

# ÖkoRess III

## Pilot Screening of Environmental Hazard Potentials of Mine Sites

Factsheet:

ooo

ooo , ooo

ID: ooo

## Note

The qualitative assessment of Environmental Hazard Potentials (EHPs) in this factsheet was conducted according to the method developed in the precursor project ÖkoRess I “Discussion of the environmental limits of primary raw material extraction and development of a method for assessing the environmental availability of raw materials to further develop the criticality concept”<sup>1</sup> (Dehoust et al. 2017a). The measurement instructions applied here are described in Dehoust et al. 2017b. The method is tested and further developed within this project (ÖkoRess III).

The information in this factsheet refers exclusively to publicly available, designated sources that have been classified as serious by the authors. It is specifically pointed out that no statement is made about the implementation and quality of agreements or standards that are applied. The implementation of agreements through memberships, certifications, etc. is the responsibility of the companies.

The surface extension of each mine area has been estimated based on publically accessible satellite images as official land-use plans from the public authorities or mine operators are not consistently available. It therefore only corresponds to the apparent area where mining, processing facilities, heaps, etc. and related infrastructure are clearly identifiable.

The fact sheets make no claim to completeness of all relevant voluntary standards. Mentioning a membership in one of the listed voluntary standards does not imply an assessment of the suitability of the standard in itself, nor does it make any statement about the member's success in implementation.

---

<sup>1</sup>TEXTE 87/2017 <https://www.umweltbundesamt.de/publikationen/discussion-of-the-environmental-limits-of-primary>

°°°

°°°

## General information



Indicator or criteria	Description and values
Name of mine	°°°
Description of mining area	°°°
Surface extension	°°° °°°
In operation since	°°° °°°
Operator	°°°
Owner	°°°
Closest town	°°°
Province	°°°
Country	°°°
Longitude	°°°
Latitude	°°°
Altitude	°°° °°°
Main product and by-products	°°°
On-site processing stages	°°°
Annual production	°°°

Proven Reserves	°°°
Probable Reserves	°°°

## Geology



Indicator or criteria	Description and values	Explanation	Assessment result	Data quality
Preconditions for acid mine drainage (AMD)	°°°	°°°	°°°	°°°
Paragenesis with heavy metals	°°°	°°°	°°°	°°°
Paragenesis with radioactive components	°°°	°°°	°°°	°°°
Deposit size	°°°	°°°	°°°	°°°
Ore grade	°°°	°°°	°°°	°°°

## Technology



Indicator or criteria	Description and values	Explanation	Evaluation result	Data quality
Mine type	°°°	°°°	°°°	°°°
Use of auxiliary substances	°°°	°°°	°°°	°°°
Mining waste	°°°	°°°	°°°	°°°
Remediation measures	°°°	°°°	°°°	°°°

## Framework conditions natural environment



Indicator or criteria	Description and values	Explanation	Evaluation result	Data quality
Accident hazard due to floods, earthquake, storms, landslides	°°°	°°°	°°°	°°°
Water Stress Index (WSI) und desert areas	°°°	°°°	°°°	°°°
Protected areas and AZE sites	°°°	°°°	°°°	°°°

## State Governance

Indicators	
WGI 1 -Voice and Accountability	°°° °°°
WGI 2 -Political Stability and Absence of Violence/ Terrorism	°°° °°°
WGI 3 - Government Effectiveness	°°° °°°
WGI 4 -Regulatory Quality	°°° °°°
WGI 5 - Rule of Law	°°° °°°
WGI 6 -Control of Corruption	°°° °°°
EPI (Environmental Performance Index)	°°°
EITI membership	°°°
International Agreements	
ILO 176	°°°

Others	°°°
<b>Legal framework</b>	
Areas of Law: Environment	°°°

<p>Areas of Law: Occupational Health and Safety (OHS)</p>	<p>°°°</p>
---	------------

## Corporate Social Responsibility (CSR)

<b>Voluntary Standards</b>	
<p>Aluminium Stewardship Initiative (ASI): Is the mine owning company a member?</p>	<p>°°° °°°</p>
<p>Aluminium Stewardship Initiative (ASI): Is the mine certified?</p>	<p>°°° °°°</p>
<p>International Council of Mining &amp; Metals (ICMM): Is the mine owning company a member?</p>	<p>°°° °°°</p>
<p>Towards Sustainable Mining (TSM) Is the mine owning company a member of the Mining Association of Canada (MAC)?</p>	<p>°°° °°°</p>
<p>Towards Sustainable Mining (TSM) outside Canada: Are TSM standards implemented*?</p>	<p>°°° °°°</p>



Initiative for Responsible Mining Assurance (IRMA): Is the mine owning company a member?	°°° °°°
Initiative for Responsible Mining Assurance (IRMA): Is the mine certified?	°°° °°°
Responsible Copper (RC): Is the mine owning company a member of RC?	°°° °°°
Responsible Copper (RC): Is the mine certified?	°°° °°°
Responsible Mining Index (RMI): Has the mine been rated?	°°° °°°
Responsible Mining Index Company indicator „Working conditions“	°°° °°°
Responsible Mining Index Company indicator „Environmental sustainability“	°°° °°°
Responsible Steel (RS): Is the mine owner a member of the RS?	°°° °°°
Responsible Steel (RS): Is the mine certified?	°°° °°°
Australian Steel Stewardship Forum (ASSF): Is the owner a member of the ASSF?	°°° °°°
Australian Steel Stewardship Forum: Is the mine certified?	°°° °°°
<b>ISO and CSR reporting</b>	
ISO 14001 (ISO 14004): Is the mine ISO 14001 certified?	°°° °°°

CSR-directive 2014/95/EU: Does the mine owning company have its headquarters in an EU country?	°°° °°°
OECD Guidelines: Does the company have its headquarters in a signatory state?	°°° °°°
ISO 26000: Does the mine implement ISO 26000?*	°°° °°°
<b>Banking Standards</b>	
WB Standards / IFC Performance Standards: Is the mine financed to a major extend by the world bank?	°°° °°°
Equator Principles (EP): Is the mine financed to a major extend by a bank adherent to the EP?	°°° °°°

\*by companies own account.

## Sources

°°°
-----

## A Glossary

Table 1 Legend

### Environmental hazard potential



*low*



*medium*



*high*

### Data quality



*low*



*medium*



*high*

- No concrete information, no general specifications of the measurement instructions, expert estimation.
- Assessment not possible due to lack of data at the site, as there is also no evidence for an assessment and there are no generalized assessment rules.

- Assessable on the basis of available information.
- Generalized classification according to measurement instructions.

- Can be derived directly from available data.

## B Abbreviations

EHP	Environmental hazard potential
FY	Financial year
kt	Kilo tonnes
m a.s.l.	Meters above sea level
Mt	Million tonnes
OHS	Occupational Health and Safety
t	tonnes
TSF	Tailing Storage Facility
WGI	World Governance Indicators
WHS	Work Health and Safety

## C Imprint

### **Publisher:**

German Environment Agency  
Section III 2.2  
PO Box 14 06  
06813 Dessau-Rosslau, Germany  
Tel: +49 340-2103-0  
info@umweltbundesamt.de  
www.umweltbundesamt.de

### **Contact:**

Jan Kosmol – jan.kosmol@uba.de

Project period: 03/2018 –02/2021

The research project has been commissioned by the German Environment Agency as part of the Environmental Research Plan of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and funded by the Federal Government (FKZ: 3717 35 306 0).

### **Contractor:**

Projekt-Consult GmbH  
Eulenkruogstrasse 82  
22359 Hamburg, Germany  
T +49 (40) 60306-740  
F +49 (40) 60306-199  
www.projekt-consult.de

### **Contact:**

Dr. Aissa Rechlin – aissa.rechlin@projekt-consult.de  
Christopher Demel – christopher.demel@projekt-consult.de

### **Project Partners:**

- ifeu – Institut für Energie-und Umweltforschung Heidelberg gGmbH (Institute for Energy and Environmental Research)
- Öko-Institut e.V. (Institute for Applied Ecology)