**FINNISH TOWARDS SUSTAINABLE MINING (TSM) STANDARD**

**ASSESSMENT PROTOCOL**

**A Tool for Assessing Water Management Performance**

**Introduction**

This document provides a tool for assisting companies in the site- or facility-level assessment of their current standard of water management. The level of water management performance is monitored using four performance indicators in accordance with this assessment tool. It enables key performance indicators to be segregated, and performance improvements for each indicator to be tracked from year to year. The use of this protocol also enhances the consistency of water management performance assessments conducted across companies. In addition, the tool has been designed to enable the external verification of company performance.

**Assessing Water Management Implementation**

The purpose of the assessment protocol is to provide guidance – based on performance indicators – to companies in their planning and implementation of water management.

The assessment should:

* assist companies in developing their capacity to monitor and improve their performance
* provide a basis for the related auditing.

Professional judgement is required when assessing the management system. Application of the assessment protocol of the Finnish TSM standard requires that the assessor have sufficient expertise in the practice of water management and management systems assessment. When carrying out an assessment, account must be taken of cooperation between the employer and employees. The assessment protocol of the Finnish TSM standard is not, in itself, a guarantee of the effectiveness of water management activities, but can be used to measure performance levels. A self-assessment checklist is attached to this document (Appendix 2).

# Performance Indicators

Four performance indicators have been established for water management:

1. Water management policy and commitment
2. Risk management and planning of activities in water management
3. Water management system
4. Reporting on water management

Five levels of performance are identified for each indicator. Assessment criteria are used to further define performance at each level. The assessor must evaluate whether the company or the performance of the site/facility meets the assessment criteria for the performance indicators, by answering the questions presented in the self-assessment checklist. A base assumption is made that all companies are in compliance with all legal and regulatory requirements.

Specific assessment criteria for each performance indicator are provided in subsequent tables, to enable the assessor to determine an appropriate level of performance (Levels C-AAA). When conducting the assessment, assessors should note that the four indicators complement one another. The performance level is determined by the fulfilment of the requirements of the criteria.

Wherever a performance element or performance indicator is irrelevant, the assessment given should be N/A. For each indicator, only one level can be reached, which is determined by the lowest level that meets the requirements. All criteria at that level and below must be met. The overall level of the Water Management is determined by the lowest level achieved.

**The goal of each company is to achieve an “A” ranking at a minimum and to work towards continuous improvement.**

## Facility-level Assessments

Companies are expected to complete an assessment and report on the performance indicators for water management for each distinct site or facility. When planning the assessment, account must be taken of the organisational structure of mining operators, as companies may categorise their facilities and define their sites in various ways. This assessment protocol focuses on companies operating in Finland and their sites and facilities, in particular.

Facility-level reporting has been found to be the most reliable, informative and useful approach to performance evaluation.

**Assessment Process**

It is recommended that the assessment include interviews, discussions and document reviews. The assessment must involve the management, as well as production and specialist personnel representing the site or facility. A level of expertise in auditing and management systems assessment and some knowledge and experience of water management are required. For each performance indicator, only one level can be reached if all criteria for that level and all preceding levels have been met. No partial levels of performance (e.g. B+) can be reported.

Where an operation is shared between two parties, e.g. a joint venture, the two parties are encouraged to discuss who should complete the assessment, and whether it should be undertaken jointly or divided up so that the results reflect the activities of each company.

**Structure of the Assessment Protocol**

For each performance indicator, the assessment protocol provides:

* a statement of purpose that expresses the spirit and intent of the indicator
* assessment criteria for each level of performance (C-AAA)
* supporting guidelines to help the assessor understand the general scope of each indicator and to act as a framework for reviewing documentation and conducting interviews necessary for the assessment of the company’s or site’s/facility’s performance
* Frequently Asked Questions (FAQs) that provide further information, such as definitions of key terms and answers to more commonly asked questions.

**PERFORMANCE INDICATOR 1**

**POLICY AND COMMITMENT**

**Purpose:**

To confirm that companies have established a water management policy and commitment that express intent, commitments and principles in relation to water management at the mine.

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|  **Performance Indicator 1****Policy and Commitments****ASSESSMENT CRITERIA** |
| **Level** | **Criteria** |
| **C** | Activities meet the requirements set in Finnish legislation and in the environmental and water management permit. No formal water management policy and commitment have been developed, and overall site management policies and commitments do not specifically address water management. |
| **B** | Water management policy and commitment are in place, or overall site management policies specifically address water management. Water management policy and commitment are not fully in conformance with the Level A description. |

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| **A** | The water management policy and commitment endorsed by the highest level of corporate management describe:* how the company manages waters in the water cycle of its operations, as well as surface and ground water reserves in the area affected by its operations throughout the operational life cycle
* how the company has prepared for exceptional circumstances and climate change in its water management
* how the company manages risks associated with water management
* how the company communicates with communities of interest and helps them understand the water-use needs of its operations and the potential impacts of its operations on the surface and ground water resources in the area
* how communities of interest were consulted during the preparation of the policy and the commitment
* how the company commits to complying with all applicable laws and regulations in all of its operations
* how the company commits to ensuring employee health and safety relating to water
* how the company commits to continuously developing its water management measures throughout the mine’s life cycle
* how the company assigns and ensures that there are necessary and sufficient resources for the planning, implementation and monitoring of and reporting on water management measures
* how the company implements openness and responsibility in its water management.

The contents of the policy and commitment are communicated to key personnel, contractors and subcontractors at the facility.The policy and commitment are publicly available.Internal audit has been conducted to ensure that the policy and commitment are in conformance with the requirements in level A. *The company commits to safeguarding the right of the Sámi to maintain and develop their own culture, especially with respect to fishing.* The company also commits to safeguarding the water-use needs of other local residents affected by its mining operations. |
| **AA** | The water management policy and commitment have been confirmed through an external independent audit. |
| **AAA** | The water management policy includes a commitment to actively partner with other water users in the area in order to promote joint sustainable water management there. The commitment defines the roles and responsibilities of the partners and allocates the resources required.The external audit, as outlined in Level AA, also involves an evaluation of the effectiveness of the policy, commitments and their implementation.*The company commits to obtaining the free, prior and informed consent of the Sámi Parliament, and in addition, in the Skolt Sámi area, of the village meeting of the Skolt Sámi.* |

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| **Water Management Policy and Commitment****FREQUENTLY ASKED QUESTIONS** |
| **No. in APPX. 1.** | **FAQ** | **PAGE** |
| 1 | [Does a “water management policy” have to be a stand-alone document?](#_bookmark10) | See page 15 |
| 2 | [Can corporate documentation be used to demonstrate commitment?](#_bookmark12) | See page 15 |
| 3 | [What does COI consultation mean?](#_bookmark14) | See page 15 |
| 4 | What is meant by “employee health and safety relating to water”? | See page 15 |
| 5 | What is meant by “life cycle”? | See page 16 |
| 14 | [What does “audit” mean?](#_bookmark25) | See page 17 |
| 15 | [What is a community of interest (COI)?](#_bookmark19) | See page 17 |
| **Water Management Policy and Commitment****SUPPORTING GUIDELINES FOR THE ASSESSOR**Through interviews and the review of documentation, clarify the following issues:* The company has established and maintains a facility level policy and commitment for water management and practice is in line with them.
* The policy and commitment accurately reflect the existing commitments and views of senior management regarding expected water management performance.
* The policy and commitment are fully in conformance with the Level A description.
* The policy and commitment are endorsed by senior management.
* An internal or external audit has been carried out at the site within the last three years to confirm that the policy and commitment are fully in conformance with the Level A description.
* The policy and commitment are endorsed by the highest level of corporate management.
* The policy includes a commitment to actively partner with other actors or communities, including assigned resources and responsibilities (with the Sámi Parliament in the Sámi Homeland and the village meeting of the Skolt Sámi in the Skolt Sámi area).
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# PERFORMANCE INDICATOR 2

# RISK MANAGEMENT AND PLANNING OF ACTIVITIES

**Purpose:**

To confirm that the company plans its water management activities comprehensively and in open dialogue and cooperation with communities of interest, is aware of the water management risks associated with its operations and has plans for facility-specific measures to manage risks.

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| **Performance Indicator 2****Risk Management and Planning of Activities****ASSESSMENT CRITERIA** |
| **Level** | **Criteria** |
| **C** | Activities meet the requirements set in Finnish legislation. No separate water management action plan in place. The elements of a water management action plan have been assessed/considered as required by legislation and the environmental permit.A monitoring plan has been developed as required by legislation (environmental and water management permit).No separate risk assessment or risk management plan has been drawn up relating to water management. A risk assessment has been prepared as required by legislation (environmental and water management permit). |
| **B** | The facility’s* primary data has been collected;
* water balance covering the entire area of operations has been prepared, with calculations for both average and exceptional hydrological conditions;
* groundwater resources at the mining site and in its vicinity have been surveyed, and the groundwater flow has been simulated;
* impacts on water bodies have been assessed; and
* risks relating to the water management have been identified and assessed, and a risk management plan has been prepared.

A separate water management action plan is being developed.Responsibility for water management is assigned to certain people at the facility, but their responsibilities are not clearly defined.Key local and regional communities of interest have been named and identified. The company has communicated with communities of interest about plans and measures relating to water use, water supply and impacts on water bodies. *When operating in the Sámi Homeland or Skolt Sámi area, the company has communicated with the Sámi Parliament in the Sámi Homeland and the village meeting of the Skolt Sámi in the Skolt Sámi area about measures relating to water use, water supply, impacts on water bodies and the prerequisites allowing the Sámi to practise their own culture.* |
| **A** | A separate water management action plan is in place and cover the entire mine life cycle. Action plan includes at least the following:* Site-specific primary data, supplemented with data from measurements performed by the operator.
* All water fractions generated in the area of operations have been identified, and a water balance covering the entire area of operations has been prepared.
* The quality of all water fractions has been established. With respect to uncertain water fractions, the action plan describes how data will be updated with measured values to be obtained later.
* The impacts on water bodies have been specified. Any possible compensation measures have been planned. In the Sámi Homeland, impacts on the prerequisites allowing the Sámi to practise their own culture have been specified in detail.
* Measures in exceptional hydrological conditions and in the event of an emergency.

The monitoring plan provides a detailed description of environmental monitoring and operative monitoring relating to the waters on the site and in the affected area.A separate risk assessment and a risk management plan for water management.* Risks relating to the quantity and quality of water have been identified, specified and assessed.
* Social risks relating to the communities of interest in the area affected by impacts on water bodies have been identified, specified and assessed. *Cultural and social risks relating to the prerequisites allowing the Sámi to practise their own culture have been identified, specified and assessed in cooperation with the Sámi Parliament in the Sámi Homeland and the village meeting of the Skolt Sámi in the Skolt Sámi area.*

Water management planning is integrated into annual business planning and budgeting processes. Tasks related to water management have been assigned to certain people at the facility.The management at the facility is aware of water management risks and risk control measures, both at the facility and with respect to water bodies in the affected area.The company has communicated with local and regional communities of interest about plans and measures relating to water use, water supply and impacts on water bodies. Communities of interest have been consulted and their views have been considered in the planning of water management.The practices have been confirmed in an internal audit. |
| **AA** | The company has agreed on joint action with local, regional and national communities of interest in order to collect additional information for the development of water management planning. *In the Sámi Homeland, traditional Sámi knowledge and practices are respected and observed in water management planning.*Water management plans have been confirmed through an external independent audit.  |
| **AAA** | The water management action plan defines an objective relating to the impact of the company with respect to at least one of the following:* The company invests in research and development aimed at developing water management knowhow in the mining industry.
* The company contributes to research increasing awareness of freshwater reserves or aimed at protecting waters.
* The company contributes to the preparation or development of water management guidance within the industry or regionally.
* The company participates significantly in the protection of freshwater resources or compensation measures in or outside its production area.

The external audit, as outlined in Level AA, also involves an evaluation of the effectiveness of the water management plans. |

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| **Risk Management and Planning of Activities****FREQUENTLY ASKED QUESTIONS** |
| **No. in APPX. 1.** | **FAQ** | **PAGE** |
| 3 | [What does COI consultation mean?](#_bookmark14) | See page 15 |
| [5](#_bookmark13) | What is meant by “life cycle”? | See page 16 |
| 6 | What does site-specific primary data include? | See page 16 |
| 7 | Which water fractions are taken into account in the water balance for the area? | See page 16 |
| 8 | What is meant by “impacts on water bodies have been specified in detail”? | See page 16 |
| 9 | What is meant by “exceptional hydrological conditions”? | See page 16 |
| 10 | What is a “detailed monitoring plan”? | See page 16 |
| 14 | [What does “audit” mean?](#_bookmark19) | See page 17 |
| 15 | [What is a community of interest (COI)?](#_bookmark25) | See page 17 |
| **Risk Management and Planning of Activities****SUPPORTING GUIDELINES FOR THE ASSESSOR**Through interviews and the review of documentation, clarify the following issues:* The company has a site-specific water management action plan.
* The facility has a water balance covering the entire area of operations, based on reliable hydrological data.
* Impacts on water bodies have been assessed with respect to changes in flow rates and water quality. *In the Sámi Homeland, the impacts of the operations on water bodies have been assessed in relation to the prerequisites allowing the Sámi to practise their own culture.*
* The mine has a detailed monitoring plan.
* Risks associated with water management have been identified at the site.
* Tasks related to water management have been assigned to certain people at the facility.
* Key communities of interest have been named and identified. The company has communicated with communities of interest about plans and measures relating to water use, water supply and impacts on water bodies. *The company has communicated with the Sámi Parliament in the Sámi Homeland and the village meeting of the Skolt Sámi in the Skolt Sámi area about measures relating to water use, water supply, impacts on water bodies and the prerequisites allowing the Sámi to practise their own culture.*
* Risks associated with water management at the site have been specified and assessed, and a risk management plan has been prepared based on the risks.
* The company can demonstrate that communities of interest have been consulted in the planning of water management, and that social risks relating to communities of interest have been identified. A risk management plan has been prepared to manage social risks. *Cultural and social risks relating to the prerequisites allowing the Sámi to practise their own culture have been identified, specified and assessed in cooperation with the Sámi Parliament in the Sámi Homeland and the village meeting of the Skolt Sámi in the Skolt Sámi area.*
* Facility-level water management plans also comprehensively cover operations in exceptional hydrological conditions and in the event of an emergency. The plans cover the entire mine life cycle.
* Tasks related to water management have been assigned to certain people at the facility, and the facility can demonstrate that its management is aware of water management risks and risk control measures at the facility.
* Water management and is included as a separate item in the annual budget and business plan of the facility, and adequate budgetary provisions are made for the implementation of improvement measures.
* The company can demonstrate that it has agreed on joint action with local, regional and national communities of interest in order to collect additional information for the development of water management planning at the mine or regionally. *In the Sámi Homeland, traditional Sámi knowledge and practices have been used as a source of information for water management planning with a view to respecting, preserving, protecting and maintaining Sámi traditions.*
* A formal internal or external independent audit has been carried out at the site within the last three years in order to confirm that the water management plans are fully in conformance with the Level A and AA description.
* The company aims to develop the industry by taking measures to increase knowhow and protect waters.
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**PERFORMANCE INDICATOR 3**

**MANAGEMENT SYSTEM**

**Purpose:**

To confirm that the management system is in place, which includes a framework for example risk assessment, setting of objectives, stakeholder consultation, planning in order to achieve the set objectives and definition of responsibilities.

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| **Performance Indicator 3****Management System****ASSESSMENT CRITERIA** |
| **Level** | **Criteria** |
| **C** | Activities meet the requirements set in Finnish legislation. No separate water management system in place. The elements of a water management system have been assessed/considered as required by legislation (environmental permit and water management permit). |
| **B** | A separate water management system is in place that describes at least the following:* objectives and plans to achieve them
* technical solutions for water management
* how the water balance of the mine has been taken into account in the dimensioning of the technical solutions
* what measures are taken to provide the facility with clean drinking water and functioning sanitation
* how the mine’s water balance prepared for exceptional situations has been taken into account in the dimensioning of the technical solutions, or what additional measures are taken in exceptional conditions
* how the monitoring data produced is taken into account in the existing water management system
 |
| **A** | A separate water management system is in place which that describes at least the following (in addition to the Level B elements):* how the effectiveness of water body-specific compensation measures is assessed and how measured data is applied in the development of the compensation measures.
* how the water balance of the mine and the area-specific water balances are updated and what detailed changes the updating of the water balance can cause in the technical implementation of water management.
* how and on what basis the monitoring plan (environmental monitoring and operative monitoring) is updated based on the measured monitoring data, and how the monitoring results are taken into account in the development of water management.
* the measures what have been taken defined in the detailed risk management plan.
* how feedback related to water management measures is collected and taken into account in the development of activities.

An internal audit has been carried out at the site to confirm that the water management system is fully in conformance with the Level A and B description. |
| **AA** | The management system has been developed in consultation with key communities of interest. *In the Sámi Homeland, guidance has been developed in cooperation with the Sámi Parliament and, in the Skolt Sámi area, with the village meeting of the Skolt Sámi.*The water management system has been confirmed in an external independent audit. |
| **AAA** | The water management system represents the best available techniques (BAT) and contributes to at least two of the following:* The mining industry’s understanding of or contribution to water management
* Regional water body-specific guidance in accordance with best practices
* Scientific development relating to mine water management or other protection of waters
* Regional or nationally significant protection of waters.

The external audit, as outlined in Level AA, also involves an evaluation of the effectiveness of the water management system and continual improvement of activities. |

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| **Management System****FREQUENTLY ASKED QUESTIONS** |
| **No. in APPX. 1.** | **FAQ** | **PAGE** |
| 3 | [What does COI consultation mean?](#_bookmark14) | See page 15 |
| 11 | What are technical solutions for water management? | See page 16 |
| 12 | What is meant by “describes technical solutions for water management in detail”? | See page 17 |
| 13 | What are water body-specific compensation measures? | See page 17 |
| 14 | What does “audit” mean? | See page 17 |
| 15 | What is a community of interest (COI)? | See page 17 |
| 16 | What is a “system”? | See page 18 |
| **Management System****SUPPORTING GUIDELINES FOR THE ASSESSOR**Through interviews and the review of documentation, clarify the following issues:* The company has a site-specific water management system that gives a detailed description of the mine’s technical solutions for water management, the measures taken to provide drinking water and sanitation and the provisions made for exceptional water management situations.
* In addition, the management system describes water body-specific compensation measures and how their effectiveness is assessed.
* The management system describes how the water balance is updated and calibrated on the basis of the measured monitoring data, and what detailed changes can be made to the system in practice.
* The measures defined in the detailed risk management plan have been taken.
* An internal or external audit or assessment has been carried out at the site within the last three years to confirm that the water management system is fully in conformance with the Level A / AA description.
* The company contributes to the development of the industry by taking measures to increase knowhow and protect waters.
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**PERFORMANCE INDICATOR 4**

**REPORTING**

**Purpose:**

To confirm that the site has developed and implemented appropriate reporting on facility-specific water management measures. Reporting includes reporting on water management plans, risk management, monitoring results and the practical measures taken.

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| **Performance Indicator 4****Reporting****ASSESSMENT CRITERIA** |
| **Level** | **Criteria** |
| **C** | Facility-specific reporting on water management is in place, or separate reporting is being developed. The elements of reporting have been assessed/considered as required by legislation (environmental permit and water management permit). |
| **B** | Facility-specific reporting on water management includes plans, monitoring results and the practical measures taken.Facility-specific water management monitoring results and practical measures are reported to the facility management on a regular basis. |
| **A** | Reporting supports facility-level budgeting and decision-making.The state of water management, the progress achieved towards water management objectives as well as the development measures taken and planned are reported to the facility management and communities of interest on a regular basis.Communications are open and reporting is public and popular. Feedback on reporting is collected regularly.An internal audit has been carried out at the site to confirm that the water management reporting is fully in conformance with the Level A description. |
| **AA** | Water management reporting has been confirmed in an external independent audit. Company is committed to developing its activities on the basis of the recommendations made in the audit. |
| **AAA** | Facility-specific water management is reported annually as part of formal, annual corporate reports.In an external independent audit has been confirmed that public reporting meets the requirements of the best available practices. |

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| **Reporting****FREQUENTLY ASKED QUESTIONS** |
| **No. in APPX. 1.** | **FAQ** | **PAGE** |
| 14 | [What does “audit” mean?](#_bookmark19) | See page 17 |
| 17 | What is meant by a “popular report”? | See page 18 |
| **Reporting****SUPPORTING GUIDELINES FOR THE ASSESSOR**Through interviews and the review of documentation, clarify the following issues:* The mine has implemented reporting on facility-specific water management measures (separate reporting or as part of other reporting systems).
* The state of water management is reported to the facility management and communities of interests on a regular basis.
* The public reporting is popular/easy to understand.
* The site has audit processes in place to ensure that the reporting is appropriate.
* The state of water management, monitoring and the development measures taken and planned are also reported as part of formal, annual corporate reports.
* The reporting system represents the best available practice.
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# APPENDIX 1:

# Assessing Water Management Performance

# FREQUENTLY ASKED QUESTIONS

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| **No.**  | **FAQ** | **PAGE** |
| 1 | [Does a “water management policy” have to be a stand-alone document?](#_bookmark10) | See page 15 |
| 2 | [Can corporate documentation be used to demonstrate commitment?](#_bookmark12) | See page 15 |
| 3 | [What does COI consultation mean?](#_bookmark14) | See page 15 |
| 4 | What is meant by “employee health and safety relating to water”? | See page 15 |
| 5 | What is meant by “life cycle”? | See page 16 |
| 6 | What does site-specific primary data include? | See page 16 |
| 7 | Which water fractions are taken into account in the water balance for the area? | See page 16 |
| 8 | What is meant by “impacts on water bodies have been specified in detail”? | See page 16 |
| 9 | What is meant by “exceptional hydrological conditions”? | See page 16 |
| 10 | What is a “detailed monitoring plan”? | See page 16 |
| 11 | What are technical solutions for water management? | See page 16 |
| 12 | What is meant by “describes technical solutions for water management in detail”? | See page 17 |
| 13 | What are water body-specific compensation measures? | See page 17 |
| 14 | What does “audit” mean? | See page 17 |
| 15 | [What is a community of interest (COI)?](#_bookmark25) | See page 17 |
| 16 | What is a “system”? | See page 18 |
| 17 | What is meant by a “popular report”? | See page 18 |

## Does a “water management policy” have to be a stand-alone document?

No. The requirement for a specific water management policy can be met within an overarching corporate policy or environmental policy if that policy contains a specific reference to water management.

## Can corporate documentation be used to demonstrate commitment?

A written senior management commitment at corporate level (e.g. a corporate policy) can be accepted as evidence during a corporate and/or site-/facility-level self-assessment or verification of the Finnish TSM standard, if accompanied by evidence that the corporate commitment is being applied and adhered to at facility or site level. There must be evidence of a link between the corporate documentation and site- or facility-level practices. If such a linkage is established, corporate documentation can be accepted as evidence of site- or facility-level commitment.

## What does COI consultation mean?

Consultation is a process by which a company communicates with communities of interest in order to understand their viewpoint(s), to inform them of company activities and performance, and to actively engage them in discussion and participation on any issues of concern.

## What is meant by “employee health and safety relating to water”?

Each employee has the right to clean drinking water and hygienic sanitation. The safety of employees involved in mine water management must not be endangered due to the quality of water or risks caused by flowing water.

## What is meant by “life cycle”?

The life cycle of a mine consists of four main phases: exploration, construction, production and closure. Exploration has its own responsibility standard, but some of the operating mines also carry out exploration measures, for example in the area of the mining district, in which case the sustainable mining standard is applied. The life cycle of mining projects is always limited, so closure planning is an integral part of mining operations.

## What does site-specific primary data include?

* Hydrological data (precipitation, temperature, evaporation, water equivalent of snow, runoff values for the area)
* Discharge data for the water bodies in the area (average flow for each section of the water body, as well as discharge data for peak flow and low flow periods)
* Water quality data for the water bodies in the area (quality of flowing water for each section of the water body as accurately as possible in different discharge situations, including peak flow and low flow periods)
* Other polluters of the receiving water, specified and with a description of the pollutant load discharged

## Which water fractions are taken into account in the water balance for the area?

All water fractions generated in the area of operations of the mine must be taken into account in the water balance. Water fractions may vary between sites to some extent, but include the following: mine drain waters, runoff from gangue areas, runoff from tailings facilities and water released from tailings, water fractions required by and leaving the process (with concentrate and tailings), waters removed from the water cycle and storm water from yard areas.

## What is meant by “impacts on water bodies have been specified in detail”?

Impacts on water bodies have been specified for each section of the water body with respect to fish fauna, flora and aquatic organisms. A more detailed impact assessment has been conducted than required by the environmental and water management permit. In the Sámi Homeland, the impacts on water bodies have been specified with respect to the prerequisites allowing the Sámi to practise their own culture.

## What is meant by “exceptional hydrological conditions”?

Exceptional hydrological conditions refer to exceptionally dry or wet conditions that can lead to exceptional measures compared to normal water management at the mine. These include long continuous dry or wet periods (e.g. a situation deviating from the average occurring once in a hundred years) or a momentary rainstorm (e.g. a rainstorm occurring once in 500 years in the summer).

## What is a “detailed monitoring plan”?

A detailed monitoring plan describes the following for each monitoring point:

* what is monitored at the point
* whether the data obtained from the point is used for environmental or operative monitoring (or both)
* how monitoring/measurement is implemented
* structures relating to the monitoring point
* the exact location of the point
* the measuring equipment and its calibration
* the constraints set on measurement by the measuring equipment
* how data is collected from the point
* how data collected from the point is entered into the system.

## What are technical solutions for water management?

Technical solutions refer to pumping stations, pumping pipelines, ditches, retention structures or water treatment structures. Water treatment structures can be active or passive systems.

## What is meant by “describes technical solutions for water management in detail”?

Each component of the system is specified, and information is provided on the dimensioning of each component.

## What are water body-specific compensation measures?

Compensation measures may concern fish fauna (transplanting), fauna or water volumes (e.g. reduction in discharge compensated for by pumping of groundwater), for example. Compensation measures can be either prescribed in the environmental permit or voluntary.

## What does “audit” mean?

The purpose of the water management audit is to show that the water management has been carried out in accordance with the guidelines. Internal audit is conducted by a person or group, which may consist of the company’s employees, but which must be independent, impartial, and objective with respect to the matter being audited (water management). External audit is conducted by an independent, impartial and objective person or group, such as an independent consultant. The findings and conclusions of the audit are based only on the evidence. Audits are valid for three (3) years.

Audit should not be confused with the verification system, which is largely a desk-top exercise in which the TSM rating self-assigned by a facility or company against a given performance indicator is verified. The TSM verification is not equivalent to an audit of tailings facility management as outlined in the preceding paragraph.

## What is a community of interest (COI)?

Communities of interest include all individuals and groups that have an interest in, or believe they may be affected by, decisions relating to the operational management. They include, but are not restricted to:

* employees
* neighbours
* landowners
* recreational users of the affected area
* the Sámi, the village meeting of the Skolt Sámi in the Skolt Sámi area
* reindeer herding co-operatives and reindeer herders
* professional fishermen and holders of fishing rights
* mining community members
* suppliers
* representatives of other livelihoods
* customers
* contractors
* environmental organisations and other non-governmental organisations
* governments, authorities
* the financial community, and
* shareholders.

## What is a “system”?

A “system”, or “management system”, represents processes that collectively provide a systematic framework for ensuring that tasks are performed correctly, consistently and effectively in order to achieve specified objectives and to drive continual improvement in performance. A systems approach requires an assessment of what needs to be done, planning in order to achieve the set objectives, the implementation of the plan, and a review of performance in meeting the objectives. A management system also considers any personnel and resource requirements and how the documentation required for the system’s implementation will be created. The documentation covers all types (paper documents, intranet documents, electronic documents, etc.) of or requirements for documentation. Not all practices need to be documented.

Within any system, processes and activities are usually given a certain status based on clear and precise requirements that are documented as a written procedure, for example. This means that the company can clearly and easily demonstrate that the process or system in question is in place. This would also typically require documented processes or an “audit trail”.

Other definitions associated with systems are:

* Commitment: The formal expression of the management’s commitment to a particular set of issues that presents the stance of the company with respect to interested external parties. A commitment can be expressed as part of the operational principles or policy of a company.
* Practice: Informal, undocumented approaches to carrying out a task.
* Procedure:A formalised, documented description of how a task is to be carried out.

## What is meant by a “popular report”?

Popular reporting refers to a report that contains relevant findings and conclusions that are significant to water quality and impacts. The results should be reported in a form that is clearly understandable.

# APPENDIX 2: SELF-ASSESSMENT CHECKLIST

***Water Management***

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| --- | --- | --- | --- |
| **Facility/Site:** |  | **Company:** |  |
| **Assessed by:** |  | **Date submitted:** |  |

|  |
| --- |
| **SUPPORTING DOCUMENTATION/EVIDENCE:** |
| **NAME OF DOCUMENT** | **LOCATION** |
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| **Interviewees:** |
| **NAME** | **POSITION** | **NAME** | **POSITION** |
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|  | **Question** | **Y** | **N** | **NA** | **Description & Evidence** |
| **INDICATOR 1: WATER MANAGEMENT POLICY AND COMMITMENT** |
| **Indicator 1****Level B** | Has the company established a water management policy and commitment? |  |  |  |  |
| *If you have answered “Yes” to the Level B question, continue to the Level A questions. If you have not answered “Yes” the Level B question, the site is a Level C site.* |
| **Indicator 1****Level A** | Are the policy and commitment fully in conformance with the Level A description? |  |  |  |  |
| Are the policy and commitment endorsed by senior management? |  |  |  |  |
| Are the contents of the policy and commitment communicated to key personnel, contractors and subcontractors at the facility?  |  |  |  |  |
| Are the policy and commitment publicly available? |  |  |  |  |
| Has an internal audit been conducted in the facility and determined that the policy and commitment are fully in conformance with the Level A description? |  |  |  |  |
| *Is the company committed to safeguarding the right of the Sámi to maintain and develop their own culture, especially with respect to fishing?* |  |  |  |  |
| Is the company committed to safeguarding the water use needs of other local residents affected by its mining operations? |  |  |  |  |
| *If you have answered “Yes” to all of the Level A questions, continue to the Level AA question. If you have not answered “Yes” to all of the Level A questions, the site is a Level B site.* |
|  **Indicator 1****Level AA** | Has an external independent audit been carried out to confirm that the policy and commitment are fully in conformance with the Level A description? |  |  |  |  |
| *If you have answered “Yes” the Level AA question, continue to the Level AAA questions. If you have not answered “Yes” to the Level AA question, the site is a Level A site.* |

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| **Indicator 1** **Level AAA** | Does the water management policy include a commitment to actively partner with other water users in the area, including resource allocation and assigned roles and responsibilities? |  |  |  |  |
| Did the external audit for Level AA include an evaluation of the effectiveness of the policy, commitment and their implementation? |  |  |  |  |
| *Is the company committed to obtain the free, prior and informed consent of the Sámi Parliament and in addition of the village meeting of the Skolt Sámi in Skolt Sámi area?* |  |  |  |  |
| *If you have answered “Yes” to all of the Level AAA questions, the site is a Level AAA site. If you have not answered “Yes” to all of the Level AAA questions, the site is a Level AA site.* |
|  | **ASSESSED LEVEL OF THE COMPANY’S PERFORMANCE FOR INDICATOR 1** | **Level:**   |

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| --- | --- | --- | --- | --- | --- |
|  | **Question** | **Y** | **N** | **NA** | **Description & Evidence** |
| **INDICATOR 2: RISK MANAGEMENT AND PLANNING OF ACTIVITIES IN WATER MANAGEMENT**  |
| **Indicator 2** **Level B** | Has the facility’s primary data been collected?  |  |  |  |  |
| Does the site have a water balance? Does it cover both average and exceptional hydrological conditions? |  |  |  |  |
| Has groundwater been surveyed and groundwater flow been simulated? |  |  |  |  |
| Have impacts on water bodies been assessed? |  |  |  |  |
| Have risks associated with water management been identified at the site? Is there a risk management plan in place?  |  |  |  |  |
| Is a separate water management action plan being developed? |  |  |  |  |
| Is the responsibility for water management assigned to certain people at the facility? |  |  |  |  |
| Have key communities of interest been named and identified? |  |  |  |  |
| Has the company communicated with communities of interest about plans and measures relating to water use, water supply and impacts on water bodies? |  |  |  |  |
| *Has the company communicated with the Sámi parliament in the Sámi Homeland and the village meeting of the Skolt Sámi in the Skolt Sámi area about measures relating to water use, water supply, impacts on water bodies and the prerequisites allowing the Sámi to practice their own culture?* |  |  |  |  |
| *If you have answered “Yes” to all of the Level B questions, continue to the Level A questions. If you have not answered “Yes” to all of the Level B questions, the site is a Level C site.* |

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| **Indicator 2****Level A** | Is there a separate water management action plan in place and does it cover for the entire life cycle of the mine? |  |  |  |  |
| Does the water management action plan include:* Site specific primary data, supplemented with data from measurements performed by the operator?
* Water balance which covers entire area of the operations?
* The quality of all water fractions?
* Description of the impacts on water bodies and any possible compensation measures? *The impacts on the prerequisites allowing the Sámi to practise their own culture specified in detail?*
* Measures in exceptional hydrological conditions and in the event of an emergency?
 |  |  |  |  |
| Does the monitoring plan provide a detailed description of environmental monitoring and operative monitoring relating to the waters on the site and in the affected area? |  |  |  |  |
| Is there a separate risk assessment and risk management plan for water management? Does it include identification, specification and assessment of following: * Risks relating to quantity and quality of water?
* Sosial risks relating to the communities of interests in the area affected by impacts on water bodies?
* *Cultural and social risks relating to the prerequisites allowing the Sámi to practise their own culture in cooperation with the Sámi Parliament in the Sámi Homeland and the village meeting of the Skolt Sámi in the Skolt Sámi area?*
 |  |  |  |  |
| Is water management included as a separate item in the annual budget and business plan of the facility? |  |  |  |  |
| Have tasks related to water management been assigned to certain people at the facility? |  |  |  |  |
| Can the facility demonstrate that its management is aware of water management risks and risk control measures at the facility? |  |  |  |  |
| Has the company communicated with local and regional COIs about plans and measures relating to water use, water supply and the impacts on water bodies? |  |  |  |  |
| Have the communities of interests been consulted and their views been considered in the planning of water management? |  |  |  |  |
| Has an internal audit been conducted and determined that the water management plans are fully in conformance with the Level A description? |  |  |  |  |
| *If you have answered “Yes” to all of the Level A questions, continue to the Level AA questions. If you have not answered “Yes” to all of the Level A questions, the site is a Level B site.* |
| **Indicator 2** **Level AA** | Can the company demonstrate that it has agreed on joint action with local, regional and national communities of interest in order to collect additional information for the development of water management planning at the mine? |  |  |  |  |
| *In the Sámi Homeland, are traditional Sámi knowledge and practices respected and observed in water management planning?* |  |  |  |  |
| Has an external independent audit been carried out to evaluate the water management plans? |  |  |  |  |
| *If you have answered “Yes” to all of the Level AA questions, continue to the Level AAA questions. If you have not answered “Yes” to all of the Level AA questions, the site is a Level A site.* |
| **Indicator 2** **Level AAA** | Does the water management action plan define an objective with respect at least one of the following: * The company invests in research and development aimed at developing water management and knowhow in the mining industry;
* The company contributes to research increasing awareness of freshwater reserves or aimed to protecting waters;
* The company contributes to the preparation or development of water management guidance within the industry or regionally;
* The company participates significantly in the protection of freshwater resources or compensation measures in or outside its production area?
 |  |  |  |  |
| Did the external audit for Level AA include an evaluation of the effectiveness of the water management plans? |  |  |  |  |
| *If you have answered “Yes” to all of the Level AAA questions, the site is a Level AAA site. If you have not answered “Yes” to all of the Level AAA questions, the site is a Level AA site.* |
|  | **ASSESSED LEVEL OF THE COMPANY’S PERFORMANCE FOR INDICATOR 2** | **Level:**   |

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|  | **Question** | **Y** | **N** | **NA** | **Description & Evidence** |
| **INDICATOR 3: WATER MANAGEMENT SYSTEM** |
| **Indicator 3** **Level B** | Does the company have a site-specific water management system in place that describes at least the following: * objectives and plans to achieve them;
* technical solutions for water management and how the water balance has been taken into account in the dimensioning;
* the measures taken to provide the facility with clean drinking water and functioning sanitation;
* provisions made for exceptional water management situations;
* how the monitoring data produced is taken into account in the management system?
 |  |  |  |  |
| *If you have answered “Yes” to all of the Level B questions, continue to the Level A questions. If you have not answered “Yes” to all of the Level B questions, the site is a Level C site.* |
| **Indicator 3** **Level A****Indicator 3** **Level AA** | In addition to the above, does the management system describe * how the effectiveness of water body-specific compensation measures is assessed and how measured data is applied in the development of compensation measures;
* how the water balance is updated and what detailed technical changes can be made to the system;
* how and what basis the monitoring plan is updated based on the monitoring data, and how the monitoring results are taken into account in the development of water management;
* the measures what have been taken defined in the detailed risk management plan;
* how a feedback related to water management measures is collected and taken into account in the development of activities?
 |  |  |  |  |
| Has an internal audit been conducted and determined that the water management system is fully in conformance with the Level A and B description? |  |  |  |  |
| *If you have answered “Yes” to all of the Level A questions, continue to the Level AA questions. If you have not answered “Yes” to all of the Level A questions, the site is a Level B site.* |
| **Indicator 3** **Level AA** | Has the water management system been developed in consultation with key communities of interest? *In the Sámi Homeland in cooperation with Sámi parliament and, in the Skolt Sámi area, with the village meeting of Skolt Sámi.* |  |  |  |  |
| Has an external independent audit been carried out to evaluate the water management system? |  |  |  |  |
| *If you have answered “Yes” to all of the Level AA questions, continue to the Level AAA questions. If you have not answered “Yes” to all of the Level AA questions, the site is a Level A site.* |
| **Indicator 3****Level AAA** | Does the water management system represent the best available techniques (BAT) and contributes to at least two of the following:* The mining industry’s understanding of or contribution to water management;
* Regional water body-specific guidance in accordance with best practices;
* Scientific development relating to mine water management or other protection of waters;
* Regional or nationally significant protection of waters?
 |  |  |  |  |
| Did the external audit for Level AA include an evaluation of the effectiveness of the water management system and continual improvement of activities? |  |  |  |  |
| *If you have answered “Yes” to all of the Level AAA questions, the site is a Level AAA site. If you have not answered “Yes” to all of the Level AAA questions, the site is a Level AA site.* |
|  | **ASSESSED LEVEL OF THE COMPANY’S PERFORMANCE FOR INDICATOR 3** | **Level:**   |

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|  | **Question** | **Y** | **N** | **NA** | **Description & Evidence** |
| **INDICATOR 4: REPORTING ON WATER MANAGEMENT** |
| **Indicator 4****Level B** | Does the facility-specific reporting on water management include plans, monitoring results and the practical measures taken?  |  |  |  |  |
| Are the facility-specific monitoring results and practical measures reported to the facility management on a regular basis? |  |  |  |  |
| *If you have answered “Yes” to all of the Level B questions, continue to the Level A questions. If you have not answered “Yes” to all of the Level B questions, the site is a Level C site.* |
| **Indicator 4** **Level A** | Does the reporting support facility-level budgeting and decision-making? |  |  |  |  |
| Are the state of water management, the progress achieved towards water management objectives and the development measures taken and planned reported to the facility management and communities of interests on a regular basis? |  |  |  |  |
| Are the communications open and is the reporting public and popular? |  |  |  |  |
| Is the feedback on reporting collected regularly? |  |  |  |  |
| Has an internal audit been conducted and determined that the water management reporting is fully in conformance with the Level A description? |  |  |  |  |
| *If you have answered “Yes” to all of the Level A questions, continue to the Level AA questions. If you have not answered “Yes” to all of the Level A questions, the site is a Level B site.* |
| **Indicator 4 Level AA** | Has an external independent audit been carried out to evaluate the water management reporting? |  |  |  |  |
| Is the company committed to developing its activities on the basis of the recommendations made in the audit? |  |  |  |  |
| *If you have answered “Yes” to all of the Level AA questions, continue to the Level AAA questions. If you have not answered “Yes” to all of the Level AA questions, the site is a Level A site.* |
| **Indicator 4****Level AAA** | Are the facility-level water management measures reported as part of formal, annual corporate reports? |  |  |  |  |
| Has an external independent audit been carried out to confirm that the public reporting meets the requirements of the best available practices? |  |  |  |  |
| *If you have answered “Yes” to all of the Level AAA questions, the site is a Level AAA site. If you have not answered “Yes” to all of the Level AAA questions, the site is a Level AA site.* |
|  | **ASSESSED LEVEL OF THE COMPANY’S PERFORMANCE FOR INDICATOR 4** | **Level:**   |