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Operational Risk Management (ORM)

Procedure [P-COR-SIB-01.02]

Official English Translation



	SISTEMA INTEGRADO BUENAVENTURA GESTIÓN DE RIESGOS OPERACIONALES (ORM) P-COR-SIB-01.02	CORPORATIVO	
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1.0 OBJETIVE

To establish a systematic and consistent framework for the identification, analysis, evaluation, treatment, monitoring, and review of operational risks across the units of Compañía de Minas Buenaventura S.A.A., seeking to ensure operational continuity and the resilience of production and support processes, and to prevent disruptions that could affect production, assets, reputation, or the safety of operations.

2.0 SCOPE

This procedure applies to all activities, processes, and facilities managed by Buenaventura.

3.0 DEFINITIONS

- **Corrective Action:** Measure adopted to eliminate the root cause of a nonconformity, deviation, or control failure, with the objective of preventing its recurrence.
- **Preventive Action:** Measure intended to eliminate the cause of a potential nonconformity, deviation, or risk event before it occurs.
- **Risk Appetite:** Level of risk that the organization is willing to accept in order to achieve its strategic and operational objectives, taking into account its control capacity and institutional tolerance.
- **Area of Influence:** Geographic, technical, or process area where an operational risk may generate direct or indirect impacts on operations or neighboring communities.
- **Risk Audit:** Systematic and independent evaluation of the degree of compliance with, and effectiveness of, the operational risk management system.
- **Bow-Tie:** Graphical methodology that visually represents a risk event, showing its causes, consequences, and preventive and corrective controls. It allows critical controls and vulnerable points to be identified.
- **Control:** Measure, action, or device implemented to prevent, detect, correct, or mitigate risks. It may be preventive (acting on the cause) or corrective (acting on the impact).
- **Critical Control:** Essential control whose failure or absence may allow a priority event to materialize or significantly increase its severity. It must be verified, monitored, and maintained with performance indicators (KPI/KRI).
- **Treatment Cost:** Estimated economic value of the set of preventive or corrective actions.
- **Risk Owner:** Person responsible for managing the risk at all stages (identification, evaluation, treatment, monitoring, and communication) within their scope of control.
- **Treatment Owner:** Person responsible for designing, implementing, and verifying the controls and action plans associated with a risk.
- **EBITDA:** Financial indicator reflecting the impact of the risk on operational profitability.
- **Control Effectiveness:** Extent to which a control consistently and reliably succeeds in preventing or mitigating the risk. It is classified as effective, partially effective, or ineffective.
- **Risk Exposure:** Level of vulnerability of a process, system, or asset to the probability of an event occurring and its possible impact.
- **Control Failure:** Deficiency in the design or implementation of a control that prevents it from functioning as intended.
- **Impact:** Consequence or effect resulting from the materialization of a risk on the organization's objectives (economic, environmental, reputational, legal, social, safety, or health).

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- **Dominant Impact:** Most relevant type of impact.
- **Lines of Defense:** Risk governance structure based on three levels:
 - *First line:* risk and treatment owners.
 - *Second line:* methodological oversight (Risk Management Office) and management control (Continuous Improvement-SIB).
 - *Third line:* internal audit.
- **Magnitude:** Overall risk level considering its probability and dominant impact.
- **Heat Map:** Graphical representation combining probability and impact of risks, classifying them into exposure levels (low, medium, high, extreme).
- **Risk Materialization:** Actual occurrence of a risk event with an impact on operational objectives. It must be recorded with date, root cause, cost, consequences, and lessons learned.
- **Operational Risk Assessment Matrix:** Tool used to evaluate and prioritize risks by assigning current and residual probability and impact levels.
- **Mitigation:** Implementation of measures to reduce the probability of occurrence and/or the impact of a risk.
- **Monitoring:** Ongoing activity of observing, measuring, and tracking the performance of controls and treatments, in order to verify their effectiveness and detect deviations.
- **MEL (Maximum Expected Loss):** Estimate of the economic loss considering the residual probability (%).
- **MPL (Maximum Possible/Foreseeable Loss):** Estimate of the maximum reasonable loss should the risk materialize, without considering probability. Formula: $\text{MEL} = \text{MPL} \times \text{Probability} \times \%$.
- **Action Plan:** Set of planned preventive activities to reduce the probability of an identified risk materializing.
- **Contingency Plan:** Set of measures and resources established to respond to and recover operations following the materialization of a risk.
- **Probability:** Estimate of the likelihood of a risk occurring, expressed in qualitative or quantitative terms.
- **Critical Process:** Activity or set of tasks whose failure could significantly disrupt the continuity or safety of the operation.
- **RBS (Risk Breakdown Structure):** Hierarchical structure that organizes typical sources of risk (people, processes, systems, third parties, external factors, environment, etc.).
- **Operational Risk Register:** Standard format for recording and assessing operational risks in the field, used to document identification, analysis, and control at layers 1 and 2 of the ORM model.
- **Operational Risk (OR):** Possibility of loss or negative impact on operational objectives caused by failures in people, processes, systems, or external factors, excluding occupational health and safety risks.
- **Severity:** Degree of potential impact of a risk on objectives, expressed in terms of damage, economic loss, or reputational harm.
- **Risk Workshop:** Formal, structured session to identify, analyze, and treat risks with a multidisciplinary team.
- **Risk Treatment:** Process by which measures (avoid, mitigate, transfer, or accept) are selected and implemented to modify the risk level.
- **Control Validation:** Process of verifying that a designed control is appropriate, correctly implemented, and fulfills its intended purpose.
- **Risk Valuation:** Result of the risk analysis and evaluation, which allows treatment actions to be prioritized according to their criticality.

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4.0 RESPONSIBLE PARTIES / RESPONSIBILITIES

SIB Facilitator (2nd Line, Unit Level)

- Provide second-line follow-up to the owners of the mining unit's critical risks.
- Validate compliance with the ORM methodology and the execution of defined treatments.
- Verify the quality and timeliness of information reported by the first line.

Unit Continuous Improvement Manager (2nd Line, Unit Level)

- Monitor the effectiveness of risk management systems and critical controls at the unit.
- Validate risk profiles and recommend corrective or improvement actions when necessary.
- Coordinate the participation of specialists in the design and improvement of risk-related processes.
- Assess the unit's resilience and propose structural or methodological adjustments to strengthen it.

SIB Coordinator (2nd Line, Corporate Level)

- Ensure that critical processes identify and manage all priority risks.
- Integrate treatments within operating processes to strengthen resilience.
- Identify improvement opportunities based on materializations, changes in context, and industry learnings.

Risk Management Office (RMO) – 2nd Line, Corporate Level

- Define, maintain, and disseminate the corporate ORM methodology.
- Train and advise units on the correct application of the model.
- Centralize operational risk information and reporting.
- Analyze trends and prepare consolidated reports for Senior Management and the Risk Committee.

General Superintendents / Superintendents (Treatment Owners - 1st Line, Unit Level)

- Execute the controls and plans defined in coordination with the Risk Owner, ensuring their timely and effective implementation.
- Record the status and progress of treatments, reinforcing or adjusting actions when necessary.
- Periodically report progress, results, and treatment performance to the Risk Owner.
- Act under the supervision of the Risk Owner, without authority to define budgets or set risk prioritization.
- Ensure the correct application of the Operational Risk Management (ORM) system within their functional scope.
- Validate the assessments and performance of critical risks, verifying that plans and controls are executed as planned.
- Ensure personnel have the competencies, training, and coaching necessary for risk management.
- Manage the assigned budget and promptly communicate relevant alerts or deviations to their superiors.

Unit Manager (Risk Owners - 1st Line, Unit Level)

- Comprehensively manage the risks under their responsibility, covering identification, analysis, treatment, monitoring, and reporting.
- Design, approve, and oversee treatment plans and controls, ensuring the assignment of owners, resources, and timelines.
- Monitor the effectiveness of implemented controls and treatment performance, making adjustments as necessary.
- Promptly report relevant results, trends, and alerts to their superiors and to the Second Line.

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- Transparently record risk materializations, documenting causes, impacts, costs, and lessons learned.
- Lead the implementation and strengthening of the Operational Risk Management (ORM) System within their unit, promoting a preventive management culture.
- Oversee the treatment of critical risks, ensuring their proper management and follow-up.
- Actively participate in field inspections, reviews, and verifications.
- Promptly escalate significant alerts or deviations detected through reports or dashboards to the Operations Management Department.

Operations Management Manager (2nd Line, Corporate Level)

- Oversee the application of ORM across all operations.
- Validate proposed annual budgets for risk management and evaluate their effectiveness.
- Provide feedback and take action in response to deviations or deficiencies in risk management.

VP of Operations (Strategic Level)

- Ensure the allocation of resources needed for operational risk management.
- Oversee and evaluate the performance of priority risks at the mining units.
- Escalate critical alerts that exceed the defined appetite or tolerance levels.
- Report quarterly to the Risk Committee on the status of operational risks.

Risk Committee (Senior Management)

- Approve the operational risk appetite and tolerance.
- Validate the allocation of strategic resources and evaluation tools.
- Oversee severe risks at the corporate level and define strategic measures to reduce them to acceptable levels.

Internal Audit (3rd Line)

- Conduct risk audits to provide independent assurance that the ORM is operating effectively.

5.0 PROCEDURE

5.1 General Aspects

Buenaventura's Operational Risk Management (ORM) Procedure is based on the Three Lines Model:

- **First Line (Operational Management):** Operating personnel and management are the risk owners; they implement critical controls and execute action plans.
- **Second Line (Oversight and Advisory):** The Risk Management Office (RMO) establishes the methodology, advises, oversees, and consolidates information at the corporate level; the Continuous Improvement Manager and the SIB Facilitator provide second-line training and monitoring.
- **Third Line (Independent Assurance):** Internal Audit objectively evaluates the effectiveness of the procedure and reports to the Board's Audit and Risk Committee.

Governance of the Procedure:

- The Risk Committee approves and oversees the procedure.
- The RMO leads technical and methodological coordination.
- Unit Management implements and monitors risks.
- Internal Audit verifies compliance and effectiveness.

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- Very high risks must be escalated immediately to the Risk Committee.
- ORM results (very high risks) will be communicated periodically to the Risk Committee, ensuring transparency and traceability of information.

Scope of Application:

- All operating mining units of Cía. de Minas Buenaventura S.A.A.
- All hierarchical levels involved in the execution or oversight of operating activities and processes within the operating cycle, from extraction through delivery to the customer.

Operational risks affecting the tactical objectives of the operation, excluding Occupational Health and Safety (OHS) risks, which are managed through specific procedures.

5.2 Risk Identification

Identification must be carried out through:

- Multidisciplinary operational risk workshops.
- Review of the Operational RBS, processes, work plans, change requests, and lessons learned.
- Consultation with experts, interviews, and analysis of events that have occurred at the unit or in the industry.

Identification Moments:

- During annual operations planning.
- Before the start of critical activities.
- During performance reviews or in response to production alerts.
- In response to regulatory, technological, or strategic changes.

Each identified risk must be recorded in the **Operational Risk Register**, indicating: description, causes, impacts, owners, and status (*Draft*, *Active*, or *Closed*).

5.3 Analysis and Evaluation

This consists of determining the probability and impact of the risk, considering its current condition (with existing controls) and its residual condition (after the planned treatment).

Instruments applied:

- **Operational Risk Assessment Matrix:** Integrates the environmental, social, safety, reputational, legal, EBITDA, and production domains.
- **Heat Map:** Current and residual, to prioritize critical risks.
- **Causal analysis (Bow-Tie)** and expert judgment where applicable.
- **MPL and MEL calculation** for high-magnitude risks.

5.4 Risk Treatment

Response strategies:

- **Avoid:** Modify plans or processes to eliminate exposure to the risk.
- **Transfer:** Wholly or partially shift the risk to a third party (insurance, contracts).
- **Accept:** Keep the risk under monitoring, with financial contingencies if applicable.
- **Mitigate:** Implement controls or action plans to reduce the probability or impact.

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Associated Plans:

- **Action Plans:** Preventive measures that reduce exposure.
- **Contingency Plans:** Response measures for when a risk materializes.

Treatment must be linked to the unit's operating budget, and its progress must be recorded in the **Operational Risk Control** format.

5.5 Critical Control Management

Critical controls must be identified and validated using effectiveness criteria. Each control must have:

- A functional description.
- An execution owner and a monitoring owner.
- Evidence of compliance.
- Performance indicators and a review frequency.

Classification of Critical Controls:

- **Acts:** Essential human actions (decisions, validations, alerts).
- **Objects:** Automatic devices or equipment.
- **Systems:** Integrated combinations of acts and objects.

5.6 Monitoring and Review

Ensures that risks, controls, and plans remain current and effective.

Required activities:

- Follow-up of active risks and trends.
- Review of critical controls and performance validation.
- Post-event review to incorporate lessons learned.
- Update of the register in response to changes in context, incidents, or emerging risks.

Frequency:

- **Monthly:** At the operating unit level.
- **Quarterly:** At the corporate level.
- **Immediate:** Following relevant materializations.

Risk closure is authorized only when the exposure period has ended or when the risk has materialized and been documented.

6.0 FORMATS AND RECORDS

Consult the Risk Management Office:

- BVN Operational RBS (risk categories).
- Operational Risk Assessment Matrix.
- Operational Risk Register Format and Operational Risk Control.

7.0 REVIEW

Apply Procedure 'P-COR-SIB-04.08 Document Management'.

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8.0 LEGAL REFERENCES AND OTHER STANDARDS

- ISO 31000
- COSO ERM
- PMI
- OmniRiesgo Methodology
- Buenaventura Risk Management Policy

9.0 ANNEXES

- **Annex 01:** Risk Management Flow Diagram.

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Annex 01
Risk Management Flow Diagram

