

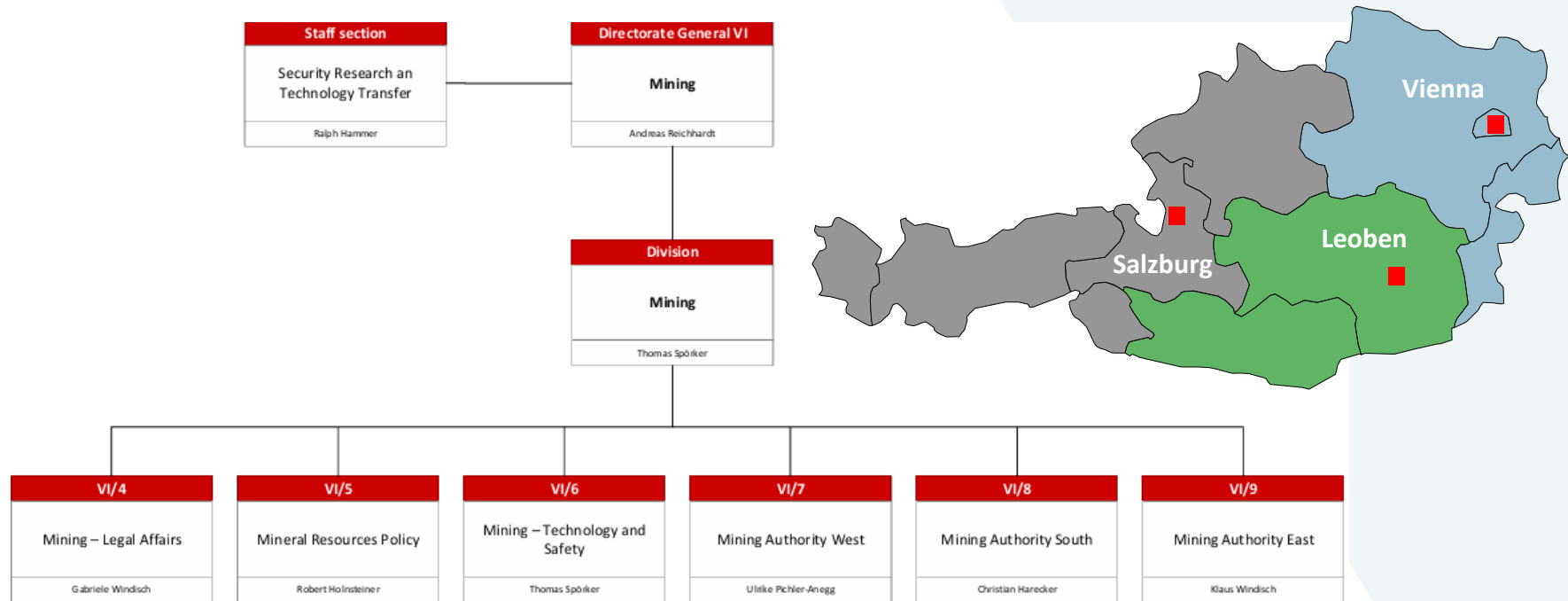
Mining and Mine Rescue in Austria

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Federal Ministry Finance
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outline

- Mining Authority in Austria
- Austrian mining industry - facts and figures
- mine rescue services
 - internal mine rescue operations
 - higher level rescue operations
- contribution to the mine rescue service

Mining Authority within the Federal Ministry Finance



facts and figures Austrian mining industry (1)

– Operating sites: 2.968

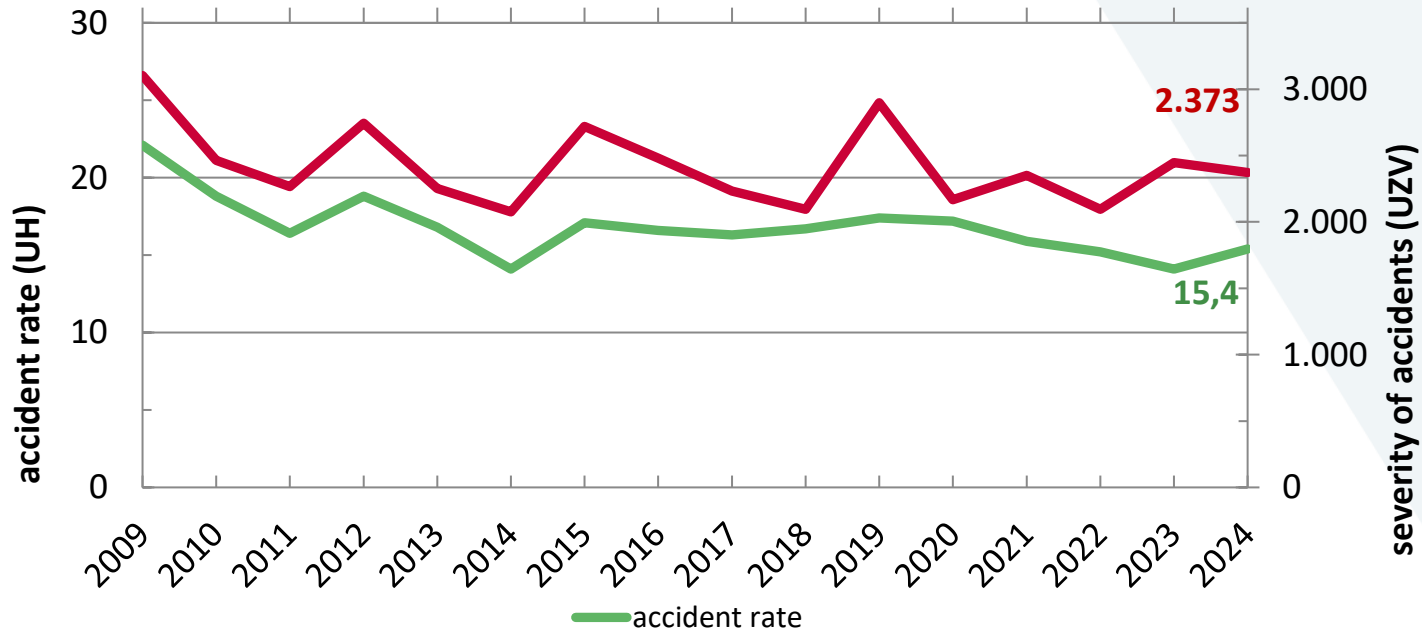
open pits	underground	wells	direct federal administration	indirect federal administration
724	23	1.700	2.447	521

facts and figures Austrian mining industry (2)

- 4.800 employees
- 0,5% direct **share on GDP** but 25% of GDP would not be possible without mining
- **Production mineral raw materials (2023)**
 - unallocated 21.7 Mio. to
 - landowner's 50 Mio. to
 - state-owned salt 3.8 Mio. to
 - state-owned oil 0.5 Mio. to
 - state-owned gas 0,55 bn Nm³

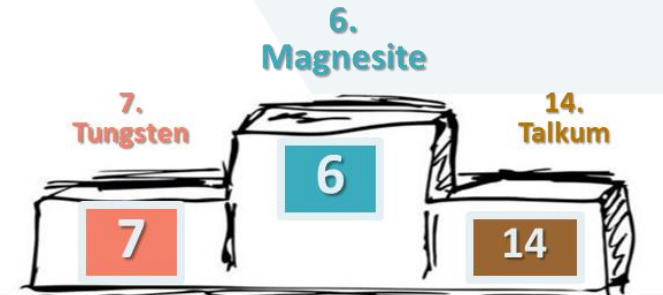
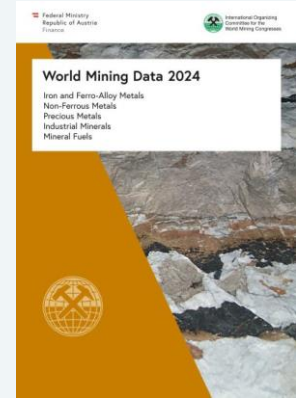
Accident Figures in the Austrian Mining Industry

Accident Rate – Severity of Accidents 2009 - 2024



facts and figures Austrian mining industry (3)

- Largest **tungsten** deposit of the western hemisphere (Mittersill)
- Largest **talcum** deposit of central Europe (Rabenwald)
- One of the largest underground **magnesite** mines in the world (Breitenau)
- Worldwide largest **siderite** deposit and largest open pit for ores of Central Europe (Erzberg)
- Deepest borehole for **salt leaching** in the world (Altaussee, 800 m)
- Largest **oilfield** in central Europe (Matzen)
- Deepest borehole **gas exploration** in Europe (Vienna Basin, 8.552 m)
- **natural gas storage** – overall working gas volume: 8,9 bn nm³



Legal framework - key areas of regulation

The **Mining act** (Federal Law Gazette I 38/1999, as amended) is the **legal basis** for all Austrian mining activities.

- **licenses** for **exploration** and **production** of raw materials, private concessions
- **approval** of **work programs**, **mining installations** and mining **equipment**
- **approval of** operational, storage and mine closing **plans**
- notification of **persons in charge** (site manager, technical superintendent, mine surveyor in charge)
- **supervisory powers**, duties of information, obligation to visit sites recurrent
- **Mine rescue services** (internal/higher level rescue operation); emergency planning

structure subsurface activities (1)

94 mines with subsurface activities

23 mining operations (active or temporary suspended)

- **4** > 100.000 m³ a year
- **3** 10.000 to 100.000 m³ a year
- **7** < 10.000 m³ a year
- **9** currently no extraction work

structure subsurface activities (2)

94 mines with subsurface activities

25 open pits with subsurface activities

particularly open stone pits
with mine shafts and subsurface
transportation systems using
conveying belts

structure subsurface activities (3)

94 mines with subsurface activities

28 underground mines as tourist attraction 570.000 visitors (2023)

- **4** more than 30.000 visitors per year
- **5** 10.000 to 30.000 visitors per year
- **19** less than 10.000 visitors per year

4 mines used for medicinal purposes
85.000 patients/year

structure subsurface activities (4)

94 mines with subsurface activities

14 utilization of abandoned mines for purposes other than extracting mineral resources

for example: mine tunnels and shafts used for

- draining of water
- water drives for electricity generation
- storage purposes
- cheese maturing, storage of whisky, mushroom cultivation

structure borehole mining

16 members to the gas protection service

3 borehole mining companies

- exploration
- production
- processing
- storage of hydrocarbons

13 production of geothermal energy (using boreholes deeper than 300 m)

legal basis

rescue operations

- mine rescue service distinguishes two cases
 - a) **internal** mine rescue operations
 - b) **higher level** rescue operations
- in both cases the
emergency response plan
is of key importance.

internal mine rescue operations (1)

The internal mine rescue level includes in particular

- duty of the mining rights holder to **take safety precautions**
- making **appropriate preparations** in order to assist in rescue operations and required measures in emergency situations
- local **guides** and **contacts**
- **cooperation** and **assistance agreements** with emergency services

The **responsibility** for mission control lies with
the **site manager**.

internal mine rescue operations (2)

1. protection objectives

The mining rights holder shall take precautions for the

- protection of human **health** and **safety**
- protection of **property** owned by **third parties** and not assigned to him for his use
- protection of the **environment**, **mineral deposits** and the **surface** as well as
- safeguarding the **surface utilization** following the cessation of mining operations.

internal mine rescue operations (3)

2. emergency plan

The mining rights holder shall **draw up** and **regularly update** an **emergency plan**, tailored to the form of mining concerned, for

- **accidents, dangerous occurrences** and
- reasonably predictable **natural and industrial disasters**,
- and undertake the necessary action where required.

The involvement of fire and disaster relief services is permissible.

internal mine rescue operations (4)

2. emergency plan

emergency planning contributes to an **efficient** and **scheduled preparation** to manage emergency and crisis situations.

The emergency plan comprises

alert strategy plan and **action plan**.

The emergency plan describes the **guidelines** for the internal mine rescue operations.

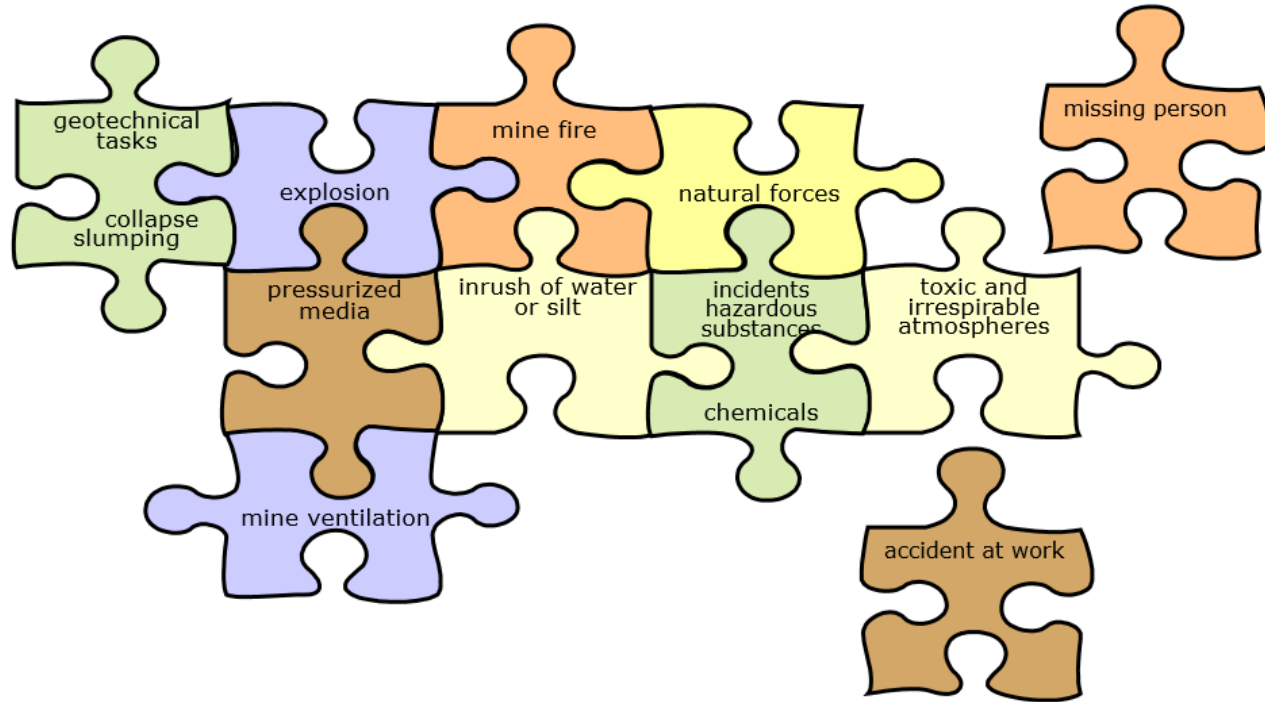
emergency plan: alert strategy plan

directory emergency numbers

correct emergency numbers are of key importance

- draw up, **regularly update** and publish this directory
- **designate a person** who is **responsible**
- ensure, that **changes are fully taken into account** in all relevant documents and all the parties involved get **access to the current data**.

emergency plan: action plan - scenarios - examples



internal mine rescue operations

3. local guides

task guide external rescue teams

particularly necessary when

- employees working subsurface
- external rescue teams are involved

requirements

- excellent knowledge in the fields of mining operations, mine working, organization and mine maps
- respiratory protection device carrier - physical fitness
- participation in mine rescue training (2/year)

internal mine rescue operations

3. instructed person

task provide information directly

particularly necessary when

- in all other mines with subsurface areas
- at least 1 instructed person shall be available

requirements

- excellent knowledge in the fields of mine operations, organization and mine maps
- participation in mine rescue training (1/year)

transition of the command of rescue operations

Insofar as it becomes clear that the severity of a natural or industrial disaster, accident or dangerous occurrence is such that

- the **measures** provided for by the **emergency response plan**
- are **insufficient** to mount a successful rescue operation,

and in particular

- as the **scale** and **duration** of the operation will **overtax** the **mission command structure**, or
- the **rescue teams** and **equipment** at the mining operation **are inadequate**,

the **command** and implementation of the rescue operation
shall pass to the **provincial governor**.

higher level mine rescue operations (1)

higher level rescue operations include in particular

- a) rendering of assistance in the event of accidents
- b) central mine rescue station, main rescue plan
- c) obligations to provide information
- d) contribution to the mine rescue service

The **responsibility** for mission control lies with
the **governor of the province**.

higher level mine rescue operations (2)

a. rendering of assistance in the event of accidents

In the event of an accident in the course of the performance of any of the activities of the kinds listed in §2 (1) mining law, every mining rights holder shall, at the request of

- the mining rights holder or third-party contractor affected, or
- the mining authority

render assistance in the form of labor and equipment, insofar as this is possible without endangering his own mining operations.

higher level mine rescue operations (3)

b. central mine rescue station

The central mine rescue station has an important role in advance of higher level rescue operations.

The coordination of organizational and technical tasks – extending beyond the internal level - for **best emergency preparedness** lies within the responsibility of the central mine rescue station.

Responsibilities of the central mine rescue station are stipulated in the mining act.

higher level mine rescue operations (4)

c. obligations to provide information

Mining rights holders shall file up-to-date versions of their,

- own emergency plans
- mine maps
- and inventories of their equipment

with the central mine rescue station in a timely manner.

higher level mine rescue operations (5)

d. contribution to the mine rescue service

mining rights holders shall contribute to the mine rescue service by providing

- mine rescue teams (19),
- technical support teams (14),
- mining equipment,
- logistics, management and the like
- or financial resources in their stead.

contribution to the mine rescue service

calculating the individual contribution – trend analysis

the evaluation system is based on the type of operation and criteria as

- company size - quantities of mineral raw materials exploited
- vast extend of the mine workings
- mine ventilation, water-handling, second exit
- storage of fuels, lubricants, hydraulic oil
- operational vehicles, electrical installation
- warning devices, alarm systems, communication devices
- accident rate
- hours worker respectively spend time subsurface

contribution to the mine rescue service - requirements

critical issues of the mining rights holder

- duty to take safety precautions
- making necessary precautions in the alert strategy and action plan
- keeping mine maps up-to-date
- name local guides and contacts
- ensuring recurrent instructions, regular trainings
- providing information to the central mine rescue station on
 - emergency plans, mine maps
 - inventories of their equipment
 - size of mine rescue teams, technical support teams as well as training schedules.

Thank you for your attention!

Glück Auf!

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