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Approaches to supporting local and community development

Brazil and the Vale SA model of corporate interaction

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Abstract: Reflection about the role of corporate social investment in Brazil, associated with the presence of a large economic enterprise, is the major stimulus of this paper. It seeks to present how cross-sector governance can contribute to the social development of a city and how this process can be led by a partnership comprising a corporate foundation, government, and civil society. To this end, the case of Canaã dos Carajás will be introduced, a municipality in the State of Pará, Amazon region, where large-scale mining investment is being carried out by the mining company Vale SA.

Keywords: public–private social partnership, territorial development, public policies, mining, Vale SA

JEL classification: H70, I30, O10, O20, O30, R11

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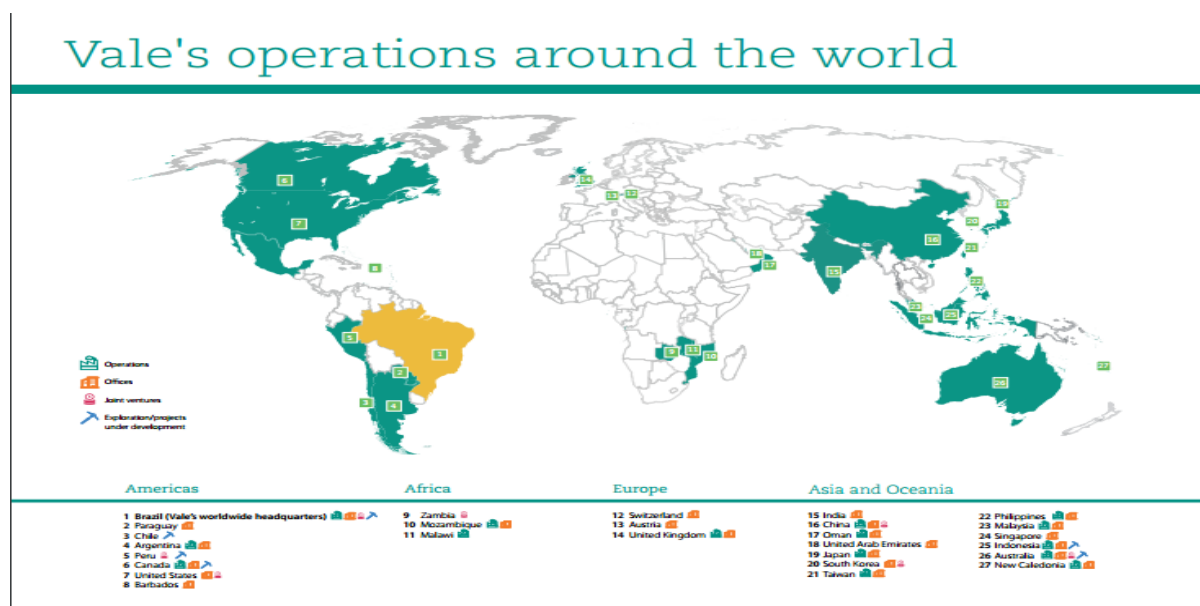
1 Vale SA—an overview

According to a Vale SA¹ fact sheet (Vale 2017), Vale is one of the largest mining companies, and one of the largest publicly traded companies, in the world.² Vale has a market capitalization of around US\$36 billion, with approximately 270,000 shareholders from all continents. It is the world's largest producer of iron ore and iron ore pellets, and of nickel. Vale also produces manganese ore, ferroalloys, metallurgical and thermal coal, copper, platinum group metals, gold, silver, cobalt, potash, phosphates, and other fertilizer nutrients. The company's global operations and financial position are summarized in Map 1 and Figures 1 and 2.

Vale's mission is 'to transform natural resources into prosperity and sustainable development', and its corporate vision is 'to be the number one global natural resources company in creating long-term value through excellence and passion for people and the planet' (Vale 2016a).

The company's business strategy is to invest in world-class assets, with long life, low cost, expandability, and high-quality output, capable of creating value through the cycles. Focusing on cost effectiveness, Vale seeks a lean organization, with teamwork and accountability, excellence in project execution, and firm commitment to transparency and shareholder value creation. Health and safety, investment in human capital, a positive work environment, and sustainability are also considered critical to Vale's long-term competitiveness.

Map 1: Vale's global presence

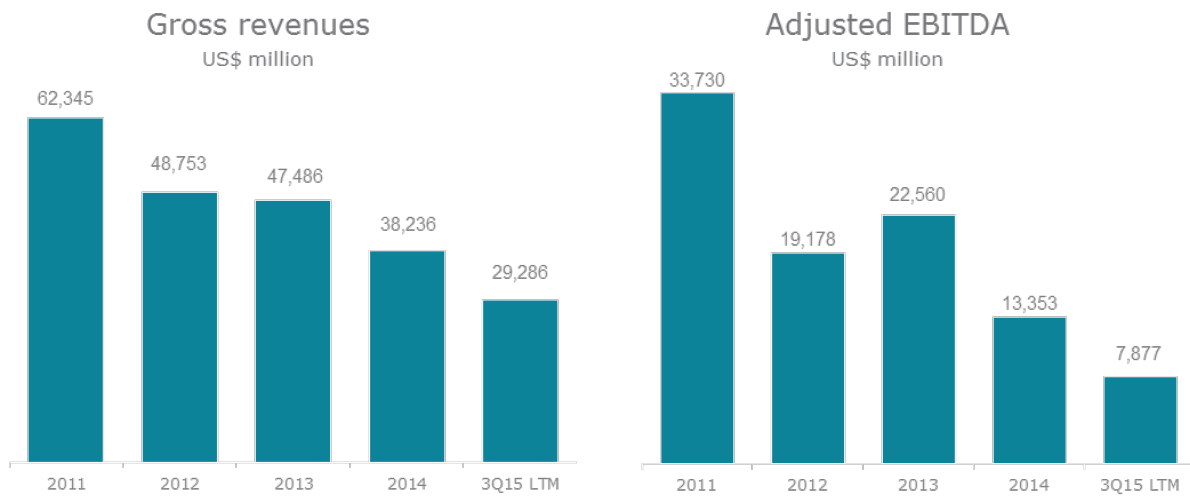


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1 SA = 'Sociedade Anônima', or 'share company'.

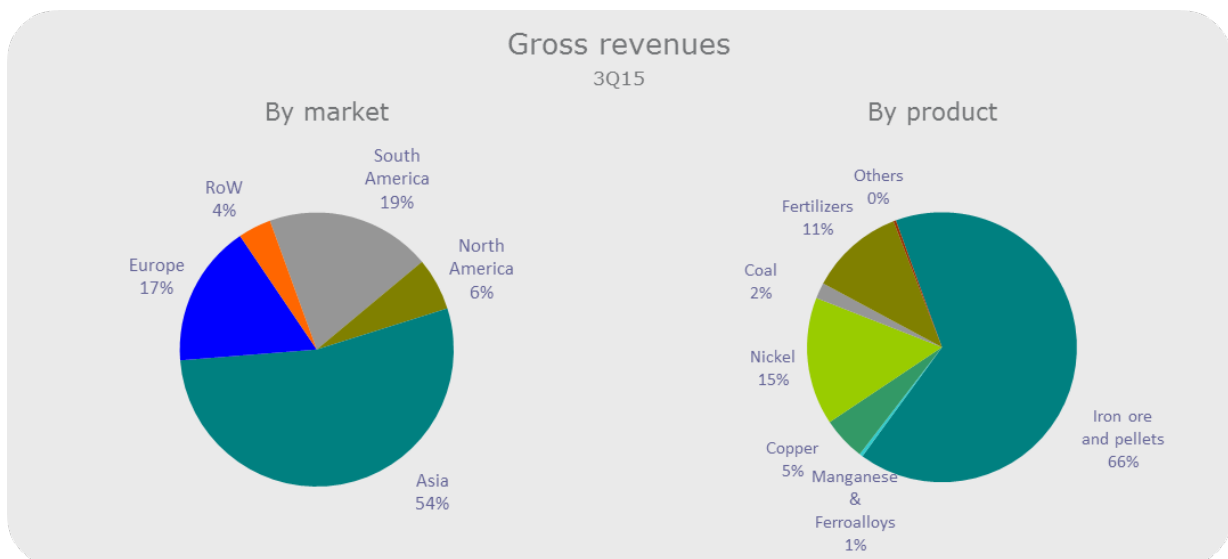
2 Vale shares are traded on the New York Stock Exchange/NYSE (VALE and VALE.P), the BM&F BOVESPA (Vale3 and Vale5), the Euronext Paris (Vale3 and Vale5), and the Stock Exchange of Hong Kong Limited (codes 6210 and 6230). Average daily trading value was approximately US\$320 million in the third quarter of 2015 (3Q15). Vale is an investment-grade company, rated BBB by Standard & Poor's, Baa2 by Moody, BBB+ by Fitch, and BBB (high) by Dominion Bond Rating Service (Vale 2017).

Figure 1: Vale's financial highlights



Source: Vale (2015a), reproduced with permission.

Figure 2: Vale's gross revenues



Source: (Vale 2015a), reproduced with permission.

All of Vale's activities are guided by management policies of transparency, respect for shareholders' rights, protection of the environment, employee development, and improving the quality of life in the communities in which the company operates.

In the last decade, Vale's community development approach has been evolving, especially in terms of contributing to local development in the regions where it has operations. This paper shares some of the results of this experience and the lessons learned so far.

2 Vale's social investment evolution

Vale Foundation was established in 1968. When privatized in 1997, Vale focused its Foundation as the main channel for implementing the company's social and community development agendas.

Vale Foundation is a non-profit organization, financially maintained by Vale. Like many other companies worldwide, Vale focused the efforts of its Foundation along two main thematic lines of social investment: education and culture. It invested in projects developed by NGOs and specialized companies throughout Brazil. This continued until 2006, after which a process of internationalization of the company began; there were, subsequently, social programmes managed locally in all of the countries in which Vale had operations.

However, following an in-depth strategic analysis of the Foundation's work in 2004, it was clear that the model as used to that date was not the most effective one. There were up to 150 projects managed by the Vale Foundation by 2000 and the results of many of these were unclear. They were not driven by territorial and local development demands, and were isolated and independent efforts. It was also noted that the company was fundamentally dependent on land; that some of its commercial operations had very long-term horizons (up to 100/150 years); that its procedures had the potential to generate both significant positive but also significant negative social, economic, and environmental impacts; and, therefore, that the territorial dimension of sustainability was critical for the company.

Hence, in 2006, Vale Foundation refocused its mission to contribute to the local development of the specific regions where Vale had its operations, by more strategically aligning its work with the nature of the company and also with the relevant specific opportunities and challenges that the mining activity opened up for the various territories of operation.

The first thing that was clear was that the Foundation needed to better understand the socioeconomic dynamics of the regions where Vale operated in order to be able to contribute effectively to their local development. So we began to partner actively with specialized institutions and to prepare integrated socioeconomic diagnoses of all the regions in Brazil (and later worldwide) where we had operations. That work sought to understand what were the cumulative impacts that Vale's projects and operations had in the mining-affected municipalities³ and what, in turn, were the possible impacts of the municipalities on Vale's operations. We studied the history of the formation of each of the municipalities, and then identified the main economic drivers and analysed demographic projections, considering both natural growth (births and deaths) and anticipated migration inflows. We also gathered detailed information on public services and infrastructure deficits (current and future), taxes (current and future), land ownership regulation, and so on. We ended up with a very good, comprehensive picture of what were the pre-existing deficits of the municipalities (financial and otherwise); what were the probable pressures that new Vale projects would bring to the region; and, also, the taxes that would be generated and whether the scale would balance itself.

We found that most municipalities—specifically the mining ones that were studied—could have positive balances, in due course, if mining operations reached their planned outputs and the tax resources were adequately applied in infrastructure and public services. Nevertheless, the timing was invariably a challenge. Some impacts would happen before the royalties on production⁴ reached the full amount. In other cases, the royalties would be so significant that the execution of all the various affordable projects would be a challenge. We also learned that there were resources

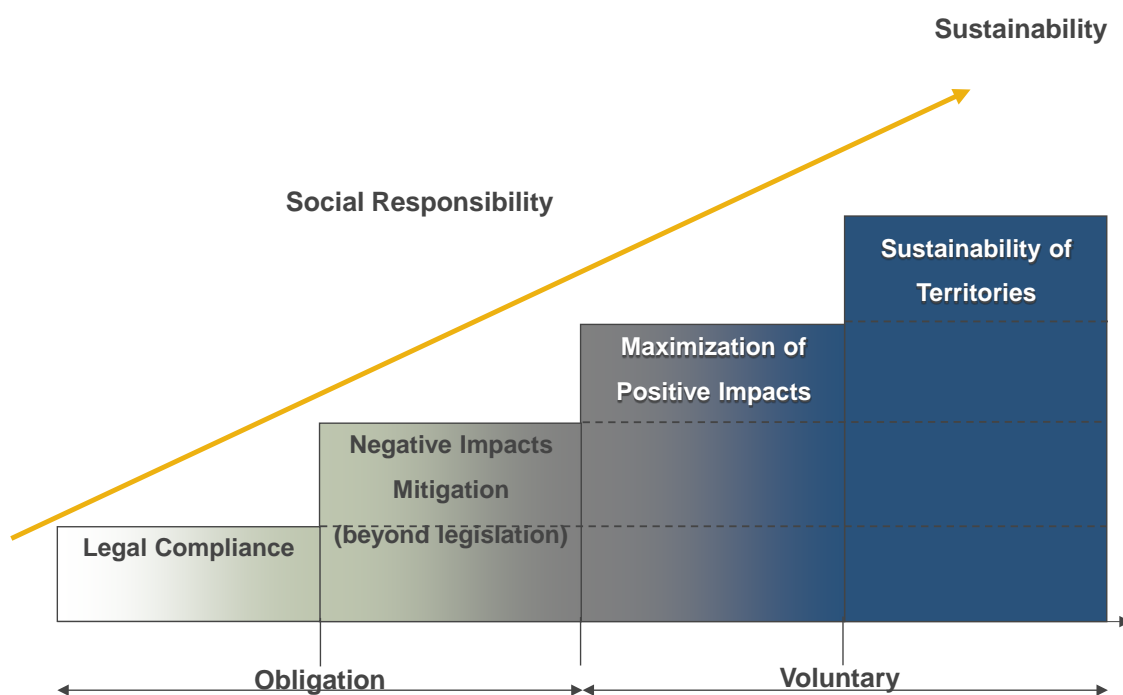
3 The municipality is the level of public administration in Brazil below the federal and state levels.

4 *Compensação Financeira pela Exploração de Recursos Minerais* (CFEM: Financial Compensation for the Exploitation of Mineral Resources), the mining royalty in Brazil, is collected by the National Department of Mineral Production (DNPM) and then re-allocated to those states and municipalities where mine production has taken place. Eighty-seven per cent of royalties is captured by the municipal and state governments (OPM, ICMM, and IBRAM 2012).

available prospectively to municipalities from various federal government programmes, but that the town hall was often not able to access these due to a lack of either technical capacity or proper information. It was clear that capacity building, planning and governance (including cross-sector governance) were needed for our host municipalities as well as for some other agencies of government.

Currently, Vale Foundation’s mission is to contribute to integrated economic, environmental, and social development in the regions where Vale operates, strengthening human capital in communities and respecting local cultural identities (Vale Foundation n.d.). Figure 3 illustrates the model of sustainable development which we follow. The Foundation’s investments are addressed mainly to education, health, and income-generation/inclusive businesses initiatives in Brazil.

Figure 3: Sustainable development evolution



Source: Authors’ illustration.

3 Public–private social partnership

As a result of these diagnostic insights, we began to develop the concept of the public–private social partnership (PPSP). The starting point for elaborating the concept was the Vale Foundation’s practical experience, in particular the liaison work it carried out with many federal government ministries and departments with the aim of supporting municipalities to raise funds, especially for deficit reduction in relation to urban infrastructure.

When the Brazilian government launched the Growth Acceleration Program (Programa de Aceleração do Crescimento; Federal Government of Brazil 2007), a national economic policy that invested billions in infrastructural works, in 2007, Vale Foundation saw an opportunity to support the municipalities where Vale operates by elaborating engineering projects in order to allow the municipalities to apply and compete more effectively for federal funds. Since most of these

remotes cities have fragile infrastructure, Vale Foundation funds the elaboration of technical projects mainly in connection with housing, sewage, drainage, and pavements. Canaã dos Carajás was one of the municipalities that had its projects approved by the federal government as a result. This has involved fundraising of R\$19 million (US\$5 million) to finance water system works.

From this experience, Vale Foundation gained a clearer understanding of the public policy framework in Brazil and how to advocate for people to achieve better access to public services. Therefore, the next step was to establish Technical Cooperation Agreements between Vale Foundation and Brazilian ministries, such as the Ministry of Health and the Ministry of Cities, seeking to discuss, plan, and execute programmes of private social investment as aligned as possible with public policies. Concerning these Agreements, there is no transfer of resources between the parties; the main objective is the integration of efforts between the public and private sectors.

One of the consequences of these partnerships was the establishment of the first model of the Public Children's Safe House (Conselho Tutelar) in Canaã in accordance with the Brazilian Human Rights Ministry standards. Initially, the new model was to be set up only in cities with more than five hundred thousand people that were to host large-scale projects such as venues for the Olympics and the World Cup. However, the dynamics of the fast growth of Canaã and its social figures showed the importance, indeed the necessity, of such a social facility for strengthening the local Child Protection Safety Net.

As background to this discussion on PPSP, it is also important to consider the Brazilian historical context. After a military dictatorship lasting for almost two decades (1964–85), the 1989 presidential election was the first since 1960 in which Brazilian citizens were able to vote for the president. Based on the 1988 Constitution, a variety of policies and regulations began to be established. This makes many of the urban planning frameworks a quite recent development in Brazil. The Ministry of Cities—with responsible for housing, land regularization, and sewage—for instance, was created only in 2003. Moreover, until the 1940s, only 30 per cent of the Brazilian population were urban. By the 1990s, about 75 per cent were already living in urban areas. Nevertheless, this population growth in urban areas was not matched in the same proportion by the provision of public services and infrastructure.

In July 2012, based on Vale Foundation's experience after 2006, it was decided to create a working group⁵ composed of organizations and experts with vast experience in the areas of sustainable development, urban planning, corporate social investment, and relationships with government, to discuss the concept of PPSP.

Based on the discussions of this working group, a reference text was developed. The PPSP as operated thereafter by Vale Foundation can be summarized as follows. It is a strategy for building a series of inter-sectoral alliances aimed at promoting the sustainable development of territories where the company has large-scale enterprises, through joint efforts, and by mobilizing the resources and knowledge of civil society, governments, and businesses for integrated long-term strategic planning, around a common agenda that includes promoting actions that contribute to:

- The promotion of quality of life and human development;

5 Members of the PPSP working group: Accenture, MIF (Multilateral Investment Fund of the IDB, the Inter-American Development Bank, IBAM (Brazilian Institute of Municipal Administration), IBRAD (Brazilian Institute of Development Administration), Eupolis Lombardia, Unesco, an expert in monitoring social projects from BNDES (National Bank for Economic and Social Development), and a professor from Dom Cabral Foundation.

- The strengthening of inter-sectoral and public policy;
- The expansion of democratic participation and the perspective of citizen inclusion;
- The effectiveness of private sector social investments;
- The collective construction of the figure of the citizen as simultaneously a beneficiary and co-participant in the process of territorial development.

Vale Foundation's PPSP is required to seek strategies that strengthen the opportunities generated by large mining projects, such as those strategies that can help in: (i) promoting diversification of economic activities; (ii) supporting the qualifications and awareness of civil society, companies, and government regarding the management of territorial development; (iii) strengthening capacity building and sharing resources and knowledge to achieve the goals defined in the public sphere.

The implementation of the PPSP in the individual territories of Brazil and other countries also requires a political consensus that enables the various initiatives that are proposed to take full advantage of both the management tools (diagnostics, plans, laws, regulations, legal apparatus, websites, etc.) and the institutional arrangements (chambers, trade associations, councils, boards, forums, development agencies) already existing. When gaps are spotted in either of these two areas (management capacity or institutional systems), investment in the capacity building of local actors and the development of strengthened management tools can be sponsored, but always with a focus on the need to sustain the partnership for sustainable development of the territory, and in a long-term systemic view.

A process of political consensus demands that the parties involved all make commitments and thereby establish their respective roles and responsibilities. From the perspective of a PPSP linked to a large enterprise such as Vale, the opportunities that are to be promoted and the impacts that are to be minimised have to be discussed jointly by the various agents. Thus, we seek to avoid the logic and the potential pitfalls that still prevail in cases where each party assumes a liability in isolation and without the need to interact with others. Specific examples of how particular PPSP projects work in practice are presented later in this paper.

The work grounded in the PPSP approach may seem like a very laborious way to proceed, as it demands consensus between the parties and the supremacy of the common good over individual vision. In practice, it is often hard and slow work to achieve consensus. However, we have found that it is the best way to develop actions that will enjoy durability and performance characteristics that can contribute to strengthening public policies and the empowerment of local actors. In due course it can, thereby, help to reduce dependence on the mining company—often the primary vector of development for remote municipalities. In this approach, the company itself seeks to promote a qualitative leap, moving from more isolated practice to a joint effort with other actors and players in the territory, integrating networking sites with other spheres, public, private, community, and social.

There is an important and perhaps unique philosophy underlying the approach of PPSP as practised by Vale Foundation. The approach recognizes that that area of 'public' policy extends beyond the government's own actions to involve the engagement of all actors. This helps to generate a different form of social control that enables the continuous improvement of policies and actions developed by communities. PSPP's vision in this sense is based on this concept of the 'public arena', which understands that citizenship is not restricted merely to the scope of the state, and that 'public life' is not just made up of government acts, but also of the acts of groups, institutions, and individuals who all aim to meet social goals.

In other words, the process of building the PPSP system has required a new attitude of governments, enterprises, and society. It is based explicitly on open dialogue to help build a vision of the common good, which is achievable through an integrated and co-ordinated set of efforts for the generation of local opportunities and the best application of private social investments and governmental resources.

4 Southeast Pará (geography, economy, Vale's presence)

Vale is present in the State of Pará. Located in the north of Brazil, Pará is the second largest state by area (it is the size of Spain and France combined). However, it is also one of the country's least developed states, ranking 22nd out of 26 states in Brazil in GDP per capita terms.

Comprised of 144 municipalities (elected local governments), it has a population of 8.2 million people (IBGE 2016), making it sparsely distributed but with many inhabitants concentrated in and around the capital, Belém.

A study conducted in 2011 by Oxford Policy Management, the International Council on Mining and Metals, and the Brazilian Mining Association, entitled 'The Mining Sector in Brazil: Building Institutions for Sustainable Development' (OPM, ICMM, and IBRAM 2012), provides a good summary of the history of Pará. In terms of development, both economic and social, the north of Brazil has struggled for decades to achieve the same level as the south. Historical and violent conflicts over land between large ranchers, smallholders, small-scale miners, and the indigenous populations of the region have been a major problem since the 1960s. These difficulties have been created mostly by land redistribution and new settlement by farmers, cattle ranchers, and logging companies, and also by the notorious gold rush in Serra Pelada in the 1980s.⁶ Today, the state still faces serious problems of infrastructure deficits, including in water supply, sewage and waste collection, lighting, paving and drainage, road networks, and public transportation. Also, Pará suffers from very large deficiencies in schooling and vocational training.

Also according to OPM, ICM, and IBRAM (2012), the mesoregion of Southeast Pará contains 39 municipalities, separated in the analysis into six 'mining municipalities' with large-scale mining operations (Canaã dos Carajás, Curionópolis, Marabá, Ourilândia do Norte, Parauapebas, and Paragominas) and the other 'non-mining municipalities'.

5 The PPSP in Southeast Pará: the Canaã dos Carajás case

In order to illustrate how the PPSP methodology has been implemented, it is helpful to discuss examples from Canaã dos Carajás, a city in Southeast Pará where Vale's largest project, the Carajás S11D Iron Project (Vale 2012), is being implemented.

Around US\$16 billion is being invested—\$6.8 billion of which is the estimated capital expenditure involved in installing the new mine and processing plant, and the remainder of which is for logistics and infrastructure. Vale is investing heavily to upgrade the Carajás railroad, with some 504 km of

⁶ For a time the village of Serra Pelada was thought to be the largest gold mine in the world in terms of numbers engaged. Because of the chaotic nature of the operation, estimating the number of miners accurately was difficult, but it was thought to be at least 80,000 people at its peak. Today the Serra Pelada mine is abandoned and the giant open pit that was created by hand has filled with water, creating a lake.

track related to expansion and 226 km related to remodelling the existing capacity. This railroad runs all the way from the iron ore mine to the company's export terminal in the Atlantic port in the state of Maranhão. S11D, when fully operational, will supply 90 million metric tons of iron ore per year. It is expected to go into operation by the end of 2016 (Vale 2016c).

Map 2: Carajás mining complex (Pará and Maranhão States)

Carajás Mining Complex



Source: Vale (2012), reproduced with permission.

Canaã dos Carajás separated itself from the city of Marabá in 1994. Before that, it was just a small agricultural settlement, with logging and agricultural activities as its key economic drivers. The first mining cycle happened with the opening of the Sossego mine (for copper extraction) in 2000. In 2001, the city had a total GDP of only R\$17 million (US\$4.8 m). By 2014, that figure had jumped to R\$3 billion (US\$857 m), while the city's population had increased more than three times (from 10,000 to 32,000) over the same period.

The fact that Canaã was established as a municipality only recently, in the 1990s, means that it had the daunting challenge of structuring itself as a city at the same time that it was starting to receive a very large inflow of mining investments. This was also a challenge for Vale. In addition to meeting

all its legal obligations, including the environmental and social requirements needed to obtain and preserve its licence to operate, especially considering the size and dimension of the investment, Vale also recognized the vital need for active collaboration with the various stakeholders involved: territorial development cannot be achieved in isolation. The establishment of a PPSP in Canaã dos Carajás a couple of years ago, through the Vale Foundation, was the result of a learning curve spanning more than a decade in which Vale has participated along with the other parties. This represents an important step towards a governance system for the new municipality wherein government, companies, and civil society have agreed to share responsibilities.

As mentioned in Section 2, the robust socioeconomic integrated studies and diagnostics have enabled the Vale teams to identify deficits (e.g. in administrative capacities) and associated opportunities for local development of the cities in which the company operates. In the case of Canaã dos Carajás, having those estimated figures has allowed Vale and its Foundation to work in partnership with the town hall, local communities, and the federal government to strengthen a wide range of public policies in order to contribute to the promotion of better-quality education, ill-health prevention and health promotion, inclusive sanitation, and efficient urban mobility; the fostering of local economic activities; and the strengthening of networks for social promotion and protection.

The PPSP meant reshaping the relationship between Vale Foundation and the municipal and federal governments. In the partnerships implemented in Canaã, the town hall began to participate in discussions to build content and results, adopting the attitude of co-participant, and not that of a mere beneficiary of a social project, going much further than making available municipal data and human resources. Moreover, almost all activities under the umbrella of the PPSP are undertaken in partnership with organizations with specialized knowledge, such as NGOs and universities, and also local organizations. Another point that should be highlighted is the fact that, in Canaã, issues are being addressed in an integrated way. For instance, the campaign for traffic safety in the city was possible through the joint effort of the municipal secretariats of transit, education, and sports, in partnership with Vale Foundation, Vale, Vale's suppliers, local businesses, and Unesco.

5.1 A few of the main results of the cross-sector partnerships by 2014/15

A central contribution has been the support to and review of the city's Master Plan,⁷ which provides a broad understanding of the city and its growing areas, and specifies guidelines for how the municipality should be developed in future in an organized manner. This work includes an ongoing discussion about the possibility of creating a fund through which to apply and manage the locally received royalties from mining activities.

At the next level, the drafting of Municipal Plans for health, education, sewage, and urban mobility provides crucial inputs to the structural improvement of overall public services provision. Canaã was one the first municipalities among 144 in the state of Pará to have an Urban Mobility Plan.

With the Urban Mobility Plan as a starting point, the following measures were adopted: educational mobility campaigns and improvement of infrastructure services to reduce traffic accidents (a major element of total spending on health in the municipality); construction of bike routes to encourage

⁷ This and related plans discussed in this section are unpublished documents developed with the city hall for use by the Mayor and public technicians.

alternative forms of transportation, especially bicycling; and the integration of municipal records on health, traffic, and public safety (under discussion).

This innovative Urban Mobility Plan was intended to benefit the whole population of Canaã dos Carajás (33,632 inhabitants). By 2015, its implementation had included the training of 35 educational professionals to enable them to cover traffic and public safety in elementary schools and also some broader educational campaigns for traffic and public safety, with 14,000 people engaged at local schools and churches and in the public sector, as well as 2,000 drivers and pedestrians and 45 motorcycle drivers. In the north of Brazil as a whole there is a precarious situation in terms of sewage and treated water access: almost 70 per cent of households have no sewage system or septic tanks and 45 per cent have no water supply system. Among the activities addressed by the PPSP, 90 technicians and community leaders from Southeast Pará were trained in the policy and management of basic sanitation by Vale Foundation, Unesco, and the Ministry of Cities, resulting in community engagement and a participatory role in the prioritization of neighbourhoods based on health indicators. Currently, as a result, the municipality has predefined goals and greater social control in the implementation and provision of these services.

A sanitation plan is being implemented based on the Environmental Salubrity Index (Índice de Salubridade Ambiental). Linking data on sanitation services with characteristics of population density and its relationship to health, the index generates indicators that show the intra-municipal inequalities, considering all components of basic sanitation: water supply, urban cleaning and solid waste management, and urban drainage and management of rainwater. In addition to providing a technical tool to prioritize integrated investment in Canaã's most populous neighbourhoods with the more precarious sanitation services, the index methodology also provides a reference for social participation in public policy and social control. It was built by the Vale Foundation and Unesco and is available for use in other municipalities.

At the moment, the town hall disposal of waste in landfill sites amounts to about 90.37 tons/day, being 75.37 tons/day of domestic and commercial waste and 15 tons/day of construction waste, which means a per capita value of 1.71 kg/inhabitant/day—more than twice the rate recommended by the World Health Organization of 0.8 kg/inhabitant/day. These data indicate that the useful lifecycle of the landfill sites is at risk of saturation within a shorter time than should be expected. Vale supported the transformation of the old dump into a landfill. It was also necessary to improve waste management by seeking to reduce the volume of waste and to stimulate recycling activities. Vale Foundation provided support in drafting the Integrated Management Municipal Plan for Solid Waste, such as specialized technical assistance and training activities that included building the Plan for Selective Collection in a participatory manner with the Cooperative of Waste Collectors of Canaã dos Carajás. Today, the Cooperative has guidelines to improve their own management skills and add value to recycled materials.

Since 2013, the Vale Foundation has also developed health actions in Canaã, based on two major fronts—'Supporting the Public Management' and 'Mobilization and Community Engagement'—emphasizing the strengthening of technical capacity of health services. Concerning the latter, this led to the creation of a group of Young Health Promoters through a process of training youngsters on issues related to health and citizenship. Over a period of two years, the adolescents involved developed many educational activities concerning health in their neighbourhoods in a way that was integrated with the Municipal Health Secretariat's calendar, as well as actively participating in forums and promoting the occupation of public spaces. Among the results of the establishment of the Young Health Promoters group have been the participation of two youngsters from Canaã dos Carajás as representatives of the rural areas of Brazil at the 2nd Pan American Forum of Children and Adolescents (held in 2014 in the Brazilian capital, Brasília) and a digital mapping project that revealed a broader picture of the local context, especially in relation to health,

education, environment, social protection, and leisure spaces in three communities of Canaã dos Carajás. This material served as the basis for discussions about the challenges and availability of local resources and also for guiding the drawing up of Vale's Community Action Plan.

One of the developments of the youth mobilization and its partnership with the town hall was the implementation of the national programme Health in Schools (Programa Saúde na Escola—PSE) in all 13 health units of Canaã. PSE is an inter-sectoral policy for health and education established in 2007, aimed at children, teenagers, and adults enrolled at public schools, to promote health and comprehensive education.

Furthermore, through co-operation between the Vale Foundation and the Health Secretariat of Canaã, actions were established to increase the technical capacities of health services. Among the results achieved was the development of professionals in basic care with 288 hours of training through the years of 2014 and 2015 on issues related to health promotion, healthy food habits, and disease prevention—of Hansen's Disease,⁸ among others. With an emphasis on building their capacity to diagnose and treat Hansen's Disease, the professionals examined and accompanied patients on treatment and examined 174 children from 7 to 13 years old, identifying seven new cases of the disease. In Canaã dos Carajás 45 people were examined and 14 new cases were identified.

Moreover, all Basic Health Units of Canaã were equipped, reaching a total of around 350 pieces of equipment, in order to improve the ambience/environment of the health care facilities, and to stimulate the continuous professional development of those working there. As a result, appointment times were reduced and the execution of collective activities for the community in health education grew. According to the Brazilian Health System, in 2013 the city had primary health care coverage of 76 per cent (SUS 2015). In 2015, through this PPSP, that percentage jumped to over 90 per cent, well above the national average of 60 per cent (SUS 2016).

A further challenge faced by the municipal management was that of structuring the public school system. With the commitment of many local actors, in 2013 the Pact for the Improvement of Public Education of Canaã dos Carajás (Pacto pela Melhoria da Educação Pública de Canaã) was established. The results included: reform of 20 schools and training of 400 educational professionals covering 12,000 public school students; greater appreciation of reading through reading groups (*rodas de conversa*), with the participation of five authors of children's and young people's literature, more than 150 teachers, and 500 students; goal-setting by classrooms; establishment of planning and evaluation routines; and increased participation of parents and families in the school environment.

As a result of dialogue with the Ministry of Education, the municipality raised about R\$3.6 million (US\$1 m) from the federal government for construction of day care facilities for children. Thanks to the efforts of the PPSP, Canaã analysed examination results for 2013, undertook a gap analysis, and established an action plan to address the gaps identified. By 2014, it had already improved its results (compared with 2013) in the National Literacy Assessment (Avaliação Nacional da Alfabetização), a national test that assesses the level and quality of literacy across Brazilian public schools—in 19 of 20 aspects, scores were above state averages (Instituto Nacional de Estudos e Pesquisa Educacionais Anísio Teixeira 2015).

According to the results of the Educational Assessment System of the State of Pará released in April 2016, it was possible to observe increases of 30.6 per cent in proficiency in Portuguese and

⁸ Hansen's Disease is another term for leprosy.

27 per cent in proficiency in Mathematics in the early years of elementary school between 2014 and 2015. For the final years of elementary school, the increase in proficiency was 50.2 per cent in Portuguese and 60.2 per cent in Mathematics (Secretaria de Estado de Educação do Pará 2016a, 2016b).

In Canaã the challenge is now to keep continuously improving its results. However, the city's experience was selected to be presented at the 24th International Congress of Educating Cities, which took place in Rosario, Argentina, in June 2016. The event is one of the most important in the world education calendar. Only 23 Brazilian municipalities took part in the Congress, with Canaã dos Carajás being the only representative of the North region of the country.

A final example of the support resulting from the PPSP relates to business development. In addition to the employment generated in Canaã dos Carajás (12,000 people employed in the S11D implementation phase and Sossego Copper mine operation; Vale 2016b), Vale Foundation has invested in local vocational and entrepreneurship support, with technical assistance to 110 small businesspeople and support to six local businesses. During the last two years, the average income growth for the six businesses in question was 238 per cent. These results already achieved are part of the Foundation's programme to contribute to increasing non-mining income and generating jobs. Local economic activities such as services, food production, and clothes-making have been supported through training, technical, and management advice; mentoring; direct investment (seed money); and monitoring of projects. Collective businesses or individual entrepreneurs can also be supported. One of the businesses supported that can be highlighted is the Apiculture [bee-keeping] Association of Canaã, which has seen a significant increase in the number of its members since the beginning of the Association's participation in the income generation and job programme: a jump from 25 people to 62.

6 Challenges faced and critical success factors for the PPSP approach

The establishment of Vale's private social investment model and a system of governance that fosters co-responsibility and co-management as a way to achieve long-term territorial development has resulted from three main factors. The first is the trajectory of the Vale Foundation itself and the lessons learned, both successes and failures, from the implementation of its previous projects in several municipalities. The second is the peculiar characteristics of mining activity—and especially its dependence on particular (often less-developed) territories combined with the unusually long-term maturity of its investments. The third is the challenges faced by the Brazilian government in providing quality public services to its citizens in remote areas (such as Southeast Pará), in order to comply with the rules established in the Federal Constitution and given the inherent limitations of the more remote municipalities in accessing existing public policies at federal level. The prevailing Brazilian political-administrative division is quite relevant to the context of social investment, to the extent that the Constitution of 1988 took responsibility away from the states and delegated it to municipalities for some powers that are often beyond the municipalities' budget and/or implementation capacity.

During the process of construction and implementation of the public–private social partnership model by Vale, the main challenges were related to the understanding of how to make the engagement between the public and private sectors work in practice. In Brazil, the culture of inter-sectoral integration and collective construction is quite recent. Thus, there is still very active discussion about the appropriate roles and responsibilities of each party, recognizing that the company (Vale) cannot and should not replace the state's role but has to be committed to efforts to implement public policies. Another lesson learned was about the need to balance expectations

in relation to the results of the partnership, as the two parties (the state agencies and the company) tend to have different timings and as there was little or no previous experience of this sort of model: it was a pioneering move in Brazil.

The pilot initiative took place in Canaã dos Carajás, as already discussed. It is important to highlight that many important social projects are moving forward well in Canaã mainly as a result of three factors: there is a positive environment in which to establish partnerships;⁹ Vale has been willing to develop and integrate its social investment activities in a multidisciplinary way; and there is solid alignment between the company and its Foundation. This alignment is important to allow both institutions to take advantage of the synergies. It makes them more effective in their social investment and in the generation of shared value to local communities.

This alignment between the company and its Foundation is evidenced by a trend derived from the survey ‘Benchmarking Corporate Social Investment (BISC)’,¹⁰ carried out annually by Comunitas.¹¹ According to BISC 2015, in 2013 more than half of the funds of institutes and foundations were allocated in an way that was aligned to the core business of the company. From 2013 to 2014, this share increased by 10 per cent (from 53 to 63 per cent) (Comunitas 2016).

In the case of mining, such internal integration is even more necessary since the implementation of mining projects impacts so forcefully on the socioeconomic dynamics of the cities in which they take place—especially those, such as Canaã, that start off as very small. Therefore, social investments focusing on contributing to local development and strengthening public services are vital for the sustainability of both the mining operations and the territories.

Finally, there is still plenty of room for improvement, especially in two respects: improved monitoring and impact assessment of the component activities; and the fostering of the establishment of more partnerships. In the case of partnerships, on the one hand, the unfavourable current global economic situation, especially the significant drop in the price of commodities, emphasizing iron ore, is affecting the amount of resources allocated to social actions. But on the other hand, the logic of partnerships has never been stronger.

Also according to BISC, there has been a drop in the volume of funds invested by a group of 336 organizations, including companies, foundations, and conglomerates, in Brazil: in 2013 the BISC companies invested R\$2 billion in the social arena, which represents a decrease of 25 per cent compared to 2012. In 2014, despite investments having increased by 11 per cent compared to 2013, this increase was not enough to recover losses sustained in 2012 to 2013. On the other hand, the logic of partnerships strengthened. In addition, in the BISC 2014, 100 per cent of the

⁹ This is helped by the relative newness of the municipality and the related absence of any strong vested interests.

¹⁰ Established in 2008, this is an annual study on the current scenario and trends of corporate social investment. Inspired by the methodology of the American-based Committee Encouraging Corporate Philanthropy (CECP), the survey seeks to measure all financial resources, goods, and services applied by private companies in projects and activities of social interest, including: support to social, environmental, and cultural projects; construction of social infrastructure, including that resulting from the installation and operation of enterprises; and permanent or eventual support to formally constituted organizations.

¹¹ Comunitas is a Brazilian civil society organization of public interest created in 2000, dedicated to the promotion of social development in Brazil, through the engagement of several sectors of society, stimulating and fostering collective actions with one common purpose: to reduce social inequalities in order to promote sustainable development in the country. Supporting the organization are a number of large corporations and their leaders, who are actively engaged in defining and implementing the organization’s programmes.

organizations surveyed indicated that the identification of public problems required collective action.

Canaã leads the rankings of the Municipal Development Index developed by the Federation of the Industries of the State of Rio de Janeiro (Índice FIRJAN de Desenvolvimento Municipal—IFDM/FIRJAN) in the state of Pará (Canaã dos Carajás—Pará 2016; Jardim 2016). In the overall index ranking, Canaã is also further ahead than other Brazilian capitals such as Aracaju, Porto Velho, Salvador, Maceio, Manaus, and Macapa, and Belém, the state capital. This index can be considered a reference in terms of monitoring Brazilian socioeconomic developments since 2005.¹² In 2013, the year on which the research was based, Canaã achieved a 0.7351 rate, a 25 per cent increase since 2005, on a scale from 0 to 1 in which the closer a city is to 1, the greater the development of the city. The municipality also showed an improvement in all three aspects.

Although this paper has described a specifically Brazilian local experience, this methodology of implementing corporate social investment might be replicated in other country contexts since the basic premises are cross-sector governance and combined efforts, avoiding the overlap of roles and responsibilities. Obviously cultural differences, the level of maturity of organizations, and the institutional environment in which they operate may require adjustments of the partnership framework to particular country circumstances. However, the basic guidelines of PSPP can be followed elsewhere.

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