



Climate Change Mitigation and Adaptation Policy (GLOBAL)

DCA 0100/2012

Rev.: 01-24/05/2012

Nº: POL-0012-G

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Purpose:

- To establish the Vale Group's commitments towards managing risks and impacts for its business arising from climate change.
- Establish the Vale Carbon Program as the strategic plan for Greenhouse Gas (GHG) emissions management, covering topics such as emissions monitoring and strategies for carbon sequestration.

Application:

- This Policy is applicable to Vale and must be reproduced by its direct and indirect subsidiaries in Brazil and other countries, with its bylaws and constituent documents duly considered, as well as applicable law. The Policy's principles must be followed, to the extent possible, within entities in which Vale has a stake, in Brazil and other countries. For the purpose of this Policy, this set of entities is termed the "Vale Group".

References:

- POL-0001-G – Code of Ethical Conduct.
- POL-0003-G – Sustainable Development Policy.
- NOR-0008-G – Environmental Management System Norm.

General Principles:

- To manage GHG emissions, evaluating risks and opportunities.
- To develop and disseminate less GHG emissions-intensive technologies or GHG-neutral technologies.
- To participate in the global efforts to stabilize the concentration of greenhouse gases in the atmosphere at acceptable levels, in accordance with applicable regulations and employing its best efforts in line with this Policy.
- To follow and participate in the evolution of regulatory frameworks related to climate change, searching for the compatibility between economical development, environmental protection and respect for free enterprise.

Commitments:

- In order to achieve standards of excellence in climate change actions, the Vale Group has established a globally coordinated set of actions, called the "Vale Carbon Program". This Program is based on ten commitments, which have been split into macro activities as described below:
 - 1. Publish an annual Vale Group inventory of GHG emissions, as well as actions to mitigate emissions and adapt to climate change.
 - Produce an annual emissions inventory and obtain independent third party verification.
 - Report regularly to stakeholders on the results of Vale Group actions in relation to climate change through structured and recognized communication channels, for example, the GRI (Global Reporting Initiative) report and the CDP (Carbon Disclosure Project) questionnaire.
 - 2. Include, as a strategic guideline in the investment decision process, options that promote the reduction of GHG emissions in Vale's processes, products and services.
 - Develop a tool/process that allows for the inclusion and evaluation of externalities associated with climate change in investment analysis.
 - Include GHG emission analysis in the project design phase, and prioritize projects with lower emissions intensity in the decision-making process.
 - Encourage the efficient use of natural resources in new and expansion projects, and existing operations. The efficient use of natural resources means reducing the intensity of these resources when producing a "Vale product".
 - 3. Aim for the continuous reduction in the Vale Group's specific emissions of GHGs and its net balance of GHG emissions through direct actions to reduce emissions in its production processes, investments in carbon capture and sequestration, and/or support for actions to reduce emissions from deforestation and degradation, considering the best available technology.
 - Provide resources to develop projects that result in reduction of GHG emissions arising from their activities, products and services, seeking wherever possible to obtain associated credits through the participation in carbon markets.
 - Promote energy efficiency and reduction in fossil fuel consumption. Encourage the production and use of renewable fuels, seeking an effective reduction in GHG emissions.



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- Promote actions to reduce GHG emissions by altering and/or improving operational processes.
- Invest in the implementation of reforestation projects, conservation projects related to forests and other natural ecosystems, including the recovery of degraded areas and the protection of biodiversity.
- 4. Engage the supply chain in order to reduce emissions from suppliers and customers.
 - Establish programs for training and to encourage the management of GHGs in the value chain.
 - Evaluate and establish joint projects with suppliers and customers to reduce GHG emissions and to sequester carbon dioxide (CO₂), taking into consideration the relevance of Vale Group's products life cycles.
 - Conduct and disclose analyses of carbon footprints or emissions over the life cycle of products. Product selection will be based on their relevance and/or risk due to climate change.
 - After supporting the development of climate change governance in the supply chain, prioritize the hiring of suppliers that have better performance in terms of GHG emissions.
- 5. Engage with governments and their sustainability representatives, civil society and other sectors in efforts to understand the impacts of climate change and respective adaptation measures.
 - Invest in the development of tools/methodologies to enable better management of risks associated with the physical impacts of climate change on operations and people in the territories where Vale operates.
- 6. Set an overall target for reducing the Vale Group's emissions, considering the specific features of each business, covering operations and projects mapped out in the company's strategic planning.
 - Develop an emissions management model to enable the definition, deployment and management of a global goal for reducing GHG emissions through reductions in the intensity of emissions for each business, as well as the implementation of strategies to offset them. The emission management model will be implemented through Action Plan on Sustainability, thereby linking results with employees' variable remuneration.
- 7. Assess risks and opportunities for business due to climate change, minimizing vulnerability and maximizing opportunities.
 - Insert risk and opportunity analyses in the Vale Group's strategic plan, considering the implications in generating value for shareholders and other stakeholders.
 - Assess the Vale Group's portfolio of projects, considering the implications of climate change and of efforts to reduce GHG emissions in the development, approval and implementation of new projects.
- 8. Disseminate knowledge, in partnership with Vale's Human Resources Department, in relation to climate change, and encourage the adoption of environmental best practices by employees and other stakeholders.
 - Work closely with our employees to raise awareness of the importance of their role as responsible citizens and consumers, capable of contributing to mitigating climate change.
 - Support the development of internal campaigns that promote the importance of reducing GHG emissions by changing habits within society.
- 9. Support initiatives and the development of innovative technologies to reduce GHG emissions and increase carbon sequestration, and to develop regional climate change adaptation solutions.
 - Invest in energy generation and use technologies that are less intensive in CO₂ emissions, focusing on the use of renewable energy and carbon capture.
 - Together with renowned research institutions, support and promote studies and research to assess the impact of climate change on the territories where Vale operates, identifying adaptations to its facilities to reduce emissions and contributing to the development of public policy.
- 10. Identify, analyze and propose actions to contribute to the formulation of regulatory frameworks related to climate change. Participate with governments, their sustainability representatives and the private sector in the development of regulatory frameworks needed to tackle climate change, from a sustainable development perspective:
 - Collaborate with governments and regulatory bodies in the development of best practices for reducing GHG emissions.
 - Together with governments and international organizations, monitor the development of public policies for reducing global GHG emissions.