


Subject: Risk Management. 	
Identification: POL-0009-G / Version: 07.	Use: Public.
Resolution: DCA – 058/2022.	Issue on: 12/01/2022.
Responsible: Executive Vice President Finance and Investor Relations.	Review up to: 12/01/2027.

1. General Guidelines

Vale is committed to manage risks proactively and effectively, always valuing the safety of its employees and business partners, the communities where it operates, and caring for the environment, in accordance with its values, Code of Conduct, internal policies and its governance rules.

“Life matters most” is a core value that guides Vale's activities. Vale seeks the best market practices as a reference in its activities in order to prevent lives from being lost or negatively transformed.

Vale’s risk management contributes to:

- Promote a risk management culture guided by transparency and aligned with the company’s objectives that adds value to the business by optimizing the flow of information needed for the decision-making process in order to prevent or mitigate any negative impacts on people, communities, environment, operational continuity, and reputation.
- Support the strategic planning and the sustainability of Vale’s businesses.
- Optimize the capital allocation and strengthen the management of Vale’s assets based on mapped risks.
- Strengthen Vale's governance practices in connection with the concept of Lines of Defense.
- Adopt as a reference the concepts and guidelines of ISO 31000, ISO 55000 and COSO-ERM for risk management, and RBPS (Risk Based Process Safety) for process safety.
- Employ the risk appetite methodology as a tool to guide the Company and its managers in the decision-making process, in the capital allocation and in formulating actions to respond to the mapped risks.
- Support the assessment of potential impacts regarding new investments, acquisitions, and divestitures, based on Vale's risk map and risk appetite.
- Map Emerging Risks in order to seek solutions that can timely mitigate possible negative impacts on the Company's business objectives.

Vale’s risk management system adopts a specific taxonomy, detailed in normative document, which must also be considered for the purposes this Policy.

2. Applicability

This Policy applies to Vale and its 100% controlled companies and must be reproduced in its direct and indirect controlled companies, in Brazil and other countries, always respecting their organizational documents and applicable local legislation. The adoption of this policy is also encouraged by other entities in which Vale has equity interest.

For the purposes of this Policy, the internal terminology used in Vale's organizational chart was adopted in order to facilitate reading and understanding of its users. Thus, “Executive Board” is internally called “Executive Committee”, “Executive Directors” are also called “Executive Vice-Presidents”, respectively.



3. References

- POL-0001-G – Code of Conduct .
- POL-0005-G – Human Rights Policy.
- POL-0012-G – Climate Change Policy.
- POL-0016-G – Anti-Corruption Policy.
- POL-0019-G – Sustainability Policy.
- POL-0025-G – Sanctions and Export Controls Policy.
- POL-0035-G – Vale Management Model Policy - Vale Production System - "VPS".
- POL-0036-G – Diversity and Inclusion Policy.
- POL-0037-G – Safety Policy for Dams and Geotechnical Mining Structures.
- POL-0041-G – Misconduct Management Policy.

4. Concepts and Definitions

Risk: is the effect of uncertainty on organizational objectives, which manifests itself in many ways and with potential impact on all dimensions of the business.

Business Risks: relevant potential risks that, if materialized, could impact people, communities, the environment, operational continuity, reputation and the achievement of the company's strategy and business objectives.

Risk appetite: summarizes the scale of risks that guides the organization and its managers in the pursuit of its strategic objectives. It must be reinforced that risk appetite does not represent, in any manner or sense, any acceptance or assumption by Vale and/or its executives of the probability of eventual materialization of risks of any kind or nature in into concrete events or results.

Integrated Risk Map ("Map"): instrument that contains the set of Vale's risk themes that must be assessed and monitored, being classified according to the taxonomy established in a specific norm.

Severity Ruler: used to standardize the qualitative and quantitative measurement of the potential negative impact of risks and assist in the development of the risk classification methodology, not representing, under any circumstances, the degree of relevance attributed by the Company to potential impacts in its various dimensions.

Probability Ruler: used to estimate, in qualitative or quantitative terms, the frequency/probability of occurrence of a potential risk.

Risk Matrix: document that represents the risk classification based on the combination of probability and severity of events. This combined analysis establishes a risk priority scale, in which each event is classified as "Very High, High, Medium, or Low". This method provides a comparison among potential risk events, allowing the proper definition of risk treatment.

Priority Risk Themes: are the risk themes of the Map subject to detailed monitoring of their classification, mitigation and consequences, which are defined in the context of the Risk Matrix analysis and aligned with the company's Risk Appetite.

Emerging Risks: are those risks that stand out due to the possibility of increasing impact over time and high uncertainty degree.

Risk Response Strategy: definition of risk treatment according to its classification of the priority level in the Risk Matrix, which should also consider the company's risk appetite, as follows:

- Very High: implementation of immediate measures to reduce the risk priority level, except for high-risk appetite.
- High: implementation of appropriate measures to reduce the risk priority level, accompanied by continuous monitoring, except for high-risk appetite.
- Medium: management to avoid aggravating the risk priority level.
- Low: may be acceptable, without giving up risk management.

Lines of Defense: corporate governance model in which areas and their respective responsibilities and processes are identified, helping the Company designs an effective risk management process.



5. Governance

Vale has an integrated risk management governance model, based on the concept of Lines of Defense, optimizing the decision-making communication flow, and reinforcing the alignment among strategy, performance, and risk management.

The general guidelines of risk management that drive Vale's businesses are established by the Board of Directors, which is supported by an Audit Committee¹ that is responsible for supervising the compliance and effectiveness of Vale's risk management processes, among other attributes. The Board of Directors and the Audit Committee carry out their responsibilities under their Internal Regulations and applicable legislation, as well as, through periodic monitoring cycles. The Executive Committee is responsible to implement these guidelines.

The Executive Committee should also maintain Risk Executive Committee(s) to assist its members in the risk management and monitoring processes, as well as in its corresponding resolutions.

6. Disclosure and Dissemination

This Policy will be filed and published by the Controllershship and Accounting Division in Vale's official file system, available to the internal and external public, as applicable.

To ensure the incorporation of this policy into Vale's culture, the ERM (Enterprise Risk Management) as a 2nd Line of Defense should design a training plan to disseminate this Policy to the Company's employees or to specific groups, as required.

7. Policy Review Deadline

This policy must be revised at least one (1) time every 5 (five) years or if it is required in order to maintain its content updated.

8. Responsibilities

Board of Directors

- Deliberate on the company's general guidelines for risk management, as well as periodically assess the Company's risk exposure and the effectiveness, integrity and compliance of the Company's risk management and its internal controls systems.
- Approve this Policy and its amendments, as proposed by the Executive Committee.
- Approve Vale's risk appetite levels and their respective statements, as proposed by the Executive Committee.
- Deliberate annually on Pluriannual Investment Plan related to risk management.
- Approve the review of the Integrated Risk Map and the Priority Risks Themes, as proposed by the Executive Committee.
- Approve the Risk Response Strategy, as proposed by the Executive Committee.

To perform its responsibilities, the Board of Directors will be supported by the Audit Committee¹, without prejudice to other competent Advisory Committees, pursuant to their respective Internal Regulations.

Audit Committee

- Support the Board of Directors in the execution of its role pertaining Vale's risk management, under this Policy and other applicable documents.
- Oversee the adequacy of processes related to risk management, including, but not limited to the Map, Priority Risk Themes, Emerging Risks and mitigation actions arising from the Risk Response Strategy.
- Evaluate the proper integration between Vale's risk management and the Annual Internal Audit Plan.

¹ Audit Committee or other denomination that may be adopted for the Advisory Committee of the Board of Directors that has attributions related to the monitoring of Internal Controls and Risk Management.



Vale Executive Committee²

- Comply with the guidelines of this Policy and establish administrative rules and norms unfolding their concepts, aiming at achieving its objectives.
- Monitor the company's risks.
- Promote a risk culture in the organization and the strengthening of the 1st and 2nd Lines of Defense.
- Define which areas of the organization will act as the 2nd Line of Defense Specialist.
- Provide the necessary human, financial, and other types of support for the 1st and 2nd Lines of Defense, assisting them to act in the prevention and mitigation of risks according to the Risk Response Strategy of the Company, according to its authority resolutions.
- Propose the evaluation and validation of the Pluriannual Investment Plan for risk management by Vale's Board of Directors, considering the consolidation of required sustaining investment.
- Establish Risk Executive Committees for support, whenever necessary, and approve their respective internal regulations.
- Propose Vale's risk appetite to the Board of Directors and recommend its review, whenever applicable.
- Propose the review of the Integrated Risk Map and the Priority Risk Themes to the Board of Directors, whenever necessary.
- Approve the review of the rules and matrix listed below, as appropriate, informing the results of the revision to Vale's Board of Directors, which might be subject to audit procedures by the 3rd Line of Defense:
 - Probability Ruler
 - Severity Rule, including criteria for classifying the risk event in the business risk categories
 - Risk Matrix

Risk Executive Committees:

The committees, according to their expertise area, should:

- Support Vale's Executive Committee in monitoring risks of the Integrated Risk Map categories, as well as issue preventive recommendations regarding potential risks presented in the Committees' meetings.
- Recommend reviews of risk management principles and tools for the continuous process improvement purposes.
- Evaluate and suggest, when necessary, changes in the risk management strategy submitting them for the Vale Executive Committee's approval.
- Other attributions related to risk management provided by Internal Regulations.

1st Line of Defense

- Manage risks, identifying, assessing, treating, preventing, and monitoring them in an integrated manner.
- Manage the preventive and mitigating controls under their responsibilities, ensuring the accuracy and timeliness of information; the process safety in compliance with external regulations, internal policies, and norms; the indicators monitoring, when applicable and seek the improvement of controls, in case of detection of any deficiency.

2nd Line of Defense – Enterprise Risk Management

- Develop and assist the implementation of management policies, methodologies, and tools, as well as promote integrated communication and disseminate the Company's risk management culture.

2nd Line of Defense – Specialists

- Define methodologies, technical and technological and management minimum standards, as well as risk and asset reliability indicators that should be mandatorily adopted by the 1st Line of Defense.
- Monitor adherence to defined guidelines.

3rd Line of Defense

- Areas completely independent from management, meaning that the internal audit and the whistleblowing channel, who are responsible for performing assessments and inspections through the execution of control tests and investigating reports respectively, including on the effectiveness of risk management and prevention, internal controls and compliance through impartial assurance, according to their respective areas of activity.

² Collegiate body composed of the President and the Vice-Presidents of the Company.



- Develop and perform the necessary checks to ensure the effectiveness of this Policy and regarding controls related to the risk management process.
- Incorporate the Risk Matrix in the preparation of the Annual Audit Plan.
- Report the observations regarding the Priority Risk Themes or Emerging Risk to the Executive Committee and the Audit Committee, according to the results of the audit work.

9. Consequence Management

Non-compliance with this policy will be subject to the Company's Misconduct Management Policy.

10. Final Provisions

In the event of any conflict between this Policy and Vale's Bylaws, the latter shall prevail, and this Policy shall be amended, if necessary.

This Policy is effective on the date of its approval by Vale's Board of Directors.

The Board of Directors delegates the approval of the unfolding of this Policy in rules and responsibilities regarding risk management and controls to the Executive Committee aiming to prevent the occurrence of MUE (Material Unwanted Events)³ and/or materialization of potential risks.

11. Approvals

Areas:	Description:
Executive Management of Business and Financial Risks & Insurance.	Preparation.
Executive Management of Corporate Governance and Board Secretariat.	Review / Recommendation.
Controllershship and Accounting Division.	Review / Recommendation.
Audit and Compliance Divison.	Review / Recommendation.
Executive Vice Presidency of Corporate and Institutional Affairs.	Review / Recommendation.
Executive Vice Presidency of Safety and Operational Excellence.	Review / Recommendation.
Executive Vice Presidency of Finance and Investor Relations.	Review / Recommendation.
Executive Committee.	Approval.
Audit Committee (CoAud).	Review / Recommendation.
People, Compensation and Governance Committee (CPRG).	Review / Recommendation.
Board of Directors (DCA - 058/2022).	Approval.

³ Term derived from the HIRA methodology - Hazard Identification and Risk Analysis, used by the operational areas to survey operational risks.