

SEMINAR 3 – Radiation Protection in the Nuclear Industry

RP workforce need / RP Career development in Switzerland

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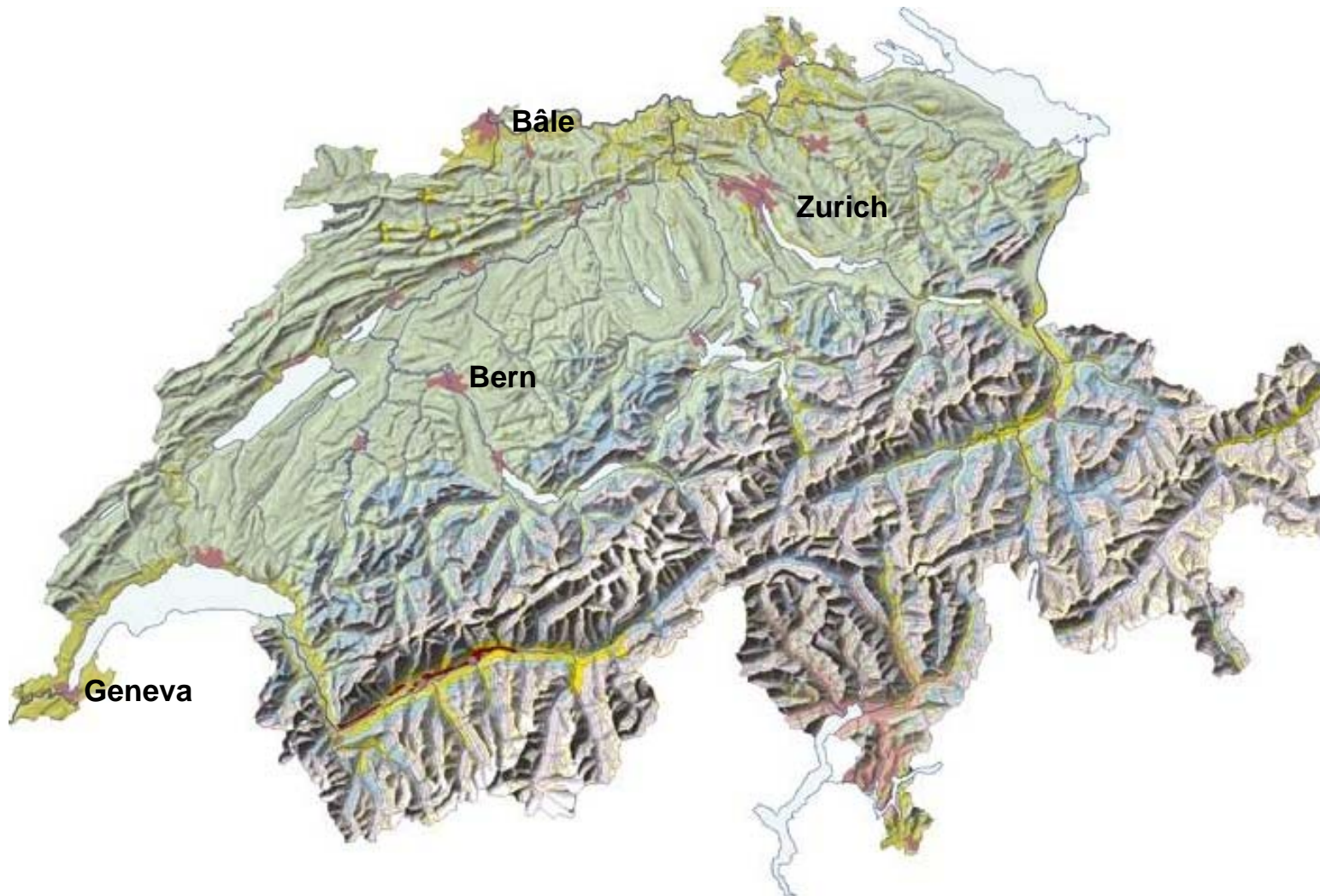
Agenda

- Occupational radiation workplaces in Switzerland – a general overview
- Specific situation in a NPP
- Brief description of RP workplaces and development possibilities at Gösgen NPP as an example
- Conclusions

Occupational radiation workplaces in Switzerland – a general overview

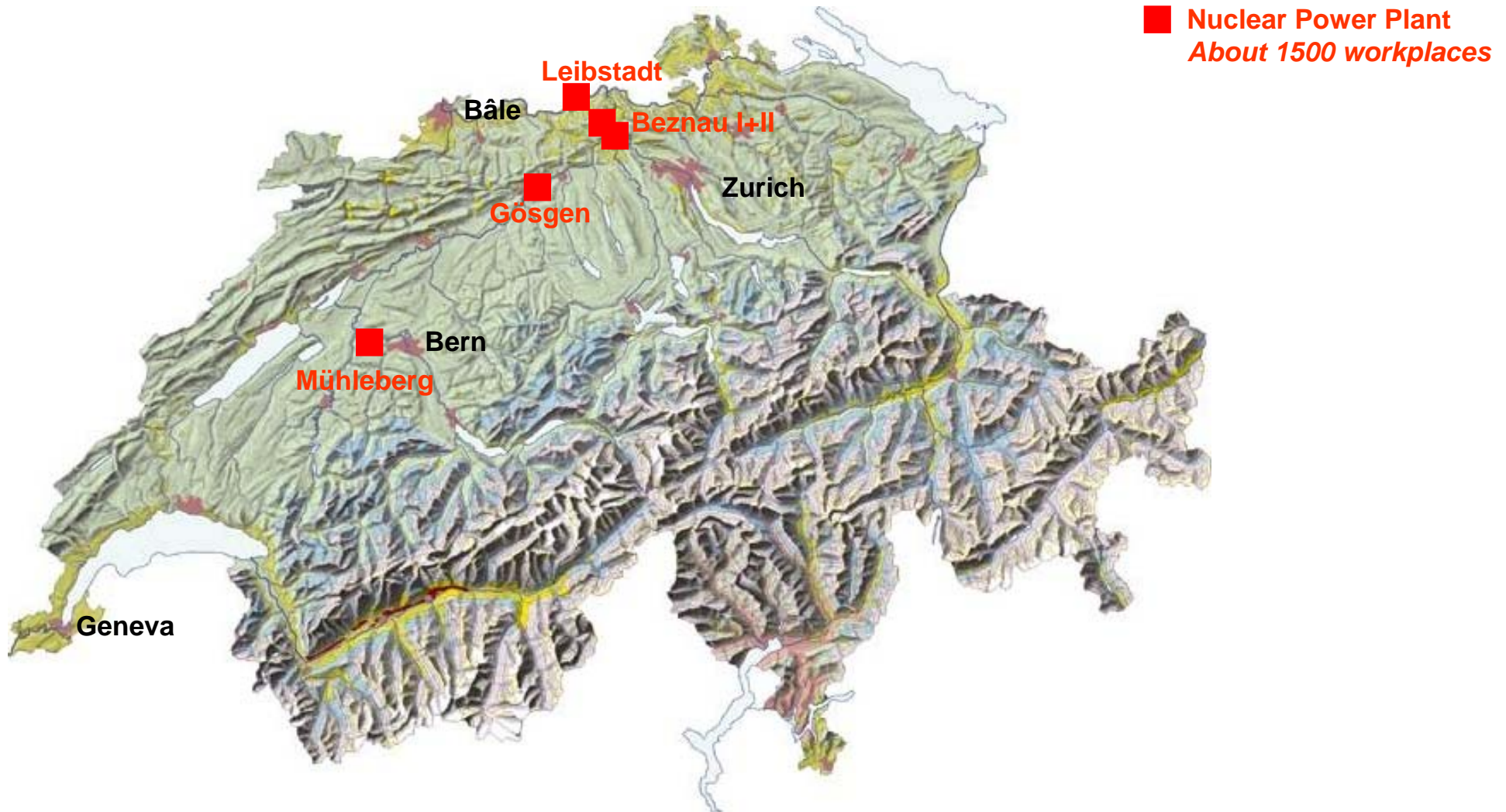


Occupational radiation workplaces in Switzerland – a general overview



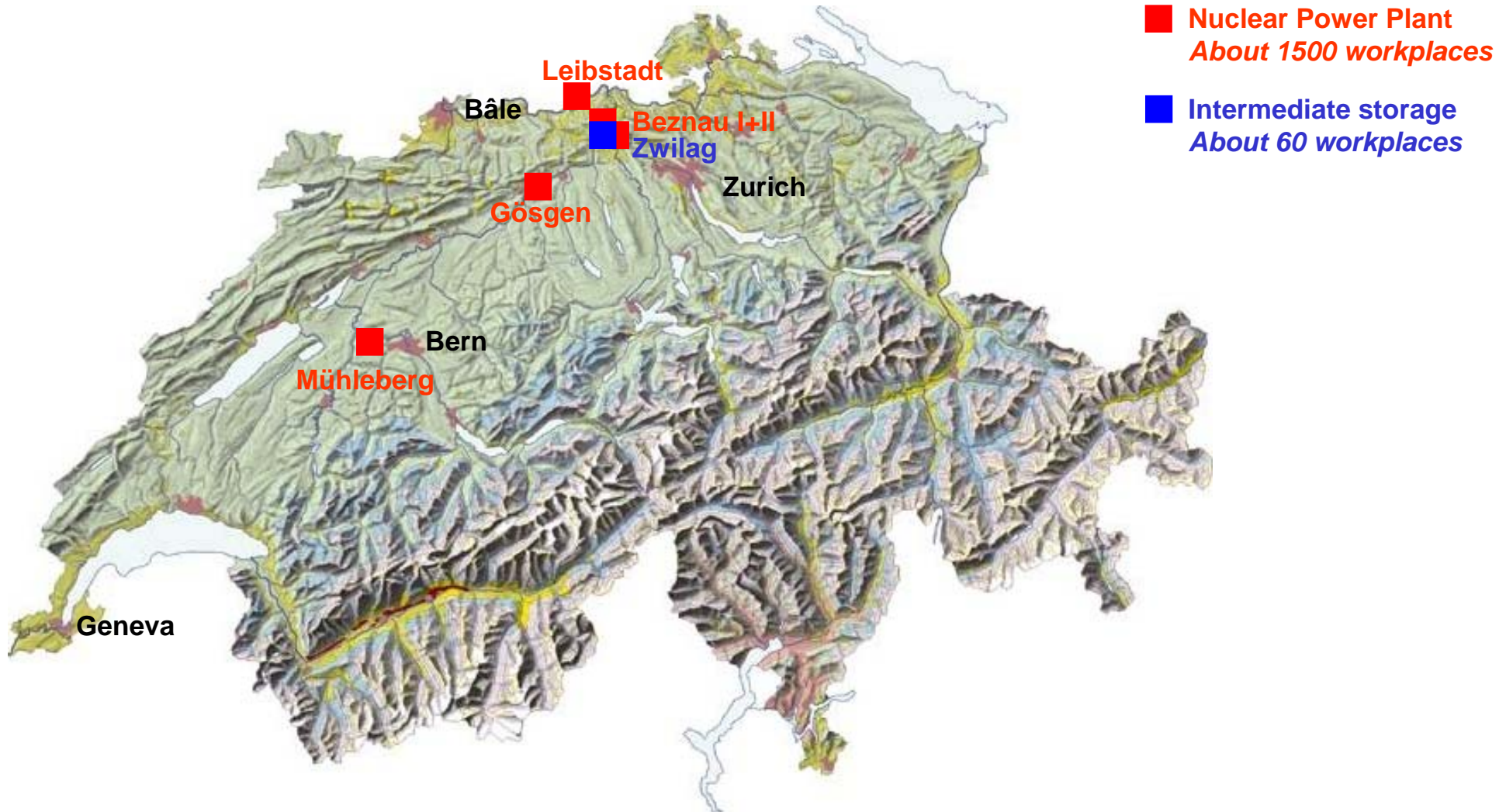


Occupational radiation workplaces in Switzerland – a general overview



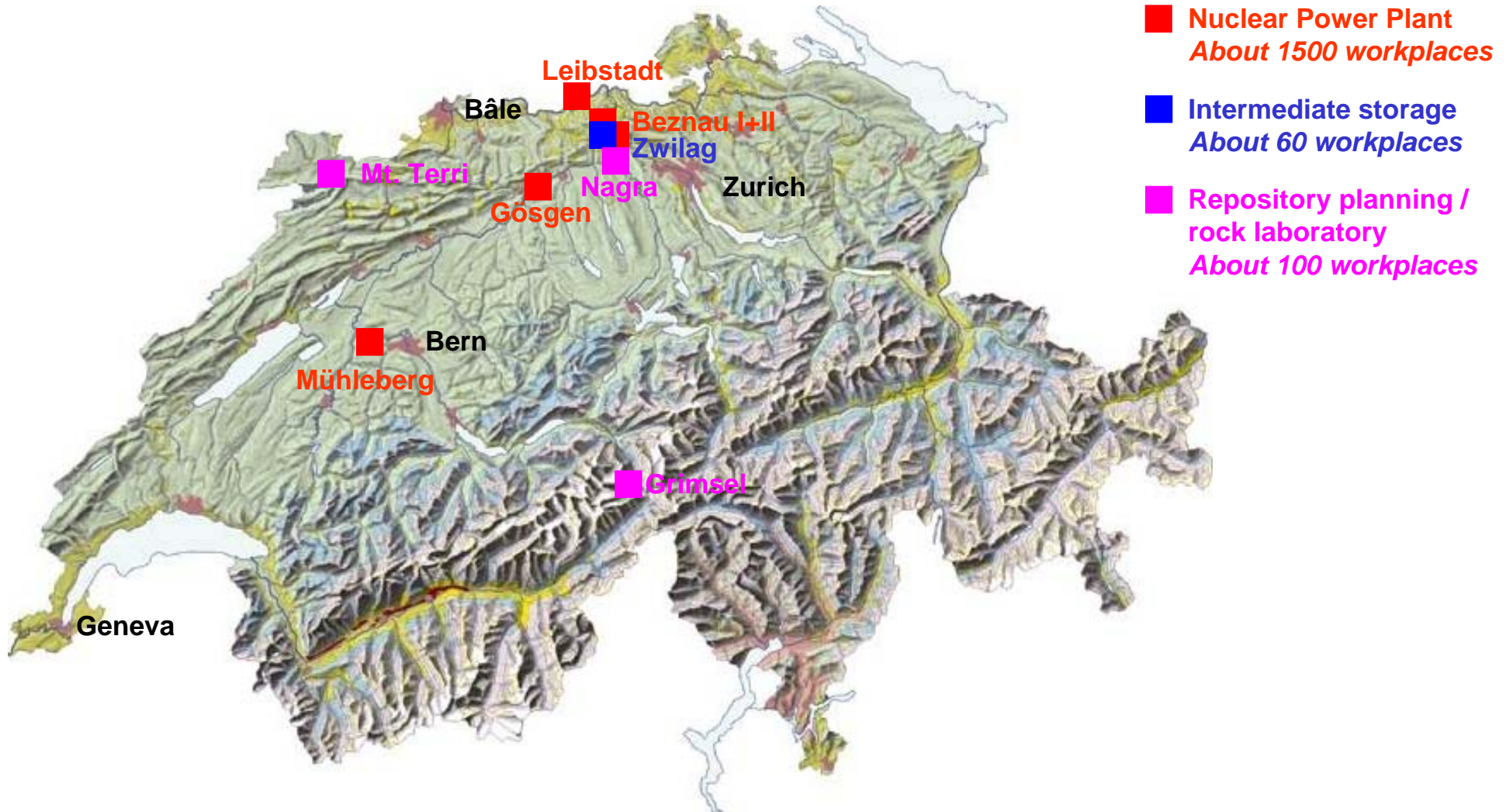


Occupational radiation workplaces in Switzerland – a general overview



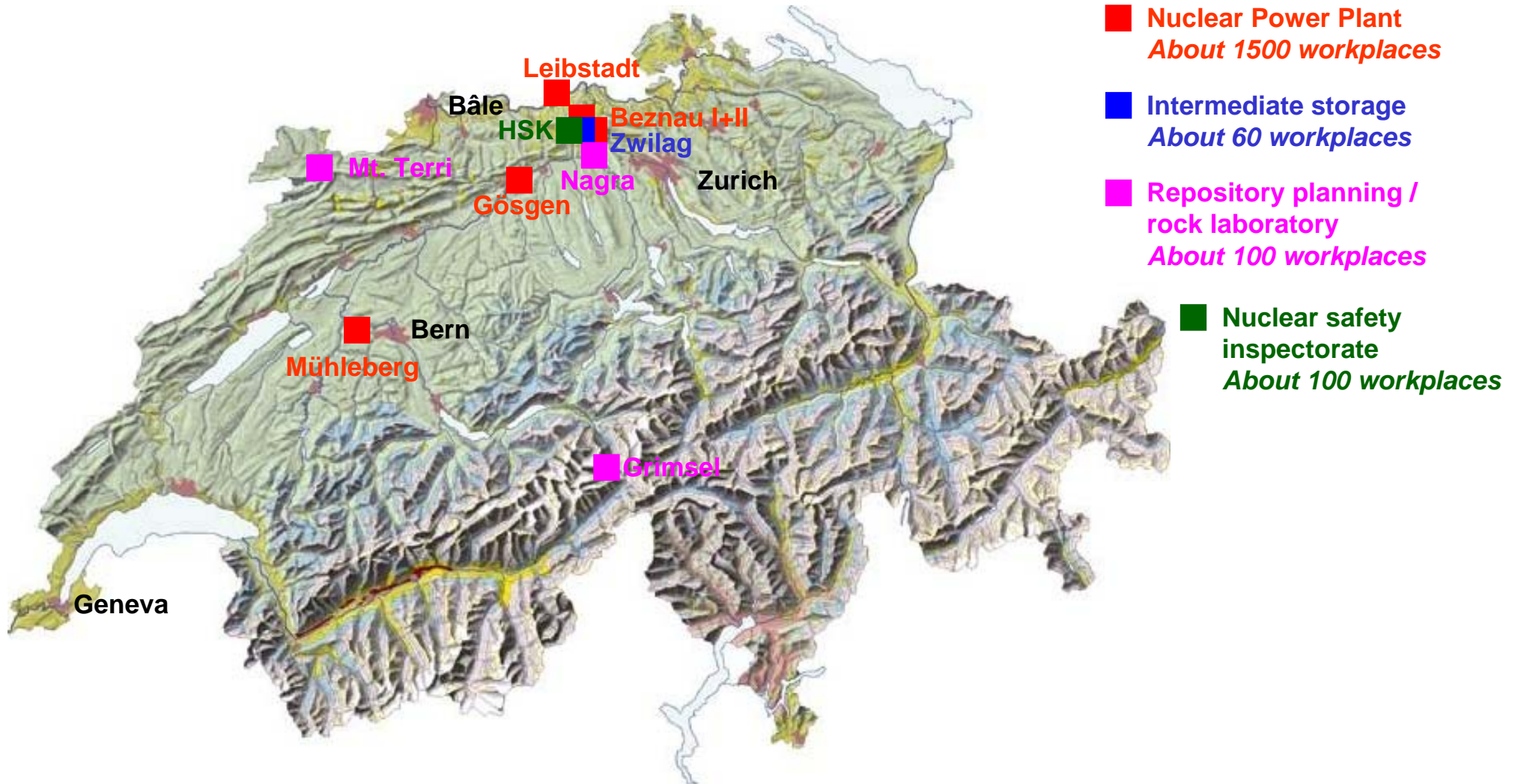


Occupational radiation workplaces in Switzerland – a general overview



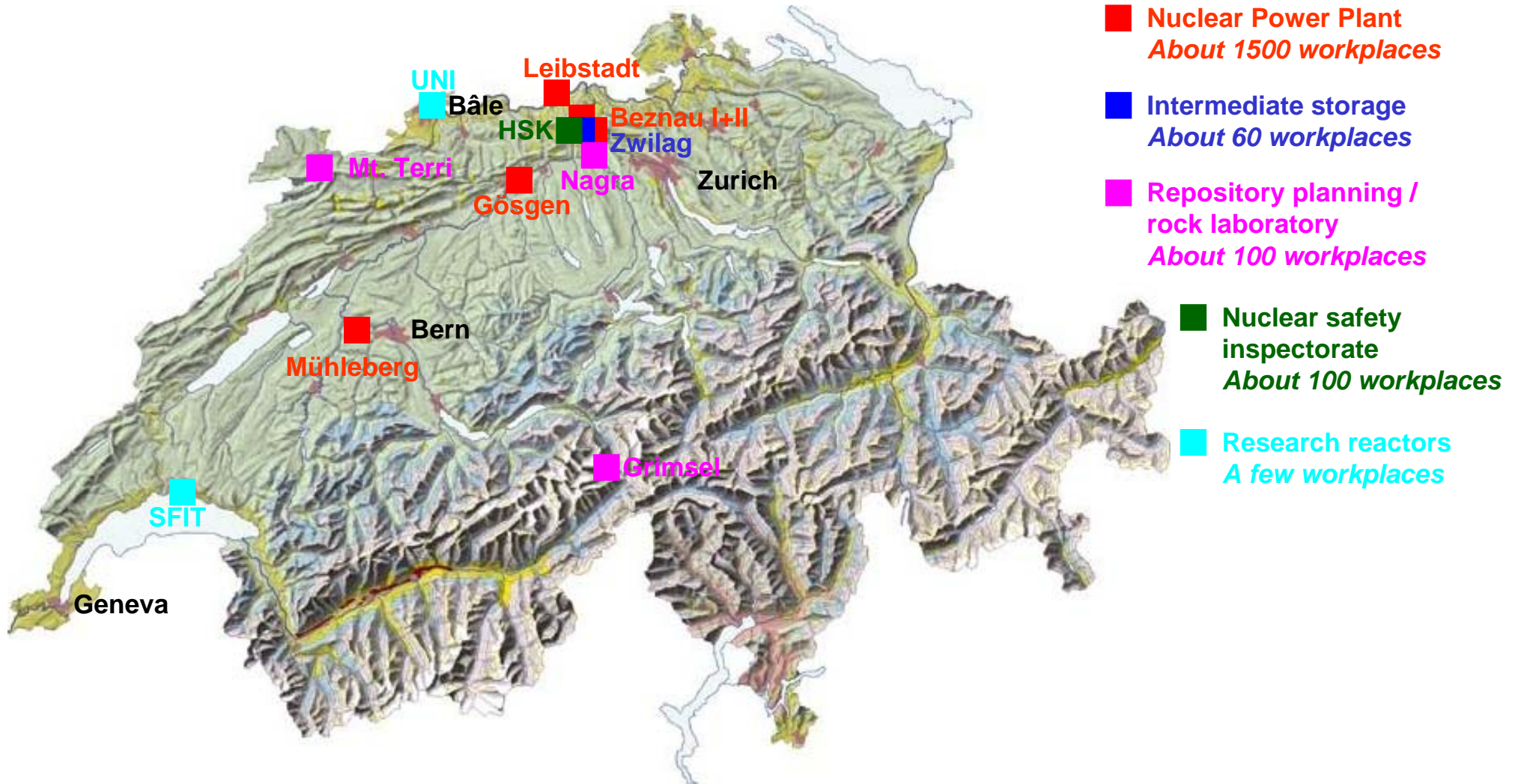


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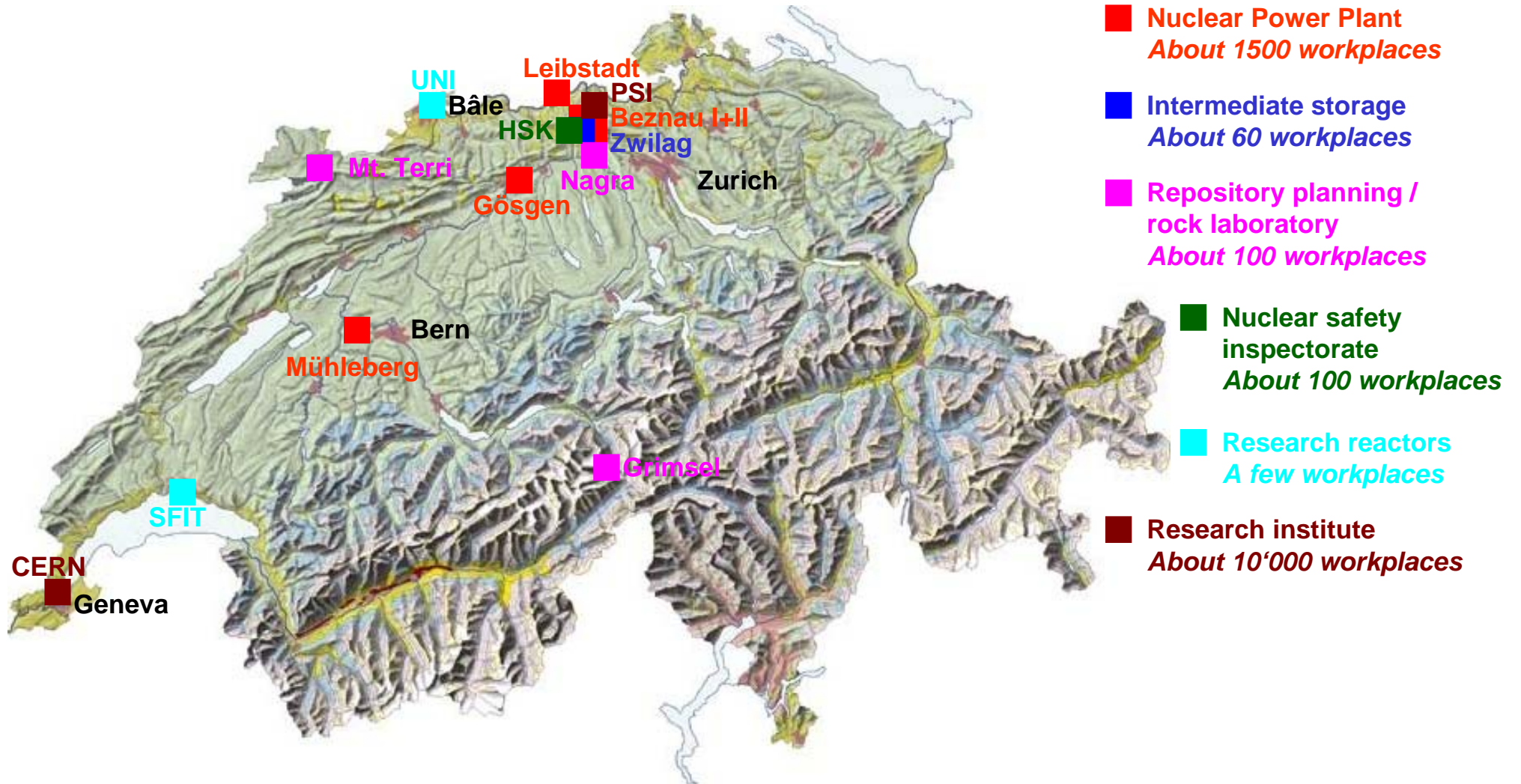


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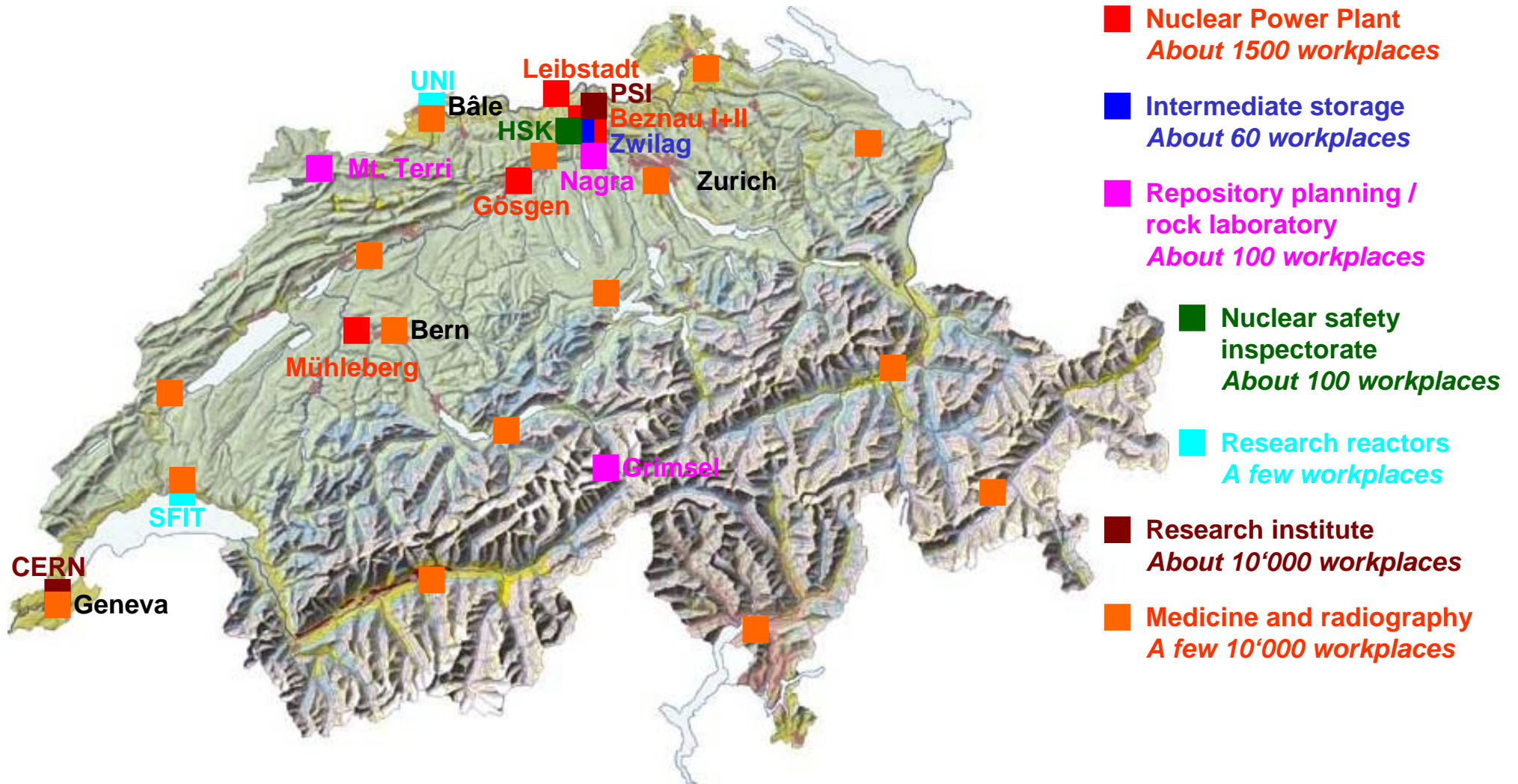




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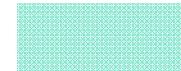


Specific situation in a NPP

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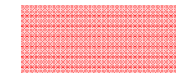
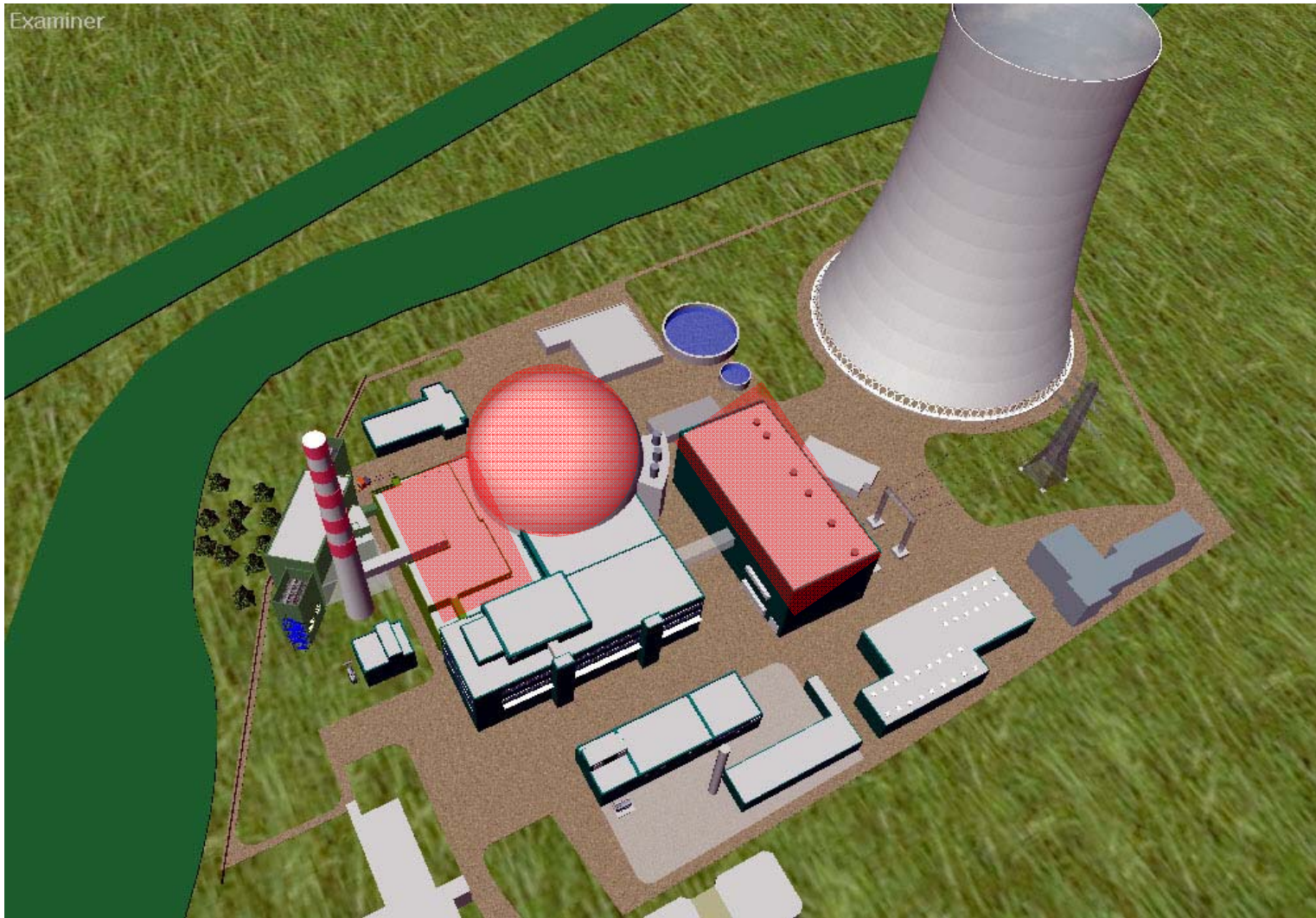


Specific situation in a NPP



Radiation zone in PWR's

Specific situation in a NPP



Radiation zone in BWR's

Specific situation in a NPP



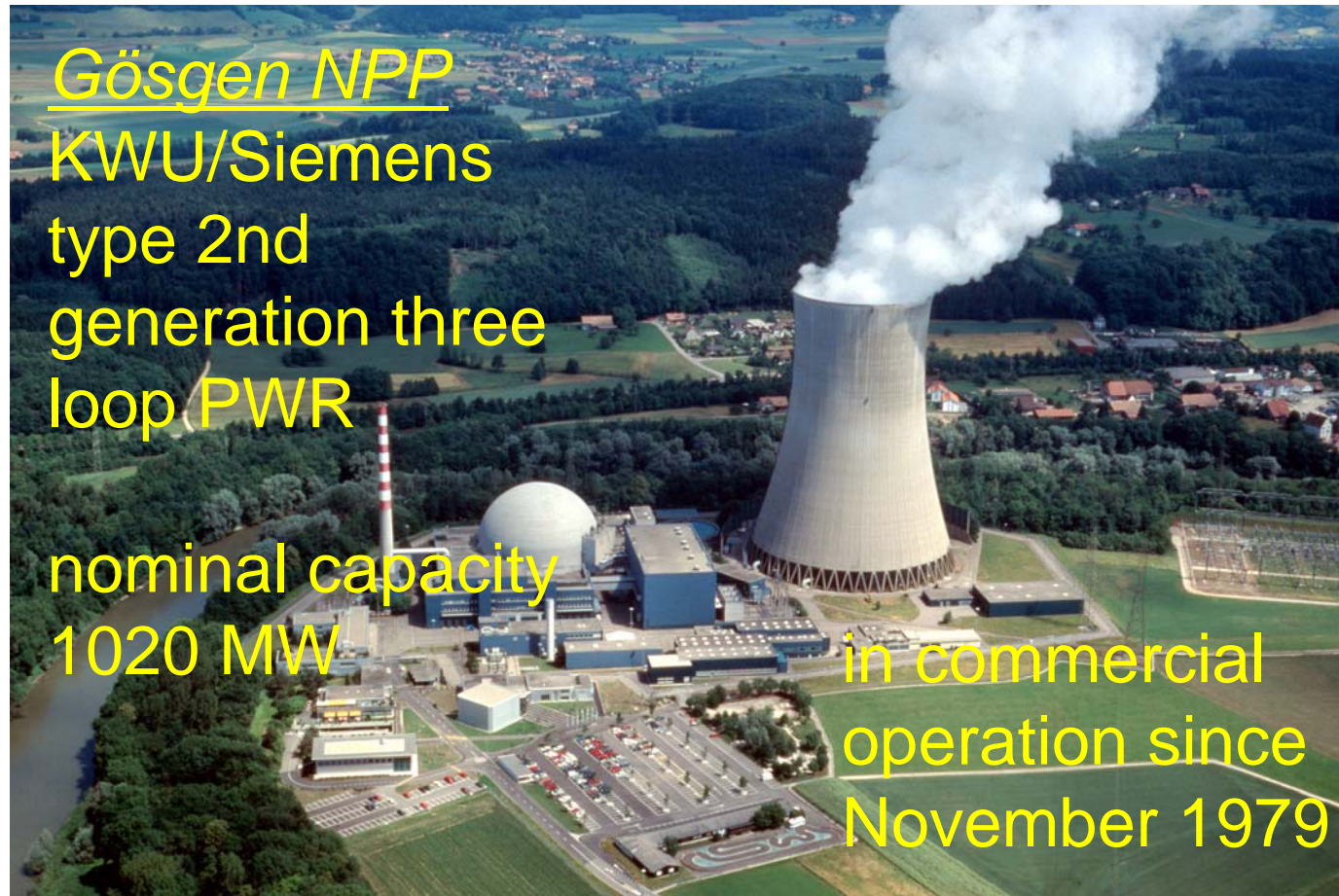
**About 400
employees per
plant, thereof
about 300
occupationally
exposed persons**

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

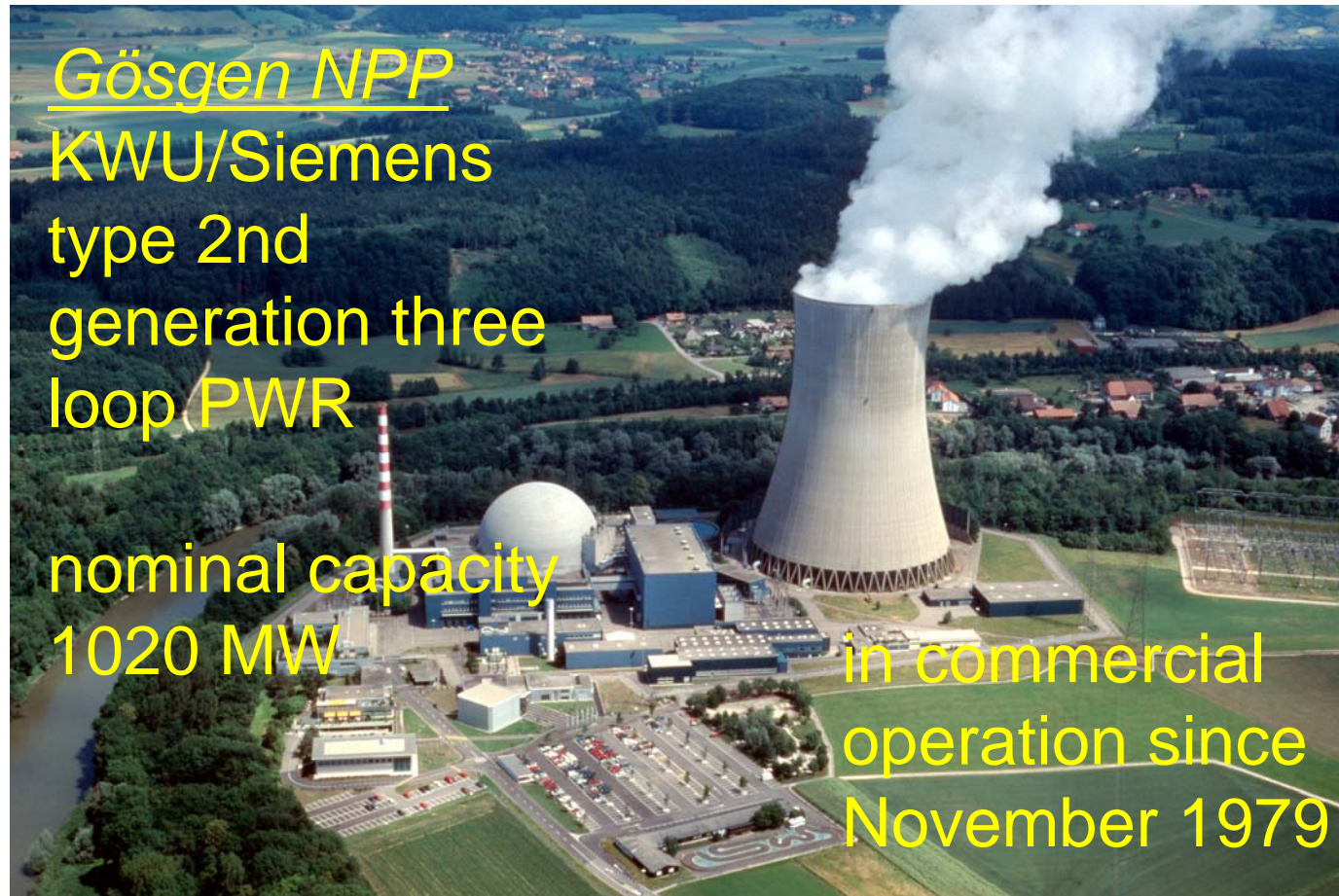
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- 9 decontworkers
- 8 RP skilled workers
- 4 RP technicians
- 4 RP experts
- 7 RP related jobs
- 32 in total**

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ **Decontworker**

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- **Decontworker** no RP specific skill
training on the job (about 1 year),
supplemented by a few training courses

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- *duties*
- sorting waste
- plant cleaning
- laundering clothes
- decontamination of components

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

- **Decontworker** no RP specific skill
- training on the job (about 1 year),
 supplemented by a few training courses
- *duties* sorting waste
- plant cleaning
- laundering clothes
- decontamination of components
- *career* none, except deputy group leader

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ Decontworker



Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ RP skilled worker

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ **RP skilled worker** specific skill training course

2 years of practice

skill test

authority approval

→ *duties*

monitoring

definition of protection levels

material release

authorizing officer in RP

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

- **RP skilled worker** specific skill training course
 - 2 years of practice
 - skill test
 - authority approval
- *duties* monitoring
 - definition of protection levels
 - material release
 - authorizing officer in RP
- *career* group leader, project leader

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ RP skilled worker



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→ **RP technician**

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→ RP technician

2 stage specific skill training course

5 years of practice

skill test

authority approval

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→ RP technician

2 stage specific skill training course

5 years of practice

skill test

authority approval

→ *duties*

overall RP tasks (projects)

RP planning

managerial functions

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

- **RP technician**
 - 2 stage specific skill training course
 - 5 years of practice
 - skill test
 - authority approval
- *duties*
 - overall RP tasks (projects)
 - RP planning
 - managerial functions
- *career*
 - team leader, project leader
 - dosimetry specialist

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ **RP expert**

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ RP expert

university degree

1 year of practice incl. training courses

skill test

authority approval

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ RP expert

university degree

1 year of practice incl. training courses

skill test

authority approval

→ *duties*

risk prevention

responsibility for carriage of radioactive material

managerial functions

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ RP expert

university degree

1 year of practice incl. training courses

skill test

authority approval

→ *duties*

risk prevention

responsibility for carriage of radioactive material

managerial functions

→ *career*

RP manager, diverse function range



Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

→ RP expert



RP manager of Gösgen NPP

Head of dep. of Chemistry & RP

responsible also for waste management

responsible for emergency planning

member of the Nagra technical committee

president of Zwiilag operational committee and member of the board of directors

member of national and international working groups (WNA RPWG & WMDWG for example)

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

related jobs

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operation of waste treatment facilities
chemical decontamination

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

related jobs

no RP specific skill

training on the job (about 1 year),
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→ *duties*

operation of waste treatment facilities
chemical decontamination

→ *career*

group leader, project leader

Brief description of RP workplaces and development possibilities at Gösgen NPP as an example

related jobs



Conclusion

- ✓ Wide variety of RP tasks in the nuclear field
- ✓ Interesting jobs, especially for skilled workers including possibilities for managerial functions
- ✓ Good position to work on an international basis for RP experts

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- ✓ Interesting jobs, especially for skilled workers including possibilities for managerial functions
- ✓ Good position to work on an international basis for RP experts

- ✓ Growing demand for RP personnel with the expansion of the nuclear industry

THANKS!