



**Objective:** to establish the principles and commitments of Vale and entities of the Vale System for the water and water resources, to manage them in a sustainable and responsible manner throughout the entire lifecycle of our enterprises.

## Scope:

This policy applies to Vale, its wholly owned (100%) subsidiaries and shall be reproduced to its direct and indirect, subsidiaries in Brazil and in other countries, always respecting these companies' constitutional documents and the applicable laws. Adoption of this policy is encouraged in other entities in which Vale has a participation interest in Brazil and in other countries.

## References:

- POL-0001-G – Code of Conduct.
- POL-0005-G – Human Rights Policy.
- POL-0009-G – Risk Management Policy.
- POL-0012-G – Climate changes Policy.
- POL-0016-G – Anti-Corruption Policy.
- POL-0019-G – Sustainability Policy.
- POL-0024-G – External Socio-environmental and Institutional Expenditures Policy.

## Definitions:

**Catchment:** is the entire region draining into a river, river system, or other body of water.

**Water stress:** occurs when the demand for water exceeds the available amount during a certain period or when poor quality restricts its use.

**Water stewardship:** the use water that is socially equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that involves site- and catchment-based actions.

**Water resources:** quantity of surface water or groundwater available for any purpose in a region.

**Water risk:** the probability of an adverse water-related event occurring, considering the impacts related to quantity (excess and scarcity) and quality, the requirements established in the legislation and by the competent control agencies, and to the company's image.

## Context:

The mining sector is essential to provide natural resources that boost economic development and social well-being, with surface water and groundwater being a fundamental input and present in all phases of mining, from conceptual projects to post-closure. The main uses of water in mining are for ore processing, machinery cleaning, environmental controls, hygiene and human consumption. On the other hand, the effluents generated come from industrial uses, drainages and human consumption.

To know the boundary conditions of the catchment is fundamental where a mining enterprise will be developed through previous diagnosis and/or specific studies, for example water quality, availability, risks and opportunities. As a guideline for its actions, Vale has set the 2030 Water Target which aims to reduce the freshwater withdrawal to processes per ton produced, which means less freshwater withdrawal for the same production. This target is part of the Structural Plan for Water Resources 2030, initiated in 2018, which is part of the socio-environmental goals<sup>1</sup> voluntarily assumed. Once this target has been reached, or the proposed deadline has expired, it should be updated.

<sup>1</sup> Vale's socio-environmental targets are in line with the United Nations Sustainable Development Goals "SDG".



To achieve the 2030 Water Target, we have been investing in the expansion of the water monitoring network, in initiatives to reuse effluents in our processes, in the search for new technologies and in the development of studies aimed at the continuous improvement of water stewardship considering the catchment where Vale operates, and more specifically in Vale's area of influence, to achieve adherence to International Council on Mining and Metals, "ICMM" principles.

Vale informs that social and humanitarian issues are dealt with in other specific policies of the company, such as the Sustainability Policy and the Human Rights Policy, for example.

## Principles and commitments:

Considering the current context on the water theme and water stewardship, Vale's activities will be guided by the following principles:

**Principle 1:** actively participate, directly or through representative entities, in the different forums related to the management of water resources of the catchment where Vale operates, and more specifically in Vale's area of influence, to discuss water security strategies:

### Commitments:

- Encourage actions that contribute to reduce the specific use of freshwater, especially in water stress regions, in line with the SDG;
- Identify water users in the catchment in Vale's area of influence and understand their aspirations and concerns in relation to water resources;
- Support projects of accessibility to water and sewage treatment preferably in communities surrounding our operations;
- Disclose information related to water resources management transparently.

**Principle 2:** where Vale operates, contribute to surface water and groundwater quantity and quality preservation in the catchment and marine areas:

### Commitments:

- Implement quantitative and qualitative integrated monitoring of water resources, with the catchment as a reference;
- Maintain water balance up to date;
- Reduce water use and effluent generation in our operational units, through the process of reduction, recirculation or reuse, especially in water stress regions, noting that the priority use is for human and animal consumption;
- Reduce and / or eliminate losses (evaporation, entrained water in tailings, leaks, and others);
- Map and manage water resources risks and impacts, considering the catchment as a reference and marine areas where Vale operates;
- Ensure that shipowners comply with the procedures associated with ballast water (example: water exchange, treatment), in order to prevent potential impacts on marine biodiversity, following the guidelines recommended by IMO, International Maritime Organization.



**Principle 3:** where Vale operates, contribute to water stewardship continuous improvement:

**Commitments:**

- Continuously assess the probability of current and future water stress, considering climate change potential interference, water multiple use, attending to the physical, biotic, demographic, economic, social and cultural diversity of the various regions;
- Enable, for 100% of the generated effluents, the development and implementation of control and treatment systems capable of ensure the established water quality conditions and standards;
- Map opportunities to optimize water use and reduce the freshwater withdrawal in our processes through reuse;
- Employ the use of data management tools related to water and effluent resources;
- Continuously improve water monitoring network through studies and acquisition of monitoring equipment and instruments (measurement and automation), aligned with the best engineering and technological practices;
- Checkup the adherence of the water resources management of the operational units to the standard procedures, once a year and by sampling.
- At the end of Vale's activities, the conditions and standards of water quantity and quality established are priority and must be respected or those observed in the previous diagnosis and/or specific studies.

## Water Resources Governance:

In the scope of operations, the figure of the Water Resources Coordinator is created, he is responsible for establishing and coordinating the Water Resources and Effluent Management Commission of the operational unit (s) and, together with representatives of the main water user areas, to implement the Water Resources and Effluent Management Program to implement the Water Resources and Effluent Management Program in accordance with the technical and governance guidelines described in the specific Normative Standard.

Aiming at uniformity of procedures and addressing issues related to water resources, the Water Resources and Effluents Operational Forum is established, which meets every two months, and includes the participation of the Water Resources Coordinators of the operations and, depending on the purpose of the meeting, other areas will be invited in each meeting, such as: Community Relations, Procurement, Institutional Relations, Strategy, Engineering and others.

The alignment between the technical teams and the senior leadership, on relevant issues, is carried out periodically at the Performance Meetings and the competent Risk Executive Committees, where the agenda priorities and the work in progress are discussed, and annually the progress of these issues will be presented to the Sustainability Committee.

## General provision:

- This Policy shall be reviewed periodically, at least once in every three (3) years or on demand.