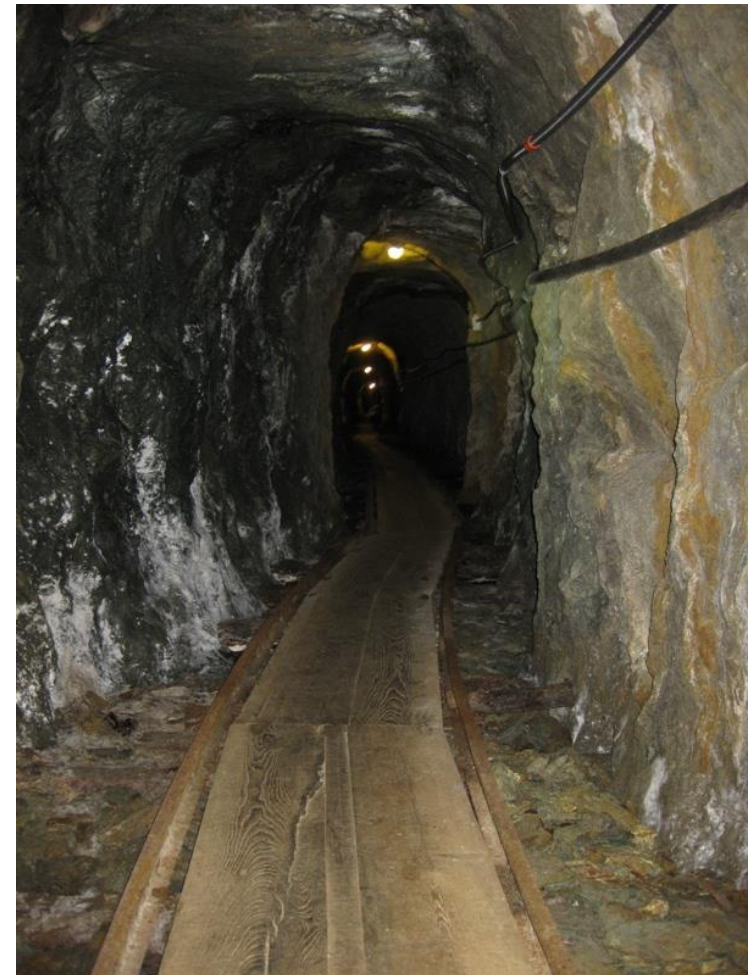


The Austrian mine rescue service

The Austrian mine rescue service

- structure of the Austrian underground mining sector
- mine rescue services
 - internal mine rescue operations
 - higher level rescue operations
- requirements and critical issues



91 mines with subsurface activities

27 mining operations (active or temporary suspended)

4 > 100.000 m³ a year

4 10.000 to 100.000 m³ a year

8 < 10.000 m³ a year

11 currently no extraction work



91 mines with subsurface activities

19 open pits with subsurface activities

particularly
subsurface
conveying systems



91 mines with subsurface activities

28 underground mines as tourist attraction
685.722 visitors (2013)

6 more than 30.000

2 10.000 to 30.000

20 less than 10.000 visitors/year

4 mines used for
medicinal purposes **21.000**



91 mines with subsurface activities

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

mine tunnels and shafts for

- water drive or
- draining of water



16 participants to the gas protection service

2 borehole mining companies

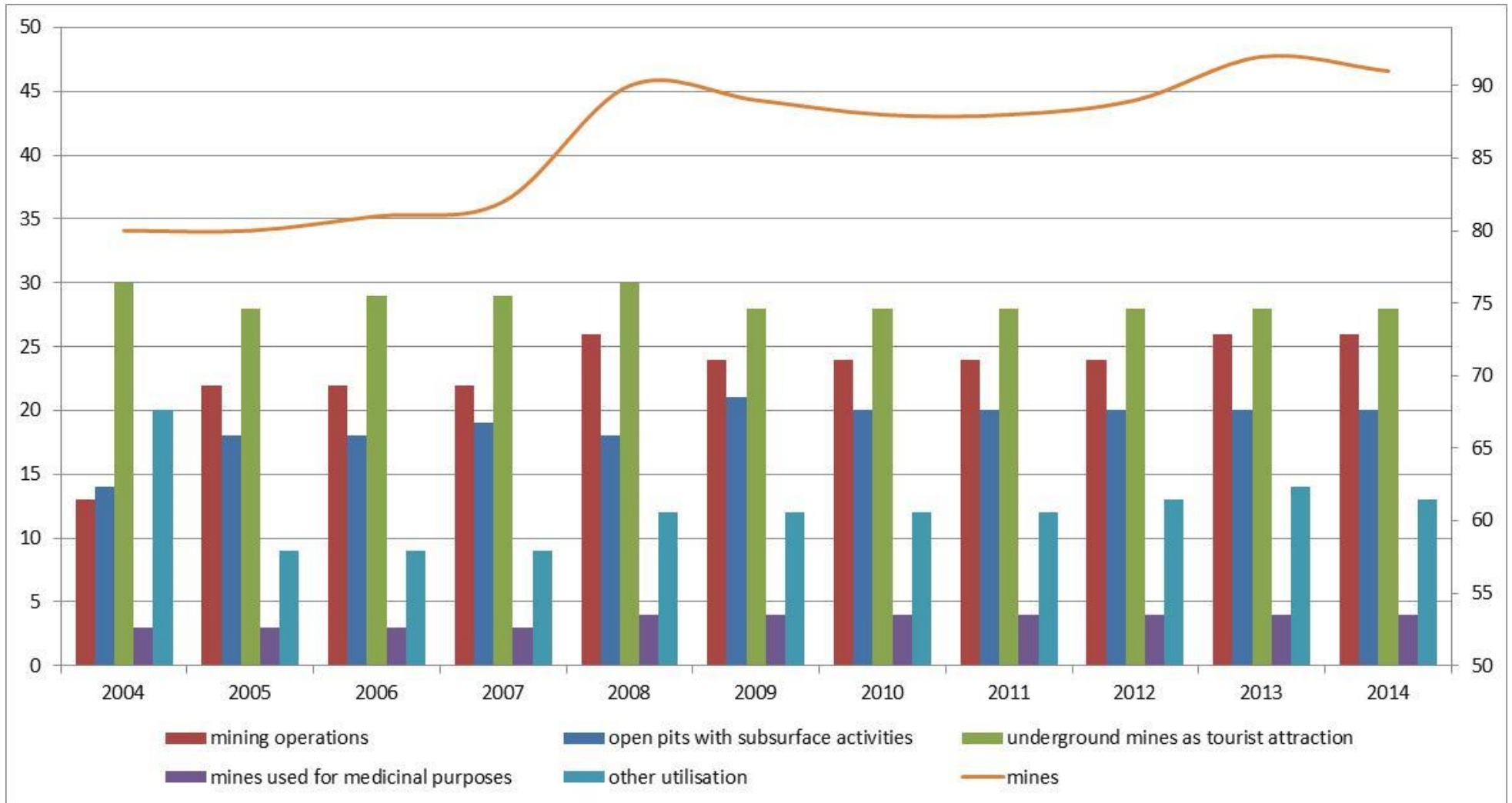
- exploration
- production
- processing
- storage

14 use of geothermal energy



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rescue operations

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



The internal mine rescue level includes in particular

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

The responsibility for mission control lies with
the site manager

emergency plan

The mining rights holder shall, further,

- 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.

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**.

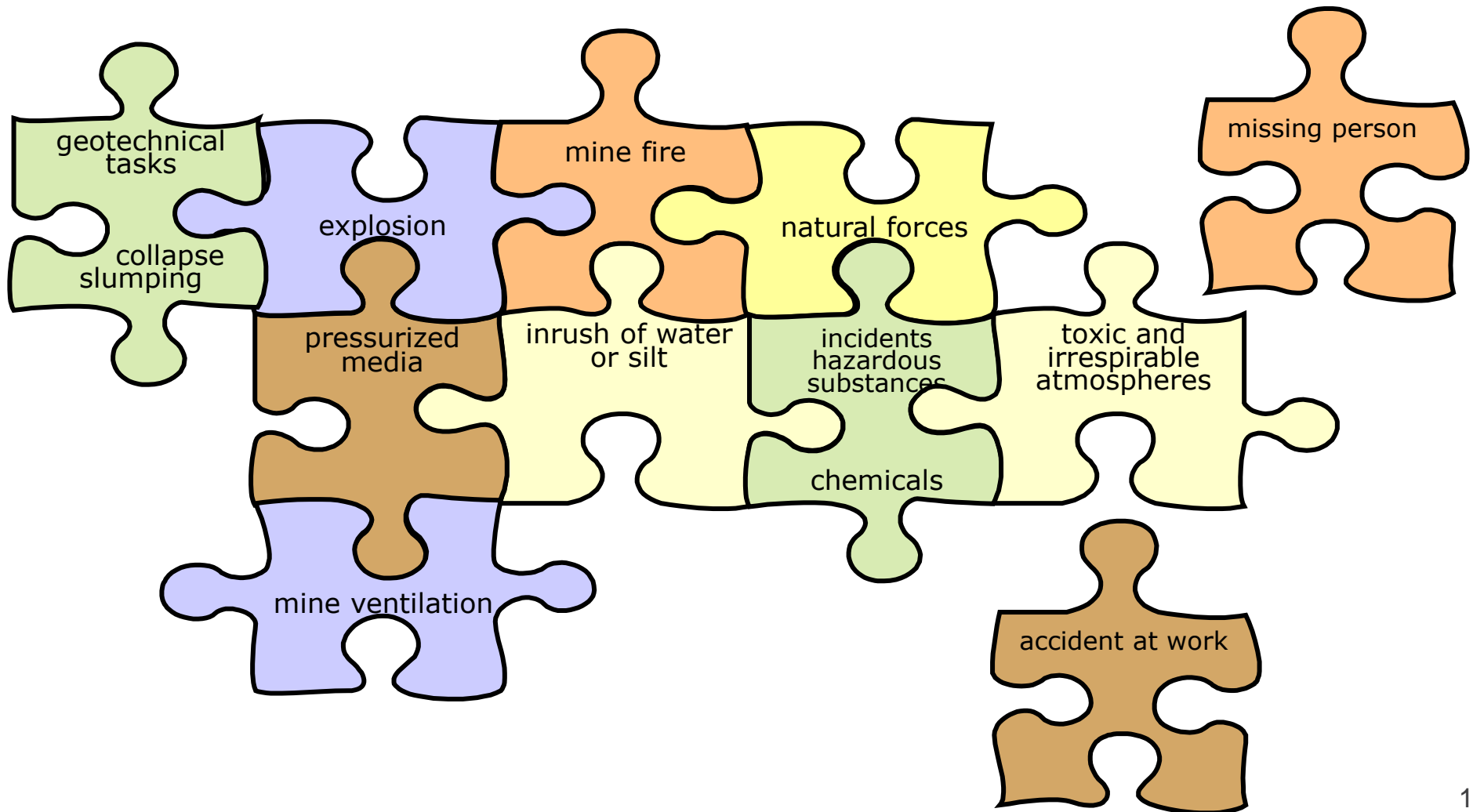
The emergency plan describes the **guidelines** for the internal mine rescue operations.

alert strategy plan – directory emergency numbers

correct emergency numbers are of key importance

- draw up, **regularly update** and publish this document containing all of this information
- **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.**

action plan - scenarios - examples



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, organisation, mine maps
- respiratory protection device carrier, physical fitness
- participation in mine rescue training (2/year)

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 mining operations, mine, 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 rescue operations include in particular

- rendering of assistance in the event of accidents
- central mine rescue station
- obligations to provide information
- main rescue plan
- contribution to the mine rescue service

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

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 of the mining authority

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

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** fall to the central mine rescue station.

Responsibilities of the central mine rescue station (1)

Making appropriate preparations in order to assist in rescue operations

these particularly include:

- **inventorying** the equipment available to rescue teams at mining operations,
- preparing a plan for mutual assistance and the conduct of rescue operations (**main rescue plan**) and updating the same as necessary, but at least annually,

Responsibilities of the central mine rescue station (2)

- where necessary, concluding cooperation and assistance agreements with units of the Austrian Federal Armed Forces, fire services, tunnel rescue teams, emergency services and disaster relief organizations, as well as foreign mine rescue teams and the like;
- determining the principles for the mine rescue service
- ascertaining the state of the rescue service at least annually, reporting to the Minister of Science, Research and Economy thereon.

Responsibilities of the central mine rescue station (3)

Advising mining rights holders on mine rescue matters

- technical advice in the field of mining and safety technology
- set up the emergency plan
- know-how transfer on safety issues
- raise awareness about safety issues
- education and training (annual mine rescue conference and workshops)
- provide safety equipment (thermal imaging camera, gas detectors)

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.



contribution to the mine rescue service

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

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

Calculating individual contribution – trend analysis

the evaluation system is based on 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
- type of operation

higher level rescue operations

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6 mine rescue stations – 17 mine rescue teams



higher level rescue operations

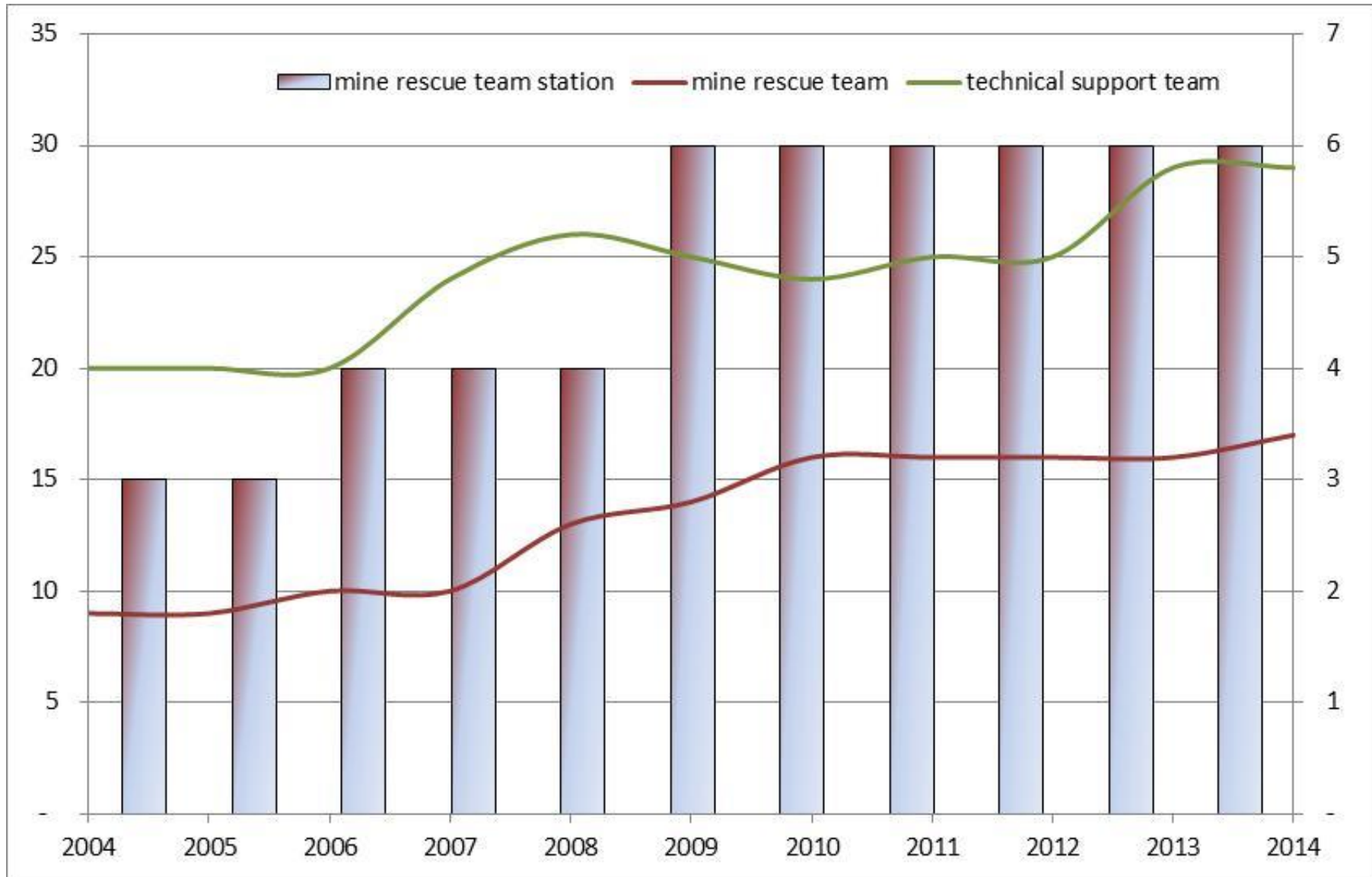
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29 technical support teams



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critical issues of the mining rights holder

- duty to take safety precautions
- necessary precautions in the alert strategy and action plan
- mine maps up-to-date
- local guides and contacts
- recurrent instructions, regular training
- information to the mine rescue station on
 - emergency plans, mine maps
 - inventories of their equipment
 - training schedule
 - size of mine rescue teams, technical support teams

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Glück auf!

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