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## Vale's worldwide operations raise water reuse to 76%

Today in Rio de Janeiro, Vale will release its 2008 Sustainability Report, showing that the company continues to make significant progress in environmental, social and economic spheres. One of the positive results described in the document is higher reuse of water resources. Of the 1.37 billion m<sup>3</sup> of water consumed by Vale in 2008, 1.03 billion m<sup>3</sup>, or 76%, came from recirculation and reuse projects in various locations, including operations acquired in Australia in 2007, which entered the sustainability report for the first time in 2008. The latest percentage represents a significant improvement on the 65% registered in 2007.

Among the reasons for last year's good result, which makes Vale a leader in reuse of water resources in the mining sector, is increased water storage capacity, enabling the company to optimize reutilization in various sites.

In the 2008 Sustainability Report, which follows the Global Reporting Initiative (GRI) methodology, Vale increased its level of transparency in disclosing information, describing 73 environmental, social and economic indicators - 22 more than in 2007, when the company first adopted the GRI model.

As in the previous year's report, the 2008 document complies with "G3", the latest version of GRI guidelines, and is classified as B+, on a scale from C to A+. The document underwent an external verification, conducted by consulting firm KPMG Assurance Services.

### GRI model

Created in 1997, the Global Reporting Initiative is a network of specialists in sustainability, headquartered in the Netherlands, which has developed a structure to prepare reports on sustainability that is the most widely used internationally.

"This publication reaffirms our commitment to the transparency of our activities and to improving our internal management of sustainability," said Vale's CEO, Roger Agnelli, in a message in the report. "In 2008, we received recognition as a company committed to transparent communications - our 2007 Sustainability Report was highlighted as a "Notable Communications on Progress" (COP) publication by the United Nations Global Compact, which shows we are on the right track."

Our 2007 Sustainability Report, the first to be based on the GRI model, contributed towards various awards for the company. Vale was ranked among the five best positioned companies in the basic materials sector (mining and metals, steelmaking and chemicals) in the 2008 GS Sustain report, published by investment bank Goldman Sachs, which analyzed sustainability performance, industry issues, and return on capital. More recently, Vale received the Transparency in Sustainability Award from the Brazilian Institute for Investor Relations (IBRI), which analyzed companies listed on the Bovespa stock exchange.

### Sustainable Development Policy

Issued in January 2009, our Sustainable Development Policy strengthens our alignment with international initiatives in which we participate, such as the United Nations Global Compact and the International Council on Mining & Metals, a global forum on sustainability in the sector. Our sustainability strategy is based on three pillars: operating sustainably, catalyzing local development, and acting as a global agent for sustainability.

The policy will contribute towards aligning our sustainability strategy with our business planning and rising to local and global challenges.

## **Climate change**

One of the global challenges for our Sustainable Development Policy to which Vale is paying close attention is climate change. In 2008, the company's greenhouse gas emissions stood at 16.8 million tons of CO<sub>2</sub> equivalent - 10% higher than in 2007. This increase was mainly due to the incorporation of Vale Australia units and improvements to the emission calculations methodology.

Last year, the company launched its Corporate Guidelines on Climate Change and Carbon, including the Vale Carbon Program, which is carrying out a series of globally-coordinated projects. These include a project to replace fuel oil with natural gas in pelletizing plants in Espírito Santo and Minas Gerais, which cut emissions by 139,000 tons of CO<sub>2</sub> equivalent between 2007 and 2008, and a project to capture methane to generate electricity in our operations at Integra underground mine in New South Wales, Australia. Besides reducing greenhouse gas emissions, the plant is able to generate 10 megawatts of electricity, enough to supply 15,000 homes.

Of all the electricity purchased by Vale (indirect electricity), 76% comes from hydroelectric sources. In Brazil, the company is investing heavily in power generation, mainly large hydroelectric projects through consortia (seven plants are operating and one - Estreito - is being built), and also small hydro projects. Vale directly produces 34% of its own electricity needs.

The company has also been investing in natural gas and biodiesel to replace diesel and fuel oil in its operations. In February, Vale launched the Green Train project, which aims to use a blend of natural gas and diesel in its locomotives, with from 50% to 70% natural gas. The project is under trials on the Vitória-Minas Railway. It is estimated that using natural gas on the Vitória-Minas Railway and the Carajás Railway will cut emissions of CO<sub>2</sub> equivalent by 73,000 tons per year.

Also this year, Vale signed an agreement with Biopalma da Amazônia S.A. to produce biodiesel from palm oil, which is ten times more productive than soy. The plan is to use B20 (a blend of 20% biodiesel and 80% regular diesel) on the Carajás Railway and in other operations in Vale's North System, starting in 2014, far in advance of government regulations that mandate its use in 2020. Vale currently uses B3 in its trains.

Vale has been recognized by the market for these and other initiatives, as well as for its transparency in publishing its greenhouse gas inventory annually. Vale is considered the global leader in its sector in the climate change ranking in Goldman Sachs' Sustain 2009 report entitled Change is coming: A framework for climate change - a defining issue of the 21st century. The report, published in July, analyzes the opportunities and challenges related to the issue, and finds that Vale manages its emissions more efficiently than its peers. Goldman Sachs analyzed the public reports of around 800 global companies, divided into 24 sectors, with a total market value of approximately 90% of the MSCI World Index, composed of company shares listed in 48 countries.

In 2008, Vale was the only Latin American company listed in the Carbon Disclosure Leadership Index by the Carbon Disclosure Project (CDP). The index rates the 500 biggest companies in the world, measured by market capitalization, listed on the FTSE Global Equity Index Series - Global 500. Of all mining companies studied, Vale registered the lowest greenhouse gas emission intensity in 2007, in terms of emissions per unit of revenue.

## **Key figures**

## People

Vale ended 2008 with 145,700 employees and contractors, of whom 80% work in Brazil; Despite the global financial crisis, the total Vale workforce (employees plus contractors) remained practically the same between 2007 and 2008. The number of direct Vale employees increased by 5,500;

In 2008, women accounted for 10% of Vale's workforce, which is in line with the mining sector. Of this group, 49% occupied technical positions and 40% worked as specialists (with university degrees);

Education is one of Vale's principal commitments to social responsibility and sustainable development. Vale's education department, runs 25 training centers in Brazil and one overseas (in China). In 2008, 4,500 people participated in professional training programs in the mining production chain.

## Local development

Vale invested US\$231 million in social projects in 2008, the same as in 2007. Of this total, around 95% was allotted to voluntary projects, i.e. not required by law, directly carried out by Vale or in partnership with civil society organizations; The Vale Foundation aims to expand its contribution to integrated development in the regions where Vale operates, in the three areas of infrastructure, public sector management, and human and economic development;

In October 2008, the Vale Foundation's first "Knowledge Station" was opened, in Tucumã (state of Pará). This is part of a structured social project to open 15 educational centers by 2015, benefiting 30,000 seven to 19 year olds in the areas where Vale is present in Brazil. Knowledge Stations are designed to go beyond the remit of traditional schools, working with physical, emotional and cognitive development in an integrated manner, through sports, cultural and professional training activities.

## Health and safety

Rates for accidents leading to time off work fell 32% between 2007 and 2008 (from 2.2 to 1.5 accident per 1 million man hours worked);

Despite our progress in terms of health and safety-related indicators, unfortunately the company registered nine fatal accidents in 2008. We continue to intensify our efforts to move towards a culture of prevention, through the implementation of Requirements for Critical Activities;

Requirements for Critical Activities involve the adoption of rules, the use of equipment and investment in infrastructure to ensure safety in the ten operational activities that historically account for 71% of fatality risks. In 2008, the company recorded a 53% implementation level for Requirements for Critical Activities. Our goal is to reach 70% implementation in 2009 and 100% by the end of 2010.

## Environment and biodiversity

Vale invested US\$678 million in environmental projects in 2008, 50% up on 2007. Most of this was spent on acquiring and installing environmental control equipment, environmental maintenance and geotechnical safety of dams and slag heaps, and reforestation and restoration of degraded areas;

Adding together the restoration and planting we are carrying out in our mining areas and that undertaken voluntarily on land owned by third parties and leased land, we have more than compensated for areas impacted by our mining operations in Brazil. In all, 1.4 hectares have been planted or restored for each hectare affected by our operations in the country;

In 2008, Vale produced 487,000 tons of waste (19% hazardous). Of this total, 50% was recycled and 39% was disposed of in the ground. Over recent years, the proportion recycled has risen steadily;

Vale protects (on its own land) or helps to protect (on third party land) approximately 10,201 km<sup>2</sup> of natural habitat, on sites owned by the company (4%), leased areas (3%) and official conservation areas protected in partnership with local government authorities (93%). The areas protected by Vale are located in a range of biomes, including Amazon Rainforest (82%), Boreal Forest (<1%), Atlantic Forest (5%) and Wallacea in Indonesia (12%), as well as areas in New Caledonia (<1%) and in the transition region between Atlantic Forest and Cerrado biomes (1%).

### More information

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