



Water, Soil, Air, Nature

Bavarian Environment Agency

...and Radioactivity !





Geographical
situation
within
Germany
and the
EU

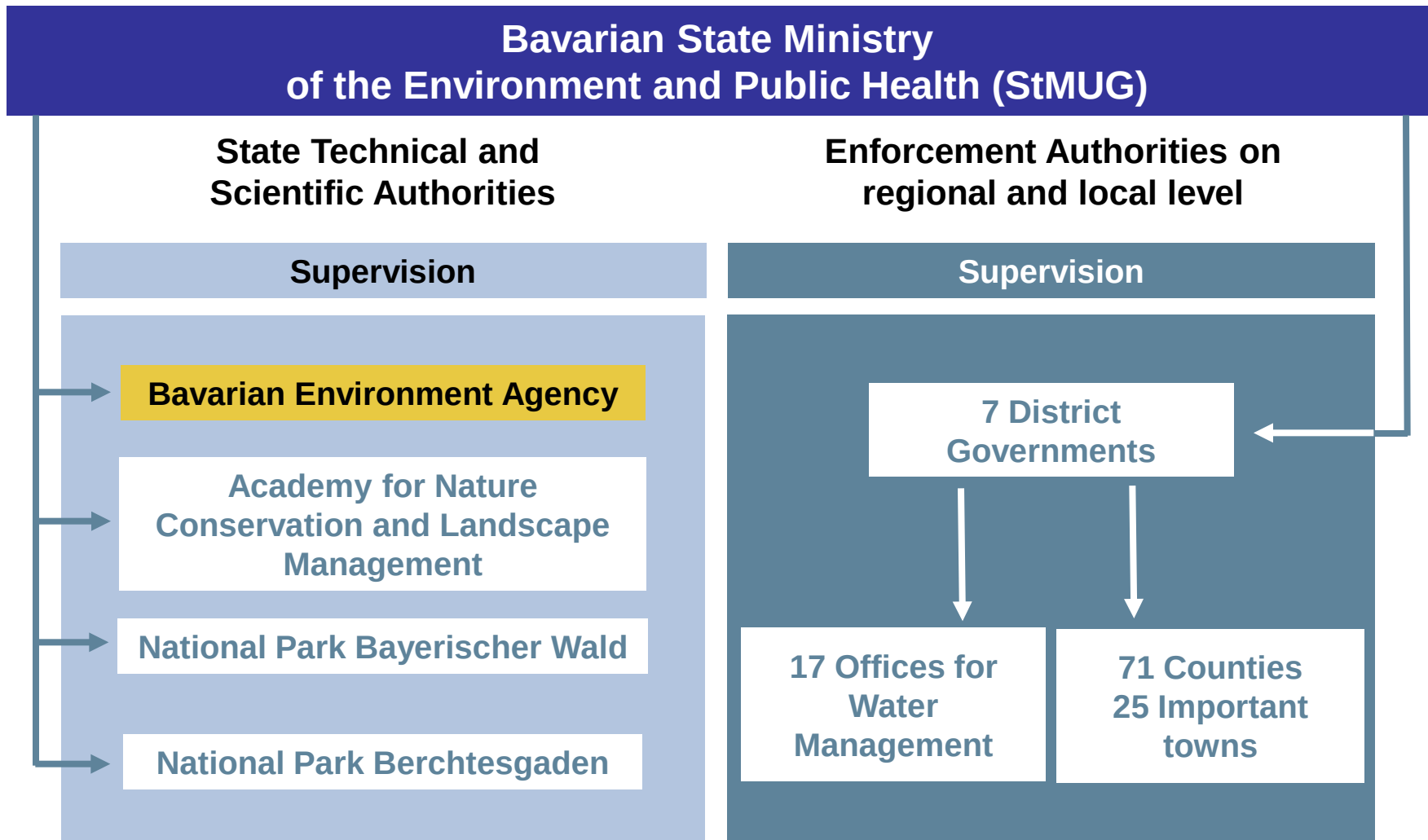


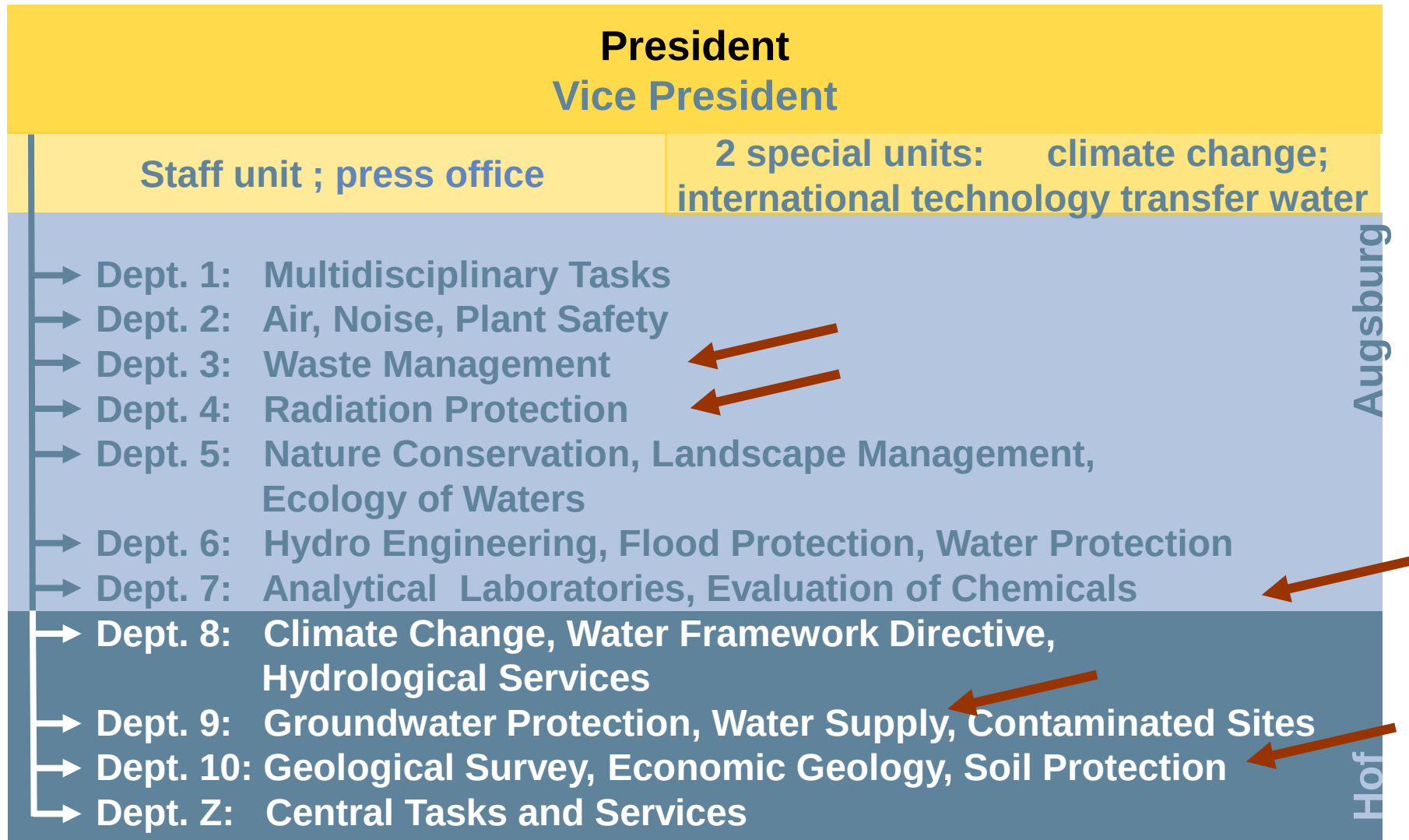
Sites of the Agency within Bavaria

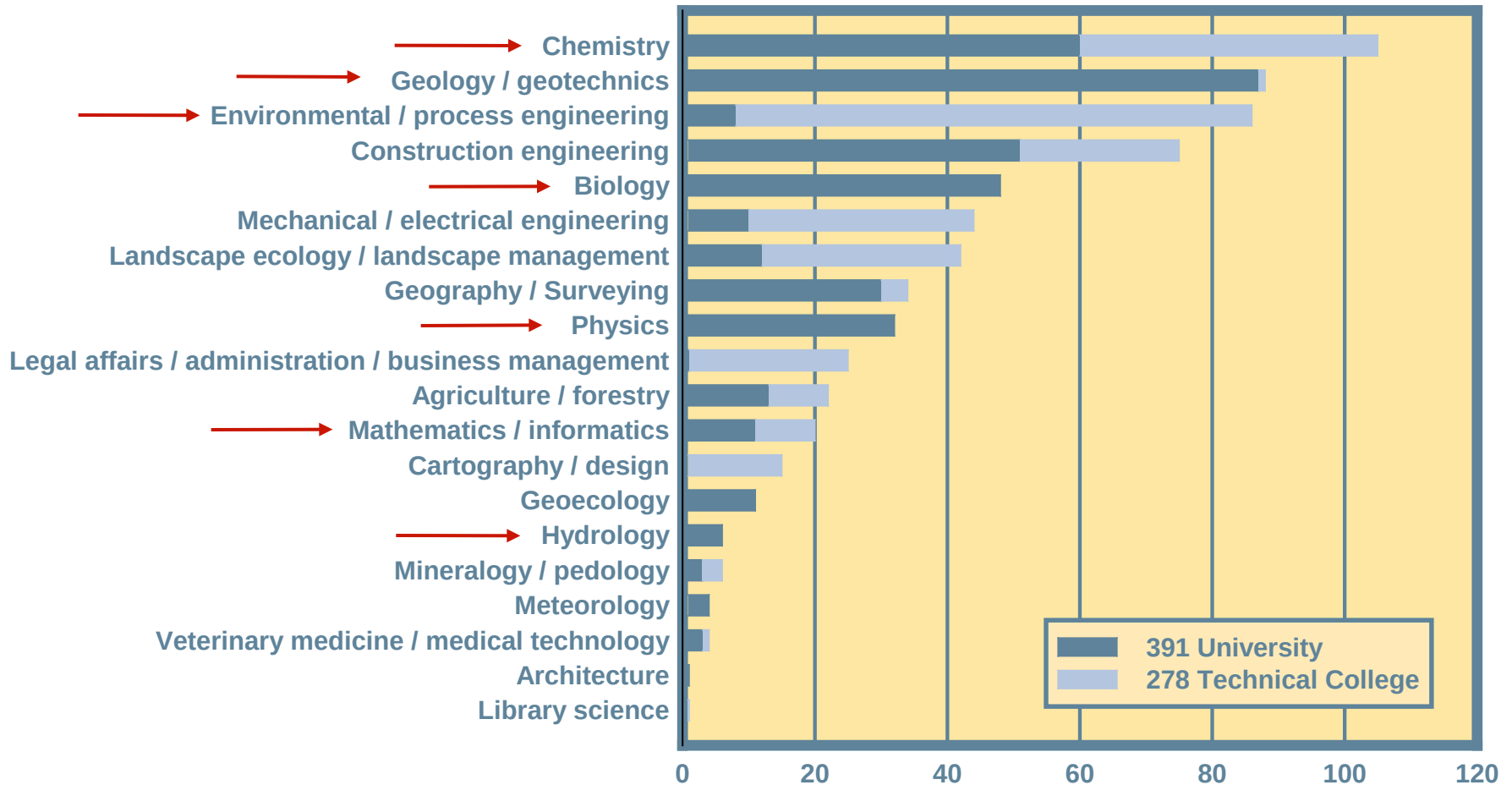




Structure of the Bavarian Environmental Administration







{ among them → members of the radiation protection department }

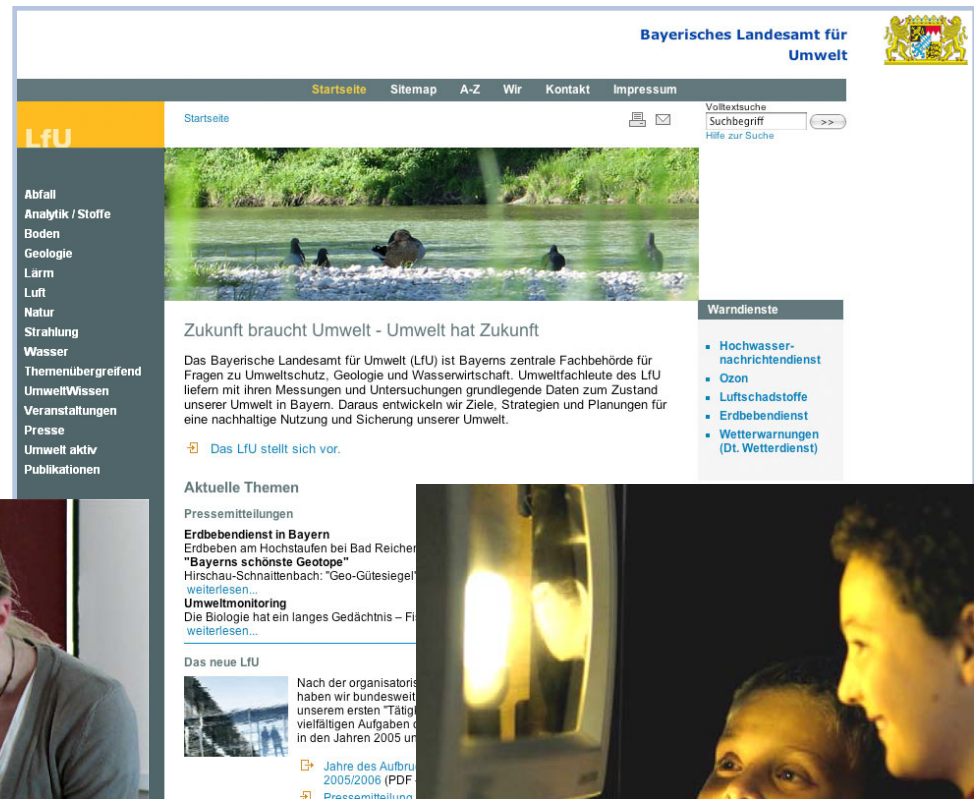


- **Establishing** and **evaluating** the condition of the environment
- **Defining** and **implementing** environmental targets
- **Professional advice** for business, science, municipalities and the authorities
- Complete and up-to-date **information**; e.g.: www.lfu.bayern.de

These approaches refer to all
environmental media !

Complete and up-to-date **information**

- Symposia
- Training courses
- Exhibitions
- Fairs
- Publications
- Internet: www.lfu.bayern.de





Dept. 4 – Radiation Protection

Monitoring of radioactivity (KfÜ, IfR)

Authorization and surveillance of plants and handling of radioactive substances (industry, medical field, research; road transports)

Radiation protection in workplaces

Radio-ecology

Radio-toxicology

Radon ... at workplaces

Radon spas



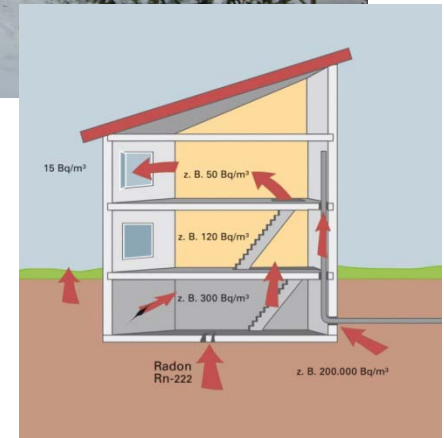
underground workplaces



Water works



... in homes, schools and offices



Uranium, Radium... in residues and materials (NORM)

scaling



Automatic monitoring

24-hour-monitoring by means of measuring systems with automatic alarms to the ministry and our office:

- * **Nuclear power plant remote monitoring (KFÜ)**
in and around nuclear power plants /research reactors
- * **Immission monitoring network for radioactivity (IfR)**
(early warning system for the whole of Bavaria, 31 stations)



Monitoring of all environmental areas

Sampling, measurement and documentation:

Radioactivity in the environment in general and in the environment of the nuclear facilities

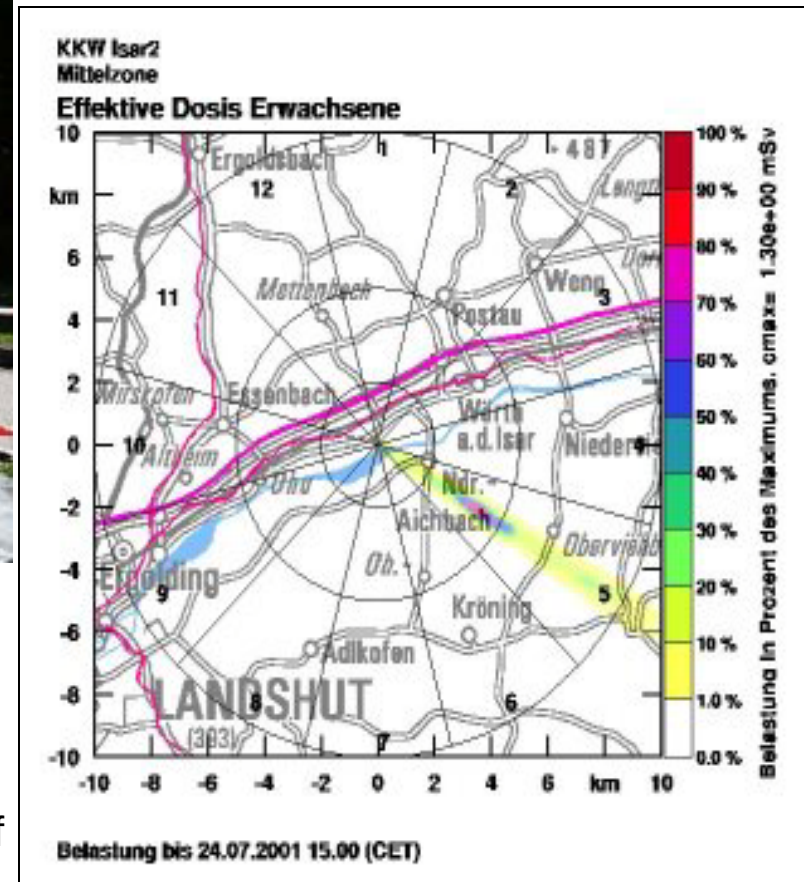
(central data collecting authority)

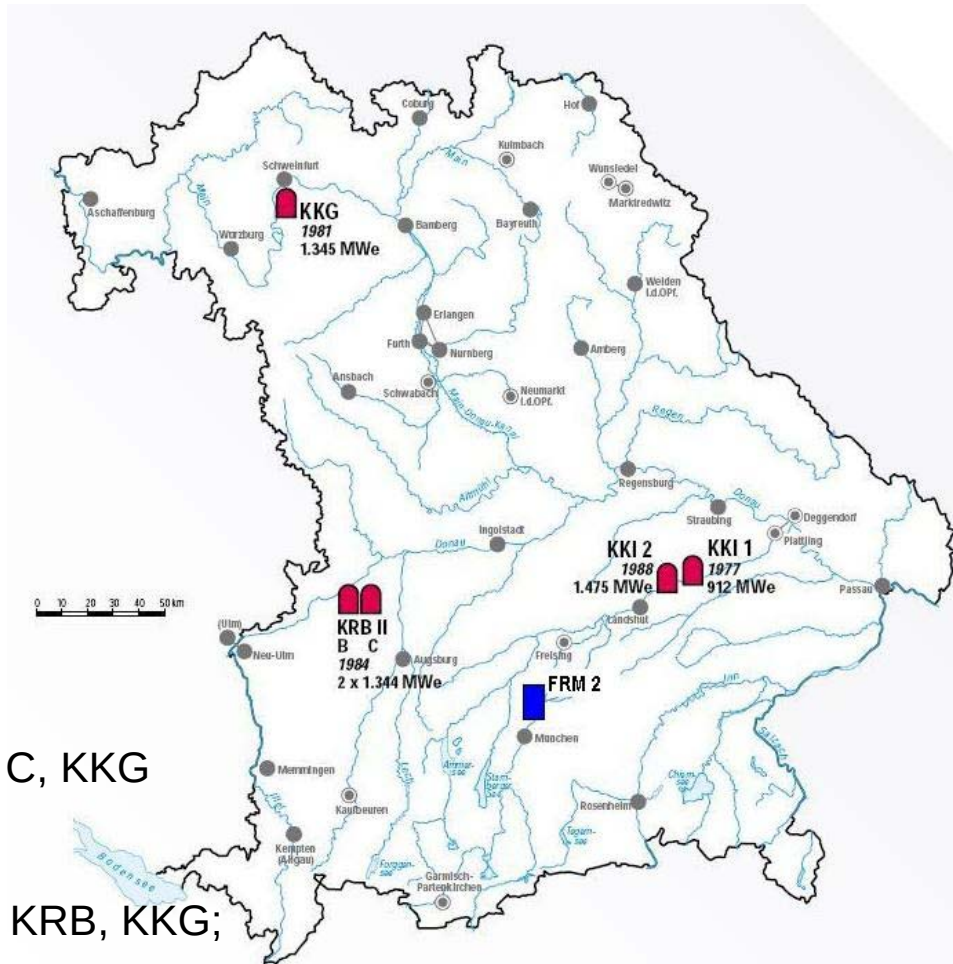
<http://www.lfu.bayern.de/strahlung/daten/index.htm>





- advisor for radiological protection
- dispersion calculation
- routine monitoring
- Trainings of measures and measurements in case of nuclear incidents
- illicit trafficking of nuclear material





Monitoring of radiation conditions in and around:

Nuclear power plants KKI 1 und 2, KRB B und C, KKG

Research reactor FRM II

Interim storage for spent fuel elements KKI, KRB, KKG;

Presence of members of our staff in the power plants:

at least once a week

Application of radioactive materials and ionising radiation

- * Licensing and inspection
- * Approval and acknowledgement of radiation protection training courses
- * Certification of personal qualification on radiation protection





Universities, pharmaceutical
industry

material testing:
industrial radiography



Road transport of
radioactive materials
(e.g.: medicine: F-18, Tc-99;
industrial radiography)

special incidents:
e.g. radioactive scrap metal;
loss / burglary of radioactive sources





- Gamma-ray-spectrometry
- In-situ-Gamma-ray-spectrometry (measuring vehicles)
- local dose rate
- Alpha-spectrometry (Uranium, Plutonium, Americium, Curium)
- Gross-alpha-, Gross-beta determination
- Strontium-89, Strontium-90
- Tritium
- Radon in air and water



11.03.2011 Earthquake and tsunami north-east of Japan

12.03.2011 start-up public hotline of the Bavarian Env.Agency

→ up to 140 calls per day

FAQs: safe holidays in Japan? Dangerous fallout in Europe? Contaminated food from Japan? Iodine tablets necessary? Merchandise from Japan is controlled in ports and airports?

15.03.2011 Munich Airport: start of checking the 2 airplanes coming from Japan directly.

13.05.2011 hotline close-down (~ 1 call per day)

→ lack of robust limit values and measures to be taken in case of detected contamination on national and EU level.

A close-up photograph of a vibrant green tree frog resting on a large, dark green leaf. The frog's skin is smooth and bright green, with some brownish markings on its sides and underbelly. Its large, bulging eyes are prominent. The background is a soft-focus green, suggesting a natural habitat with other foliage.

The **environment** has a future –
the future needs the **environment**.