



Capacitación técnica en la gestión de los recursos hídricos en áreas mineras y de post-minería

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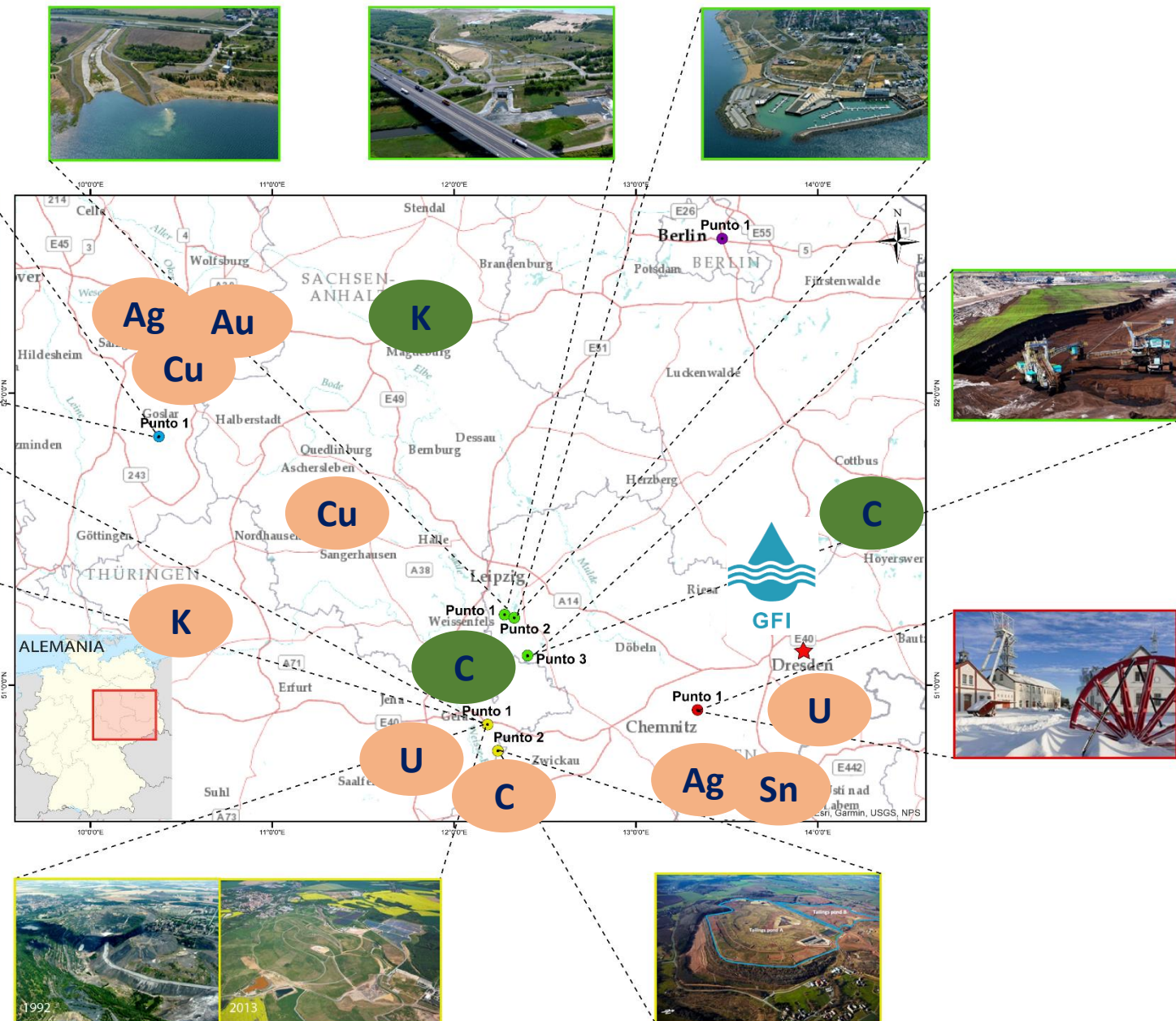
Saxony (& neighbore Fed. States): Region of Mining and Post-mining rehabilitation

- 800 y metal mining
- 150 y coal mining
- 100 y salt mining
- 40 y uranium mining
- 30 y rehabilitation
- 2038: finish of lignite coal mining

 active mining

 rehabilitation, post mining

Puntos excursión
Fecha



Dresden Groundwater Center

Research and Development - R & D

- Development of practices and methods for soil and groundwater remediation
- Transfer of R & D results in remediation technologies
- Patent-protected new technologies

Education and capacitation

- Education of M.Sc./Ph.D. students
- Advanced training for professionals in environmental engineering
- Cooperative scientific training courses with international experts / institutions
- Management and guidance of (internat.) conferences / workshops



Consulting and Application

- Studies, concepts, planning
- Mining remediation
 - soil and groundwater remediation
 - Water engineering / watermanagement
 - Geotechnics
 - Closing and maintenance of waste dumps

Laboratory and pilot scale testing

- Basic and special lab analyses
- Sampling of water, soil and gas
- Test of measurement and remediation technologies in the pilot scale



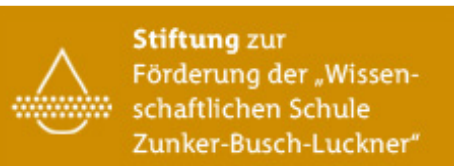
NGO



Ltd



Ltd

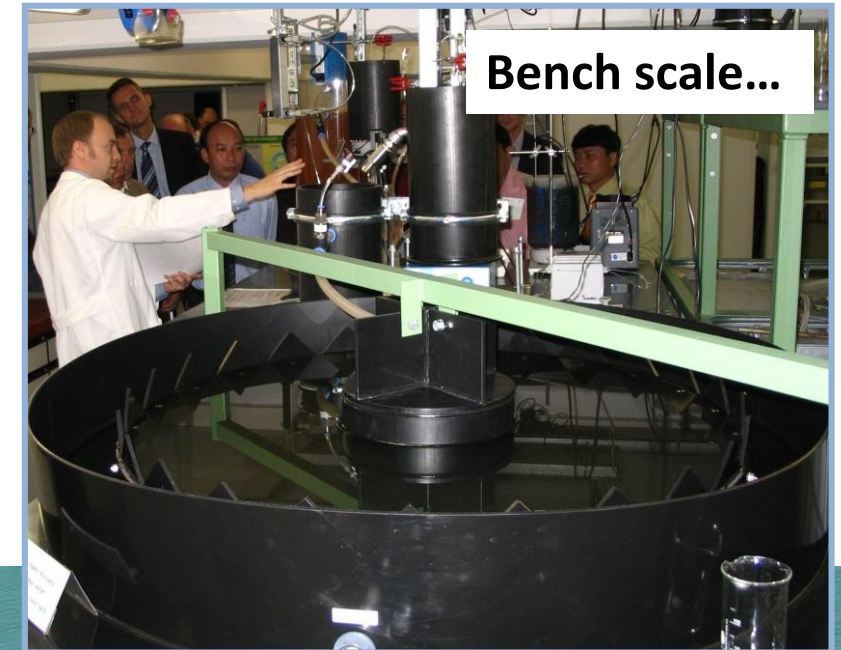


Foundation

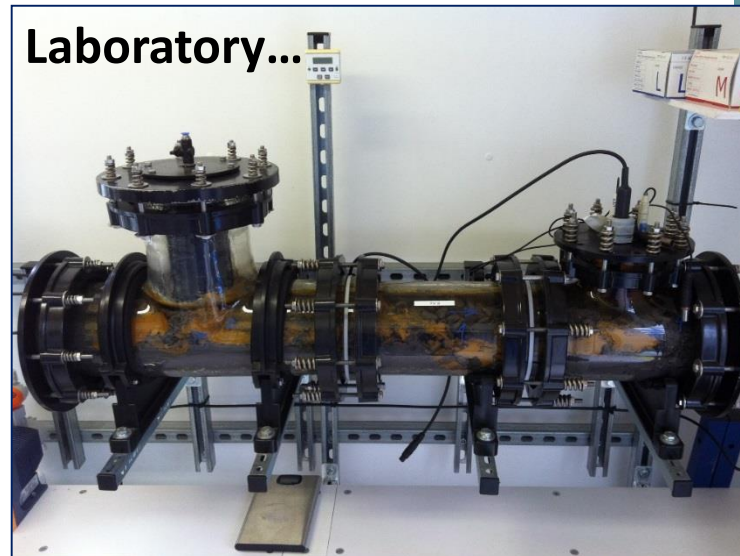
Lab & Pilot & Field Scale Testing and Technology Development

What we are doing...

- Water protection and treatment
- Remediation of contaminated sites
- Hydrogeology, geophysics, geochemistry
- Hydraulic and migration modeling in lakes and groundwater



Field...



Contaminated site remediation (monitoring and clean-up technologies)



Team site remediation



Rositz, Turingia
Kontrollbefahrung zur
GW-Probenahme

[illegible]

Hazardous waste deposit
St. Petersburg
Environmental monitoring



Post-mining Perù *monitoring of tailings*



Mine water treatment and water conflict management



e.g. Vietnam:

- hard coal mining
- copper mining



Range of Activities of the Dresden Groundwater Center in technical capacitation of hydro-resources management

Education & Formation

- post-school environmental orientation
- studentships, student co-working
- BSc & MSc thesis tutoring

Scientific cooperation & specialization

- know-how & technology development
- PhD tutoring & scientific networking
- quality control of water management

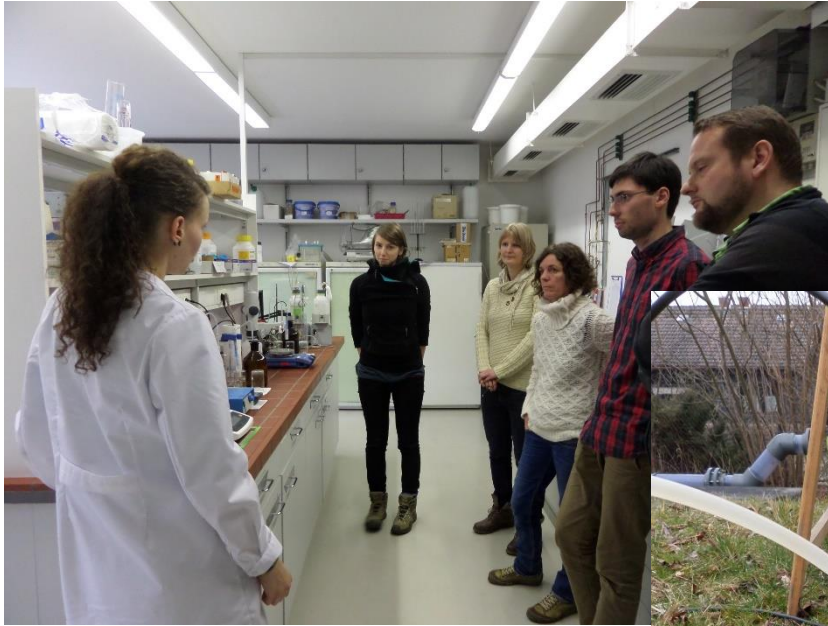
Technical Capacitation

- scientific basic knowlegde
- field & lab monitoring techniques
- pilot plant (water) treatment techniques

Conferences & Workshops

- internat. & national cientific networking
- link to environmental administrations
- publication & know-how-transfer

Technical capacitation of hydro-resources management



lab & field parameter testing
of groundwater



 Dresdner Grundwasserforschungszentrum e.V.
DGFZ e.V. im Grundwasser-Zentrum Dresden



WEITERBILDUNG

PROBENAHEME von Grund-, Oberfläch wasser und Sediment

inklusive Montanhydrologischem Monitoring
Bereich der LMBV mbH

am **25.—26. Mai 20**

modular: praktische Seeprobenahme

auf der Talsperre Bautzen

 Dresdner Grundwasserforschungszentrum e.V.
DGFZ e.V. im Grundwasser-Zentrum Dresden



SACHKUNDELEHRGANG

PROBENAHEME von Abfällen nach LAGA PN 98

am **24. Feb. 2021**

Technical capacitation of hydro-resources management



soil & waste
sampling



surface water
sampling



Technical capacitation of hydro-resources management



mining dump site prospecting



geophysical
groundwater sounding



International Activities: Training, Capacity building, Consulting



DGFZ
Dresdner Grundwasser-
forschungszentrum e.V.

Innovative Technologies for Mine Water Treatment and Retention of Mining Related Contaminants - Recent Examples

TRAINING COURSE

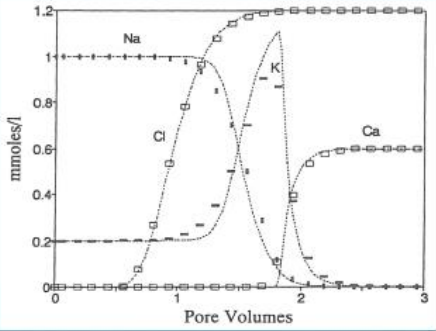
MOHID

Water Modelling

SHORT COURSE

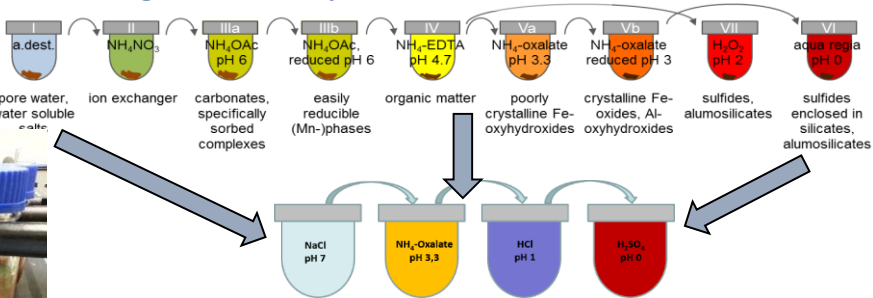
Hydrogeochemical transport modeling with PHREEQC-2

August 22th to 26th, 2016

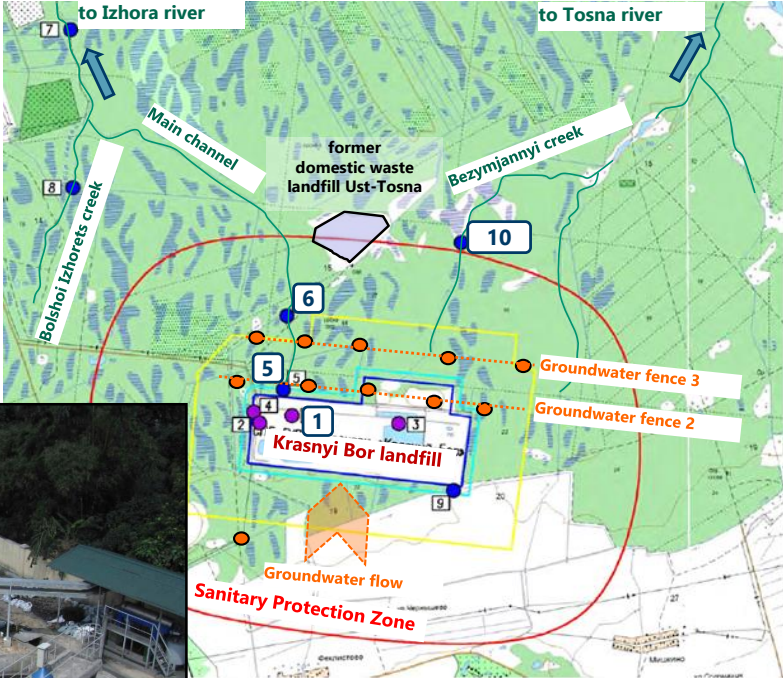




Chile: sequential extraction for tailing inventory estimation



Russia: hazardous waste deposit monitoring



Vietnam: technology development for coal mine water treatment

Apoyo al desarrollo de competencias y capacidades en la gestión de Pasivos Ambientales Mineros

Estudio comparativo de experiencias positivas en la gestión de sitios contaminados

Chile, Perú, Colombia, Bolivia, Ecuador

2017 - 2019

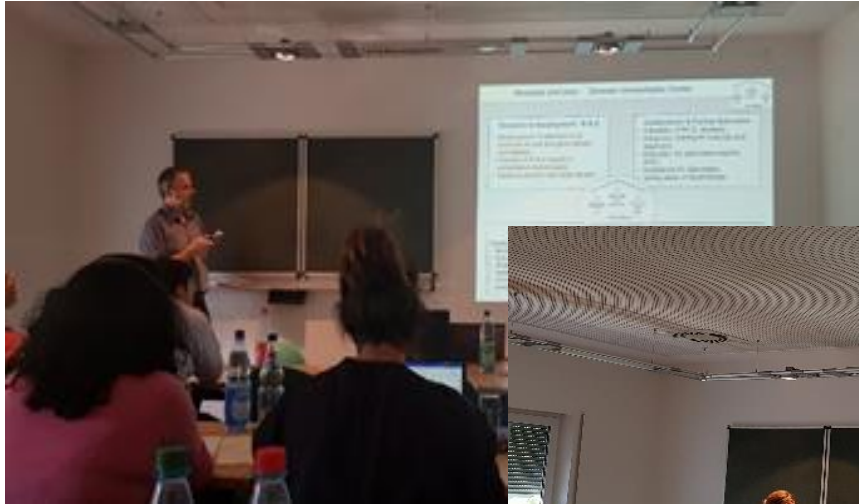
Foto 1. Hochwasserschutz-Bauwerk am Zwenkauer See der LMBV.



Foto 2. Abschluss-Workshop bei GIZ, Berlin.

Viaje de Capacitación e Intercambio técnico, AHK-Perú, 2019

Technologías de tratamiento de aguas residuales en el sector minero



Formation of capacities



Lab technology demonstration

Proyecto Federal-Regional Sajonia-Perú

Gestión de los recursos hídricos en la post-minería del Perú

BGR y DGFZ de Alemania, y Minera Los Rosales inician colaboración sobre proyecto de reaprovechamiento de PAMs en Puno, Perú

<https://minsus.net>

2020-2022

**Muchas gracias
por su atención!**

