Reallocation and Resettlement of Indigenous City Dwellers in Altamira, Environmental Supervision, Non-Indigenous Communication, and productive activities involving a variety of subsistence and income-generation projects for indigenous communities. There is also an infrastructure program for villages in the Belo Monte hydroelectric power plant's area of influence, involving various works already executed, such as the following: Territorial Protection Units to support government actions to monitor indigenous lands; construction of an Indian House in Altamira to support indigenous village dwellers who are passing through the city; landing strips to support aeromedical removals; highway renovation and maintenance; construction of flour mills; installation of a water supply and distribution system in villages (including artesian wells); and construction of sewage collection and treatment facilities. Work is also under way to build schools and basic health facilities in the 34 villages located in the project's area of influence, besides other initiatives contained in the PBA-CI's Operating Plan.

During the first two years, heavy investment was also made to support indigenous communities by donating a wide range of items, such as boats, boat engines, motor-generators, vehicles and fuel to support subsistence activities and cultural activities, as well as other items to improve the people's quality of life.

The project's environmental licensing process also required the execution of initiatives to contribute to governmental strategies for the socioeconomic development of the Xingu region. To this end, in partnership with the state and federal governments, we highlight the Xingu Regional Sustainable Development Plan (PDRSX), which has a total budget of R\$500 million. This plan is aimed at implementing public policies in the following areas: Territorial Ordering and Land Use Regularization; Infrastructure; Promotion of Productive Sustainable Activities; Social Inclusion; and a Management Model for Large Construction Projects.

In regard to the lawsuits mentioned in the report, Vale was not appointed as a defendant in none of them. Besides, the Supreme Court of Brazil has ruled to allow the civil works of the power plant.

For more information, contact Norte Energia: <http://norteenergiasa.com.br/site/portugues/contato/>

21) Impacts of ports on the survival of local fishing chains in Maranhão, Espírito Santo and Rio de Janeiro

Text of 2015 Unsustainability Report

Original Portuguese text: "Desarticulação das cadeias locais de pesca. A contaminação das águas pelo minério e os danos ambientais causados pela construção ou pela operação dos portos da Vale provocam impactos no ecossistema marítimo e alterações permanentes do meio ambiente local. São Luís (MA), Espírito Santo (ES), Rio de Janeiro (RJ), Piura (Peru) e Perak (Malásia) são alguns lugares em que é evidente o impacto da atuação da Vale na vida e reprodução dos pescadores artesanais.

No Rio de Janeiro, cerca de 8 mil postos de trabalho que eram gerados pela pesca na Baía de Sepetiba foram prejudicados pela intensa poluição ambiental provocada pela megadragagem da Companhia Siderúrgica do Atlântico (CSA).

Na Grande Vitória (onde localizam-se o Porto de Tubarão, administrado pela Vale, e oito usinas de pelotização da empresa), foi realizada em fevereiro de 2015, uma audiência pública referente ao pó preto do minério que invade as casas, ruas e os pulmões dos moradores de todos os municípios da região metropolitana. A Vale também é responsável pela poluição do mar e pela modificação da sua biodiversidade devido à sedimentação de minério de ferro no mar na região de Camburi, em Vitória. Em São Luís, no Maranhão, onde pescadores são impactados pelo Porto Ponta da Madeira, e na Malásia, com o Terminal Marítimo Teluk Rubiah, inaugurado pela Vale em 2014, também é possível observar situações semelhantes.”

English version: “Harm to local fishing chains. The contamination of waters by iron ore and environmental damage caused by the construction or operation of Vale’s ports have impacts on the marine ecosystem and cause permanent alterations in the local environment. São Luís (Maranhão), Espírito Santo, Rio de Janeiro, Piura (Peru) and Perak (Malaysia) are some places where the impact of Vale’s activities on the livelihoods of artisanal fishermen is evident.”

In Rio de Janeiro, around 8,000 jobs provided by fishing in Sepetiba Bay have been harmed by the intense environmental pollution generated by Companhia Siderúrgica do Atlântico (CSA)’s massive dredging work.

In Greater Vitória (home to the Port of Tubarão, administered by Vale, and eight pellet plants belonging to the company), a public hearing was held in February 2015 regarding the black ore dust that invades homes, streets and the lungs of residents in all the municipalities of the metropolitan region. Vale is also responsible for polluting the sea and modifying its biodiversity due to iron ore sedimentation in the sea in the region of Camburi, in Vitória. It is also possible to observe similar situations in São Luís, Maranhão, where fishermen are affected by the Port of Ponta da Madeira, and in Malaysia, where the Teluk Rubiah Maritime Terminal was opened by Vale in 2014.

Vale’s Response

In São Luís, Maranhão, Vale monitors the area around the piers of Ponta da Madeira Maritime Terminal, located in São Marcos Bay. This work is done in partnership with the Federal University of Maranhão (UFMA), through its Oceanography Department, and consists of evaluating the marine ecosystem of waters in the area around Vale’s port operations. The results indicate that there is no evidence of alterations to the marine environment composed of fauna and flora organisms. A team of researchers in different fields, including bioscience, oceanography, zoology and geochemistry, uses modern equipment to measure water and sediment quality parameters.

TKCSA clarifies that the decline in fishing in Sepetiba Bay has been occurring since the 1970s for numerous reasons that are not influenced by the company, which began its construction activities in 2005 and started up in June 2010. All the compensatory measures for fishing, as established by INEA, have been met by the company.

In Vitória, Vale produced and officially submitted the complementary studies requested by the environmental authorities following an analysis of work presented in July 2013. The State

Environment and Water Resources Institute (IEMA) analyzed the studies submitted and produced a technical opinion, which Vale and IEMA have been analyzing since February 2015. It should be noted that the material in question, deposited during the 1970s, is confined to the far north of the beach and has not caused any impacts on the rest of the shore. It is also important to emphasize that since the 1980s the company has used control measures to impede this kind of occurrence, and has been conducting marine monitoring of the bay for 26 years.

Sechura Bay (Bahía de Sechura) in Peru, located near Miski Mayo mining company (Vale's subsidiary) is constantly monitored by OEFA, the Peruvian environmental inspection agency. OEFA ensures that the particulate material from phosphate rock released in the mining company's truck boarding area is within the limits established by law. Other renowned institutes in the country, such as the Technological Institute of Production (Instituto Tecnológico de la Producción – ITP) and the Peruvian Sea Institute (Instituto del Mar del Perú – IMARPE), state that the Sechura Bay contaminant factors are not related to the mining activity. Additionally, we report that the phosphate is transported in fully covered conveyor belts, which prevent contact of the product with the air. This measure is part of the continuous improvement action plan put in place by Miski Mayo in 2011. The company reinforces its commitment to the environmental preservation of the regions where it operates. In 2012 it urged authorities and other companies in the Piura region to join efforts towards proper sanitation in the Sechura Bay in Peru. As a result, in 2014 a Supreme Resolution (n° 288-2014-PCM) was issued and a number of meetings and participatory monitoring activities under this initiative took place. As for the previous consultation in San Martín de Sechura; the process is not carried out by the investment project lead, but by the relevant governmental body which, in the case of the mining sector in Peru, is the Ministry of Energy and Mines. In order to approve inception of Miski Mayo operations, the Ministry established that there was no need for a previous consultation, given that San Martín de Sechura Community is not an indigenous population. In addition to that, at that particular moment, previous consultation processes had not been regulated by local legislation (which entered into force in 2011). The Vice ministry of Intercultural Affairs within the Ministry of Culture, which is the body in charge of recognizing Indigenous populations in Peru, does not acknowledge the presence of Indigenous populations in the Piura department, where the San Martín de Sechura community is located. Even so, the company established a lasting relationship with neighborhood communities, providing them with information on the enterprise, clarifying doubts and supporting the community grievance process, which is fundamental for proper social impact management.

22) Piquiá de baixo, Açailândia, Maranhão

Text of 2015 Unsustainability Report

Original Portuguese text: “A luta pelo território em **Piquiá de Baixo**. A atividade siderúrgica em Piquiá de Baixo, bairro em Açailândia (MA), em estreita parceria com a Vale, gera graves problemas de saúde em milhares de pessoas que vivem nas proximidades. A Vale fornece a matéria prima para as siderúrgicas e escoo o produto industrializado pela EFC, que passa ao lado do bairro. São cinco usinas que processam o ferro da mineradora, jogando no ar uma fumaça tóxica que, continuamente, provoca doenças e mortes. Mesmo que infrinjam frontalmente o “Código de Ética e Conduta do Fornecedor” da Vale, as siderúrgicas contam com ela para o transporte de 100% da produção de ferro gusa pela Estrada de Ferro Carajás. Desde 2005, a Associação Comunitária dos Moradores de Piquiá de Baixo têm reivindicado medidas de controle e

diminuição da poluição, pela responsabilização das empresas pelos danos causados à saúde dos moradores e pelo reassentamento coletivo da comunidade, com 312 famílias, em outra área, livre da contaminação.

O reassentamento proposto para Piquiá de Baixo não se enquadra apenas na entrega de condições mínimas de moradia a quem não tem casa, mas permitirá devolver qualidade de vida às famílias, revalorizar sua vocação produtiva e o cultivo de relações comunitárias. A gravidade dos fatos, bem como a ausência de medidas efetivas por parte do Estado brasileiro e das empresas para coibir a perpetuação das violações, fez com que, em 09 de janeiro de 2014, quatro Relatorias Especiais das Nações Unidas solicitassem ao Estado Brasileiro informações a respeito da contaminação de que tem sido vítima a comunidade de Piquiá de Baixo.

Os Relatores Especiais das Nações Unidas Anand Grover, sobre o direito de todos ao gozo do mais alto nível de saúde mental e física, Marc Pallemmaerts, sobre as implicações para os direitos humanos da disposição e gestão ambientalmente adequada de substâncias e dejetos perigosos, Catarina Albuquerque, para o direito humano ao saneamento e água portátil e Alexandra Guáqueta, do Grupo de Trabalho sobre direitos humanos, corporações transnacionais e outras empresas, solicitaram ao Estado brasileiro que apresentasse respostas a dez perguntas que compreendem desde a matéria fática até as medidas preventivas utilizadas pelo Estado para evitar que as atividades das empresas sigam provocando os mesmos impactos nos direitos humanos da comunidade, além das medidas de responsabilização das empresas envolvidas.

Para viabilizar o reassentamento e, na falta de alternativas, a Associação Comunitária dos Moradores do Pequiá assumiu a condução do processo e apresentou projeto de financiamento junto à Caixa Econômica Federal, pelo Programa Minha Casa Minha Vida Entidades. Os recursos do programa responderão a cerca de 70% das obras de construção das casas e da infraestrutura básica do novo bairro. A Fundação Vale e o SIFEMA (Sindicato das Indústrias de Ferro Gusa do Estado do Maranhão) se comprometeram perante o Ministério Público a complementar os recursos faltantes nessa etapa da construção. Em dezembro de 2014 o projeto foi tecnicamente aprovado pela CEF e desde então aguarda seleção pelo Ministério das Cidades. Com a contratação do projeto, faltará ainda definir os responsáveis pelo financiamento da construção dos equipamentos públicos e sociais necessários. A empresa Vale, ao reconhecer a sua parcela de responsabilidade, deveria rever suas práticas para que suas operações e as das empresas siderúrgicas venham a respeitar as leis e os padrões ambientais nacionais e internacionais referentes à qualidade do ar e da água.”

English version: “The struggle for territory in Piquiá de Baixo. Steelmaking activity in Piquiá de Baixo, a neighborhood of Açailândia, Maranhão, conducted in close partnership with Vale, is generating serious health problems among thousands of people who live nearby. Vale supplies the raw material to the steel mills and transports their manufactured goods using the EFC, which passes next to the neighborhood. There are five plants that process the mining company’s iron, spewing into the air toxic fumes that continually provoke diseases and deaths. Despite blatantly violating Vale’s ‘Suppliers’ Code of Ethics and Conduct,’ the steelmakers rely on the company to transport 100% of the pig iron they produce via the Carajás Railroad. Since 2005, the Community Association of Residents of Piquiá de Baixo has demanded measures to control and reduce this pollution, to hold the companies liable for the damage caused to residents’ health, and to collectively resettle the community, which consists of 312 families, to another area free from contamination.

The resettlement proposed for Piquiá de Baixo does not only involve delivering minimum living conditions for homeless people, but will also make it possible to restore the families’ quality of life,

productive vocation and community relations. The severity of the facts and the lack of effective measures taken by the Brazilian state and companies to curb the perpetuation of violations led the United Nations to submit four Special Reports to the Brazilian state on January 9, 2014, requesting information about the contamination that the community of Piquiá de Baixo has suffered.

The United Nations special rapporteurs Anand Grover (regarding the right of all people to enjoy the highest level of mental and physical health), Marc Pallemmaerts (regarding the implications for human rights of the environmentally appropriate disposal and management of dangerous substances and waste), Catarina Albuquerque (regarding the human right to sanitation and drinking water) and Alexandra Guáqueta (a member of the Working Group on human rights, transnational corporations and other companies) have asked the Brazilian state to present responses to 10 questions ranging from factual matters to the preventive measures used by the state to prevent the companies' activities from continuing to have the same impacts on the community's human rights, as well as measures to hold the companies involved liable.

To enable the resettlement and in the absence of any other options, the Community Association of Residents of Pequiá took over the process and submitted a funding proposal to Caixa Econômica Federal (CEF), as part of the 'Minha Casa Minha Vida Entidades' public housing program. The program's resources will pay for around 70% of the work to build the houses and basic infrastructure of the new neighborhood. The Vale Foundation and Maranhão State Pig Iron Industry Association (SIFEMA) made a commitment to the Public Prosecution Ministry to provide the remaining resources during this construction stage. In December 2014, the project was technically approved by CEF and since then it has been awaiting selection by the Cities Ministry. As part of the process of contracting for the project, the parties responsible for funding the construction of the necessary public and social facilities have not yet been determined. Vale, recognizing its share of the responsibility, should review its practices to ensure that its operations and those of steel companies respect national and international environmental laws and standards regarding air and water quality."

Vale's Response

The main source of the problems affecting the community of Piquiá de Baixo is pig iron production emissions in the Açailândia steelmaking complex. Vale participates in the production chain by supplying iron ore and transporting pig iron. Despite that the impacts generated by pig iron plants are not directly related to Vale, which has not had any pig iron operations in the region since 2010, when Vale seized and sold its pig iron assets, we maintain dialogue with the community. This dialogue, which has included local civil society organizations and the public authorities, is aimed at diagnosing the problems indicated by the community and participating in solutions arising from industrial activities in the pig iron chain.

To meet a request from the Public Prosecution Ministry in Açailândia, Vale, through the Vale Foundation, produced a socioeconomic diagnosis of the 330 families in the community in question. This diagnosis involved extensive community participation, and was completed and submitted to the Public Prosecution Ministry at the start of 2011. During the process, a commission of 30 families was established to represent all the families involved. The aim of this work was to identify the families' profile, involving visits to support the project to construct a new neighborhood to house them, in line with the desire expressed by the community.

In October 2014, the Vale Foundation formally entered into a partnership with the Community Association of Piquiá and CAIXA, undertaking to support the construction of 312 houses to rehouse



the community. This voluntary social investment initiative is part of the Vale Foundation's Urban Quality Label Program, which is designed to support social housing projects within the scope of the "Minha Casa, Minha Vida" program, providing complementary funds for each housing unit.

To receive these complementary funds for each housing unit from the Vale Foundation, the Community Association of Piquiá signed an agreement to participate in the Urban Quality Label Program, agreeing to meet the quality criteria provided for in the program. This proposal is being analyzed by CAIXA and awaiting selection by the Cities Ministry to contract the project. The construction work's execution will be managed by the Community Association of Piquiá itself, involving the participation of the beneficiary families.

Danilo Chammas, a lawyer at the Justiça nos Trilhos organization, thanked the Vale Foundation for its initiative in an email sent to the Foundation on October 1, 2014: "On behalf of the Community Association of Residents of Piquiá, thank you for the initiative, which I hope yields good results."

23) Forced labor at Pico Mine

Text of 2015 Unsustainability Report

Original Portuguese text: "Trabalho escravo e condições degradantes. Em fevereiro de 2015, a Vale foi denunciada por submeter trabalhadores da Mina do Pico, localizada em Itabirito, Minas Gerais à situação análoga à escravidão. A inspeção do Ministério Público do Trabalho (MPT) detectou a utilização de terceirização ilícita e verificou que a empresa, contratada e remunerada pela Vale, sujeitou trabalhadores a condições sub-humanas, com o conhecimento e concordância tácita da mineradora. As denúncias reportam banheiros com ar empestado e fezes espalhadas pelo chão, jornadas de trabalho exaustivas, condições degradantes e trabalhadores vítimas de fraude, promessa enganosa e ameaça. Os auditores fiscais classificaram o ambiente como "repugnante". O canteiro foi interditado e a Vale autuada por 32 infrações trabalhistas, além de ser responsabilizada por submeter 309 pessoas[10] ao trabalho análogo ao de escravo."

English version: "Slave labor and degrading conditions In February 2015, Vale was denounced for subjecting workers at Pico Mine, located in Itabirito, Minas Gerais, to slave-like conditions. An inspection by the Public Prosecution Ministry's Labor Branch ("Ministério Público do Trabalho") detected illegal outsourcing and found that the company involved, hired and remunerated by Vale, had subjected its workers to subhuman conditions, with the mining company's knowledge and tacit agreement. There were reports of toilets full of insects in the air and with feces on the floor, exhaustive working hours, degrading conditions, and workers subjected to fraud, false promises and threats. The inspectors described the environment as "repugnant." The construction site was closed down and Vale was cited for 32 labor infractions and held liable for subjecting 309 people[10] to slave-like labor."

Vale's Response

In February 2015, the Ministry of Work and Employment, after inspecting the work site where the Ouro Verde company was transporting finished products for Vale, at Pico Mine, in the state of

Ethics and Conduct Office
Av. Graça Aranha, 26, 20° andar
20030-900 Rio de Janeiro, RJ - Brasil
Vale S.A.



Minas Gerais, issued Vale with infraction notices for alleged illegal outsourcing and subjecting workers to slave-like conditions.

All the infraction notices were duly contested by Vale and are awaiting judgment.

Vale repudiates any and all forms of disrespect for human rights and decent working conditions, and reaffirms its commitment to vigorously combat the practice of any situation that suggests the submission of workers to slave-like conditions in its operations.

24) Privatization

Text of 2015 Unsustainability Report

Original Portuguese text: “Hoje tramitam na justiça 100 processos que contestam a legalidade da privatização da Vale, ocorrida em 1997. Em 2007, um plebiscito popular pediu a anulação da privatização da Vale.”

English version: “There are now 100 lawsuits under way in the courts that contest the legality of Vale’s privatization, which occurred in 1997. In 2007, a petition was organized to demand the annulling of the company’s privatization.”

Vale’s Response

There are 69 lawsuits in course questioning the legality of Vale’s privatization occurred in 1997. All these lawsuits are still awaiting a final judicial decision and there is no defined amount involving these cases. In Vale’s opinion, they are unlikely to affect the result of the privatization process or have any negative effect on the company.

The Fourth Federal Court of Pará has been recognized as competent to judge all these public lawsuits. A number of constitutional and procedural violations are under appreciation of the Superior Court of Justice and Supreme Federal Court, and they are still awaiting judgment by these courts.

Only after final ruling by the Superior Court of Justice and Supreme Federal Court on the constitutional and procedural matters that these lawsuits will resume their course and have their merits analyzed.

25) Santa Rosa dos Pretos and Monge Belo

Text of 2015 Unsustainability Report

Original Portuguese text: “A Vale chegou a impugnar oficialmente junto ao INCRA o reconhecimento de terras das comunidades remanescentes de quilombos das comunidades



maranhenses Santa Rosa dos Pretos e Monge Belo[25], cujas áreas são de interesse da empresa para a realização das obras de duplicação da Estrada de Ferro Carajás (EFC).

As comunidades, reconhecidas pela Fundação Cultural Palmares (FCP) desde 2005, buscam a titulação dos seus territórios e foram surpreendidas pela ação da mineradora e até hoje não conseguiram receber o título de propriedade. Ao tentar impugnar o processo de reconhecimento de terras quilombolas, a Vale, mais uma vez, evidencia o seu modus operandi de viabilizar seus empreendimentos através da privação dos grupos sociais de usufruírem livremente das diversas possibilidades sociais, econômicas, ambientais, culturais e históricas relacionadas aos seus territórios. Em setembro de 2014, a EFC foi ocupada por trabalhadores rurais de 35 comunidades quilombolas maranhenses que exigiram uma série de medidas que garantissem os direitos dos quilombolas maranhenses aos seus territórios. Denúncias também foram encaminhadas ao Ministério Público Federal (MPF) pelo Instituto Nacional de Colonização e Reforma Agrária (Incra) e pela FCP sobre o fato das obras de duplicação da ferrovia estarem sendo feitas sem qualquer ação compensatória ou mitigatória por parte da empresa, causando impactos diretos a várias comunidades quilombolas na região. Por conta dessa ação de protesto, alguns membros dessas comunidades seguem sendo processados judicialmente ou investigados em inquéritos da Polícia Federal instaurados a pedido da Vale S.A.”

English version: “Vale has officially challenged INCRA over its recognition of the lands of the Santa Rosa dos Pretos and Monge Belo quilombo communities in Maranhão[25], whose areas are of interest to the company for its work to expand the Carajás Railroad (EFC).

The communities, recognized by the Palmares Cultural Foundation since 2005, want to receive land title for their territories and they were surprised by the mining company’s action. Until today they have not succeeded in receiving their title deeds. By trying to challenge the process of recognizing the quilombola lands, Vale once more demonstrates its modus operandi to enable its projects by depriving social groups of free enjoyment of the different social, economic, environmental, cultural and historical possibilities of their territories. In September 2014, the EFC was occupied by rural workers from 35 quilombola communities in Maranhão, who demanded a series of measures to guarantee their territorial rights. Complaints have also been submitted to the Federal Public Prosecution Ministry by the National Institute for Colonization and Agricultural Reform (Incra) and the Palmares Cultural Foundation regarding the fact that the railroad expansion work is being done without any compensatory or mitigating action by the company, causing direct impacts on several quilombola communities in the region. Following this protest, some members of these communities have been sued in the courts or investigated in Federal Police inquiries established at Vale S.A.’s request.”

Vale’s Response

During the land titling process for the quilombola communities of Monge Belo and Santa Rosa dos Pretos, a cartographic error was observed in the public notices published by INCRA in the official gazette (DOU). As well as featuring the wrong coordinates, the polygons presented in the public notice overlapped the area allocated to the right-of-way strip for the EFC’s operation. Considering these facts and with the safety of people and the operation’s maintenance in mind, Vale made a request for the respective administrative corrections to be made as part of the land titling process for these territories.



At the same time, in August 2011, within the scope of the EFC expansion process, the Federal Public Prosecution Ministry filed a public civil lawsuit on behalf of the communities of Santa Rosa dos Pretos and Monge Belo, questioning Installation License 752, granted by IBAMA to Vale to start the work to expand the Carajás Railroad.

In the court settlement, the need to correct the area assigned for the communities, as stated in the Technical Identification and Delimitation Reports, was established, thereby guaranteeing respect for the railroad's right-of-way strip, as well as Vale's support to ensure the communities' mobility, their productive activities and the construction of a school.

The commitments made by Vale within the scope of this agreement are being honored and we have regularly reported our activities at meetings with the stakeholders who participated in the public civil lawsuit. These commitments include the construction of four railroad bridges, one of which was delivered in June 2015. Construction work on the second bridge began in March 2015 and we expect it will be completed in February 2016. Accordingly, we will meet the schedule stipulated in the court settlement, which provides for the construction of two more bridges, in 2017 and 2018.

Since the agreement was signed, relations with the communities have progressed with no conflicts.

On July 10, 2014, the president of the National Institute for Colonization and Agricultural Reform (INCRA) published INCRA Ordinance 355, recognizing and declaring the lands of the remaining quilombo community of Santa Rosa dos Pretos.

As part of the licensing process, the Palmares Cultural Foundation – the federal government body responsible for the quilombola component in environmental licensing processes – determined that there are 15 communities in the Carajás Railroad's area of direct influence. Of these 15 communities, nine are proceeding with the process of implementing initiatives to mitigate and/or compensate for impacts arising from the EFC's operation and expansion work, as specified in the Basic Environmental Plan, which was validated following public consultations. These initiatives include sub-programs to strengthen quilombola culture, to support communication, to promote safety and to prevent people and animals from being hit by trains. Vale is waiting for approval from the other six communities, where the corresponding initiatives have been suspended at the request of the Federal Public Defender's Office while the Palmares Cultural Foundation clarifies a number of matters to this entity.

Vale remains in dialogue with all the communities and has made a request for approval from the six communities so that it can execute the initiatives provided for in the Basic Environmental Plan.

26) The Vale Foundation's Education Initiatives

Text of 2015 Unsustainability Report

Original Portuguese text: "Através da Fundação Vale, a Vale S.A. investe em inúmeros projetos ligados à educação infantil e de jovens e adultos, tanto dos seus trabalhadores, quanto nas comunidades próximas aos seus empreendimentos. Esses projetos estão inseridos na estratégia de busca por legitimidade da empresa, tanto na sociedade como nos mercados. A mineração é um setor reconhecido por seus grandes impactos sociais e ambientais. Desse modo, os programas vinculados à responsabilidade social das empresas têm o propósito de minimizar os efeitos intrínsecos à atividade mineral. Porém, observa-se nos projetos da Vale o desenvolvimento de programas paliativos, que se aproveitam da omissão do próprio Estado nas localidades. Ou seja, a



Vale reivindica para si um papel que é do Estado. A Fundação Vale funciona através de Parceria Social Público Privada que, como a própria empresa designa, é um pacto entre governo, setor privado e sociedade civil para a promoção do desenvolvimento dos territórios, gozando a empresa de benefícios de isenção fiscal. O que não se evidencia é como as suas atividades de responsabilidade social interferem nos processos decisórios nas instâncias públicas. Um caso exemplar são as parcerias com as Secretarias Municipais de Educação no oferecimento de cursos para o desenvolvimento profissional de professores, diretores e supervisores das escolas que buscam a formação profissional continuada. Esses cursos, organizados e realizados pela Fundação Vale, configuram-se como um importante instrumento para a capilaridade da ideologia da empresa na sociedade, tornando a sua visão hegemônica e atuando diretamente na formação da subjetividade social. Além de contribuir para a construção de uma imagem bastante positiva da empresa, o investimento em setores como educação, saúde, cultura e meio ambiente oferece diversas possibilidades de exposição de dados e fatos não estritamente financeiros da Vale, e servem para a geração de valor social à empresa, influenciando o seu valor e papel no mercado. O lançamento anual do seu Relatório de Sustentabilidade é parte dessa estratégia de legitimação social.”

English version: “Through the Vale Foundation, Vale S.A. invests in numerous projects related to education for infants, young people and adults, both for its workers and in the communities near its operations. These projects are part of the company’s strategy to seek legitimacy, both among society and in the markets. Mining is a sector recognized for its major social and environmental impacts. As a result, programs linked to the social responsibility of companies are designed to minimize the effects inherent to mining activity. However, in Vale’s projects one may note the development of palliative measures that take advantage of the state’s omissions in the localities in question. In other words, Vale claims for itself a role that belongs to the state. The Vale Foundation functions through public-private social partnerships, which as the company itself describes, are pacts between government, the private sector and civil society to promote regional development, enabling the company to benefit from tax incentives. What is not evident is how its social responsibility activities interfere with decision-making processes within the public authorities. A good example of this is Vale’s partnerships with Municipal Education Secretariats to offer professional development courses for teachers, directors and supervisors at schools looking for continuing professional training. These courses, organized and conducted by the Vale Foundation, are an important instrument to deploy the company’s ideology in society, making its vision hegemonic and directly affecting the formation of social subjectivity. Besides contributing to the construction of a very positive image for the company, investment in sectors such as education, health, culture and the environment offer various possibilities to expose facts and figures that are not strictly financial about Vale, and serve to generate social value for the company, influencing its market value and role. The annual launch of its Sustainability Report is part of this strategy of social legitimation.”

Vale’s Response

The Vale Foundation’s education area carries out projects in the regions where Vale operates, in partnership with the local public authorities and NGO’s, creating shared agendas and working in alignment with public guidelines and policies in the educational area. Accordingly, we understand that our programs are part of the set of efforts being made at the moment to improve education. Our

action is always in partnership with the state and NGO's, constructing strategies of co-responsibility and joint efforts rather than overlapping or occupying the specific role of government entities.

In this context, the Vale Foundation's projects follow the guidelines of public-private social partnerships, a concept built by many national and international stakeholders. These partnerships are designed to form an inter-sector alliance that results in the construction of a shared work agenda with the following aims:

- Promote quality of life and human development;
- Strengthen inter-sectoral interaction and public policies;
- Expand democratic participation from an angle of citizenship inclusion;
- Ensure the effectiveness of private sector social investments;
- Uphold collective construction and the role of citizens as both beneficiaries and co-participants in the regional development process.

The Vale Foundation's Education area runs continuing training projects for education professionals in accordance with the guidelines of public education policies. Accordingly, the content of training processes is aligned with the proposals of the Education Ministry and based on prevailing legislation, especially the Law on National Education Guidelines and Foundations (Law 9,394/96). Our training projects are executed by renowned institutions in the education area, such as public universities and NGOs, and based on academic research results. The teaching materials used in this training are provided digitally on the Vale Foundation's website, in order to ensure the transparency of the approach used and permit in-depth knowledge about the activities conducted.

In 2014, we trained 552 teachers and 42 school managers. Also this year, we held a range of meetings with the authors of children's books, with the participation of over 2,000 teachers and 4,500 students. In these meetings over 1,800 cases containing over 18,000 books were provided to 1st to 3rd year elementary school classes. In addition, the Vale Foundation has seven Learning Houses, integration spaces for the exchange of experience and access to different educational activities that are available to the whole community.

We also clarify that the Vale Foundation is a duly constituted non-profit institution that possesses a Federal Public Utility Title, meaning that it is exempt from taxes on its revenues inherent to its activities, in accordance with the Federal Constitution, article 150, VI, c. This characteristic enables companies to make donations of sums that would otherwise be paid in corporate income tax.

27) Social management tools and Sustainability Action Plan

Text of 2015 Unsustainability Report

Original Portuguese text: "Diálogo social, gestão de demandas, estudos socioeconômicos, plano plurianual de dispêndios sociais: ferramenta de aferição do chamado "risco social", ou seja, de determinar as chances de que uma comunidade possa se mobilizar para o debate e o questionamento dos projetos; cooptação e divisão de comunidades.

Através de ações de assistência social, em especial do Programa de Ação de Sustentabilidade (PAS), a Vale aplica uma série de "políticas de resignação", oferecendo respostas simbólicas limitadas sob a forma de compensação ou mitigação."

English version: “Social dialogue, demand management, socioeconomic studies, multi-year social spending plan: tools for gauging so-called “social risk,” i.e. determining the chances that a community may mobilize to debate and question projects, co-opting and dividing communities.

Through social welfare initiatives, especially its Sustainability Action Program, Vale applies a series of ‘resignation policies,’ offering limited, symbolic responses in the form of compensation or mitigation.”

Vale’s Response

As described in our 2013¹ Sustainability Report, our main social management tools are the following:

- Social dialogue: Practice for sharing information and promoting understanding and mutual cooperation, in order to incorporate the perspective of communities in the company’s decisions.
- Demand management: Process for treating communities’ demands, complaints and human rights risks, supported by a database for recording and processing demands, contributing to the allocation of resources, applicable to operations in Brazil and Mozambique.
- Socioeconomic studies: Integrated regional socioeconomic diagnoses, providing information about a region and the impacts generated by our projects. They also underpin social initiatives, whether voluntary or mandatory, as well as social dialogue.
- Multi-Year Social Spending Plan: Document that guides the allocation of resources in regions, produced based on alignment between community demands, socioeconomic studies and the guidelines defined by the Social Action Policy.

As described in our 2013² Sustainability Report, the indicators that make up the Sustainability Action Plan are part of the management process and they are linked to essential aspects of our operations, such as energy, water, waste, emissions and the restoration of degraded areas. In order to monitor our performance in these aspects, absolute or relative targets are established and considered in employees’ variable remuneration.

The indicator results are reported annually in our Sustainability Reports. The most recent results are available in our 2014³ Sustainability Report.

¹ <http://www.vale.com/PT/aboutvale/sustainability/links/LinksDownloadsDocuments/relatorio-de-sustentabilidade-2013.pdf>

² <http://www.vale.com/PT/aboutvale/sustainability/links/LinksDownloadsDocuments/relatorio-de-sustentabilidade-2013.pdf>

³ <http://www.vale.com/PT/aboutvale/sustainability/links/LinksDownloadsDocuments/relatorio-de-sustentabilidade-2014.pdf>

28) Vale Capes Awards

Text of 2015 Unsustainability Report

Original Portuguese text: “Prêmio Vale Capes. Um exemplo deste tipo de investimento pela empresa foi o lançamento do Prêmio Vale-Capes de Ciência e Sustentabilidade, criado a partir de uma parceria entre a Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Capes) e a Vale.

Firmada durante a Conferência Rio +20, ele premia teses de doutorado e dissertações de mestrado associadas a temas ambientais e socioambientais. A parceria da Vale com uma das instituições públicas de maior relevância na produção de conhecimento do país é uma forma da empresa validar sua imagem de grande incentivadora de novas tecnologias e práticas para o desenvolvimento sustentável, invisibilizando sua atuação como um dos maiores atores responsáveis por graves conflitos socioambientais, tanto no Brasil como em outros países. Além disso, essa parceria compromete a autonomia científica no estudo das relações entre meio ambiente e sociedade no Brasil, principalmente no que se refere ao setor da mineração.”

English version: “Vale Capes Awards. An example of this kind of investment by the company was the launch of the Vale-Capes Science and Sustainability Awards, created through a partnership between the Brazilian Education Ministry’s graduate education support agency (Capes) and Vale.

Established during the Rio +20 Conference, this scheme distributes prizes for PhD and MA dissertations associated with environmental and social topics. Vale’s partnership with one of Brazil’s leading public institutions in the field of knowledge production is a way for the company to validate its image as an important promoter of new technologies and practices for sustainable development, cloaking its action as one of the main players responsible for serious social and environmental conflicts, both in Brazil and other countries. Furthermore, this partnership harms scientific autonomy in the study of relations between the environment and society in Brazil, especially with regard to the mining sector.”

Vale’s Response

Since 2009, when it created its Technology and Innovation Department, Vale has been establishing distinctive ways of interacting with the science and technology community. This movement is based on the company’s perception that its frontiers need to be expanded to permit broader and more structured dialogue with other players. By expanding its frontiers and developing closer relationships with academic institutions, the company shows that it values institutional coordination and the pursuit of complementary interests and ways of working. This stance is aligned with the principle of open innovation, through which divergent views give way to cooperation and institutional coordination.

In line with this model, Vale has developed several initiatives together with the academic community, including the launches of public contests in partnership with government entities to promote scientific knowledge. These initiatives include the Vale-Capes Science and Sustainability



Awards, whose first edition began in 2012, since when they have been stimulating young scientists to produce high-quality knowledge, focused on the challenges posed by areas related to environmental and social issues (e.g. innovative solutions and processes for issues such as cutting water and energy consumption, reducing greenhouse gas emissions, using, reusing and recycling wastes, and social and environmental technology to combat poverty).

It should be noted that the Vale's partnership with Capes has complied with all the principles dictated by this government entity, which upholds academic autonomy and impartiality. The initiative was implemented through a national public contest, in which any student who completed an MA or PhD course in 2001, at any Brazilian university, could take part. In its latest edition (2014), 127 papers were submitted from all over Brazil (90 MA and 37 PhD dissertations), up from 110 the previous year. The award-winning papers included studies about the use of solar energy and social technologies to combat poverty, both from states that do not have Vale operations. Given the initiative's success, Capes will not only maintain the awards in the coming years, but also proposes to hold a seminar regarding the winning entries for the next edition.

Vale believes that a modern and developed society is the result of dialogue, in which differences are viewed as opportunities and solutions are constructed through institutional cooperation. Accordingly, university-company relationships are an ideal solution.

29) COMEFC

Text of 2015 Unsustainability Report

Original Portuguese text: "Em 2013, no Maranhão, 23 prefeituras decidiram se reunir para criar o Consórcio dos Municípios da Estrada de Ferro Carajás (Comefc). Entre as principais metas deste consórcio, destaca-se o estabelecimento de um nível mínimo de arrecadação de tributos municipais e a criação do Fundo de Desenvolvimento Municipal (FDM), voltado para o fortalecimento de políticas públicas de educação, saúde e geração de renda.

Este Fundo seria criado com a contrapartida de US\$ 1 para cada tonelada escoada pela Vale através da EFC. Isso significa que um total de R\$ 318,28 milhões[37] poderia ter sido repassados por esta mineradora aos municípios, somente em 2014. No final de 2013, o Comefc comemorou a obtenção de uma linha de créditos em projetos da Fundação Vale com um montante de R\$ 85 milhões, pago somente uma vez, para os municípios do corredor da EFC. Este resultado frustrou as expectativas iniciais geradas pelo consórcio, pois, ao invés de submeter a Vale ao pagamento de tributos na forma da lei, o Comefc preferiu submeter cada um dos 23 municípios à Vale, condicionando o acesso aos recursos à aprovação de projetos pela empresa."

English version: "In 2013, in Maranhão, 23 municipal governments decided to come together to create the Carajás Railroad Consortium of Municipalities (Comefc). The main goals of this consortium include establishing a minimum level of municipal tax revenue and creating a Municipal Development Fund (FDM) aimed at strengthening public education, health and income generation policies.

This Fund would be financed by levying US\$1 on every metric ton transported by Vale on the EFC. This means that a total of R\$318.28 million[37] could have been transferred by this mining company to the municipal governments in 2014 alone. In late 2013, Comefc obtained a credit line for Vale



Foundation projects amounting to R\$85 million, in a single payment, for municipalities along the EFC corridor. This result frustrated the initial expectations generated by the consortium, because rather than subjecting Vale to the payment of taxes under law, Comefc preferred to submit each of the 23 municipalities to Vale, making access to the resources in question conditional upon the company's approval of the projects.”

Vale's Response

Since its establishment in the region, Vale has supported the development of the municipalities along the Carajás Railroad.

In 2013, with the creation of the Carajás Railroad Consortium of Municipalities in Maranhão (COMEFC), composed of 21 municipalities, Vale began to channel part of its resources into social investments in partnership with the Consortium. These investments are carried out through the submission of proposals produced by COMEFC.

All the proposals are evaluated by the company and analyzed from the perspective of Vale's social investment policy and the guidelines of the health, education and agricultural development ministries.

When projects are approved, agreements are established between Vale, the municipal government in question and COMEFC. The funds are released in installments in line with the execution of the established schedule and the provision of accounts including proof of tax invoices. All agreements entered into are published in the Maranhão state gazette.

As of July 2015, approximately R\$9.7 million had been released for installments for more than 67 approved projects. Projects that are not approved are returned to COMEFC for adjustment and future resubmission.

It should be noted that Vale's social investments along the Carajás Railroad are not limited to its partnership with COMEFC. Other projects are also carried out directly with municipal governments, communities, residents associations, NGOs and cooperatives, among other stakeholders.

30) Guiné, Simandu Project

Text of 2015 Unsustainability Report

Original Portuguese text: “Em 2014, a Rio Tinto, outra gigante no setor da mineração, entrou com uma ação contra a Vale e a BSGR, sócias em uma concessão para a exploração de jazidas de minério de ferro na República da Guiné. A alegação da Rio Tinto é de que ambas lhe “roubaram” a concessão mediante o pagamento de suborno pela BSGR para um ex-ministro da Guiné em 2010. Segundo a Rio Tinto, os US\$ 200 milhões pagos a título de suborno teriam sido feitos com os recursos do pagamento feito pela Vale à BSGR para entrar na sociedade.”

English version: “In 2014 , Rio Tinto , another giant in the mining sector, has filed a lawsuit against Vale and BSGR , partners in a concession for the exploration of iron ore deposits in Guinea . Rio Tinto's claim is that both Vale and BSGR "stole " the contract through bribery payment by BSGR to a former minister of Guinea in 2010. According to Rio Tinto, the \$ 200 million paid to bribery title



would have been made with the resources of the payment made by Vale to BSGR to enter the society. "

Vale's Response

On April 30, 2014, Rio Tinto plc ("Rio Tinto") filed a lawsuit against Vale, BSGR, and other defendants in the United States District Court for the Southern District of New York, alleging violations of the U.S. Racketeer Influenced and Corrupt Organizations Act (RICO) in relation to Rio Tinto's loss of certain Simandou mining rights, the Government of Guinea's assignment of those rights to BSGR, and Vale's subsequent investment in VBG. Discovery has begun and under the current schedule will be completed in March 2016. Vale vigorously defends the action, which it believes to be without merit.

For more information, please visit our website: www.vale.com

Read our Sustainability Report: <http://www.vale.com/EN/aboutvale/sustainability/Pages/default.aspx>