Symposium

Global environmental challenges

M.Sc. degree program Environmental Chemistry
module M1

UNIVERSITÄT BAYREUTH

Bayceer
Bayreuth Center of Ecology and Environmental Research



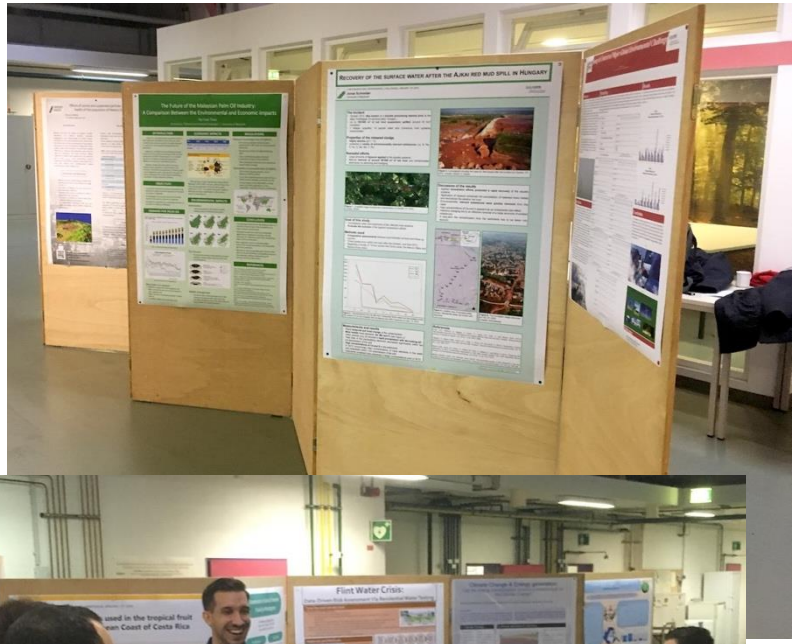


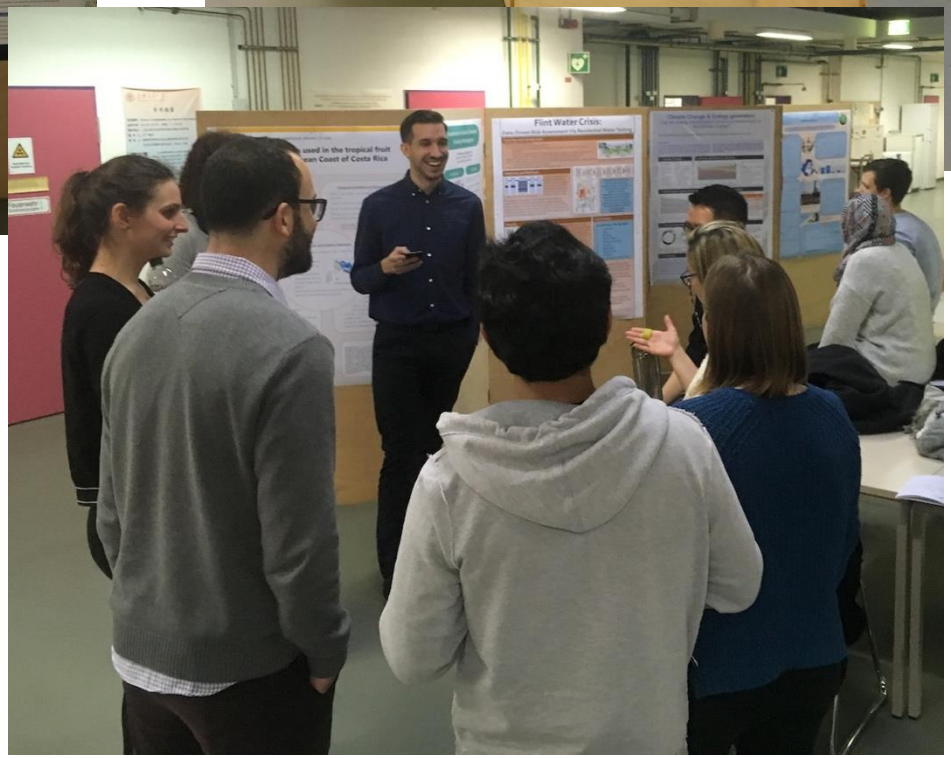
the idea

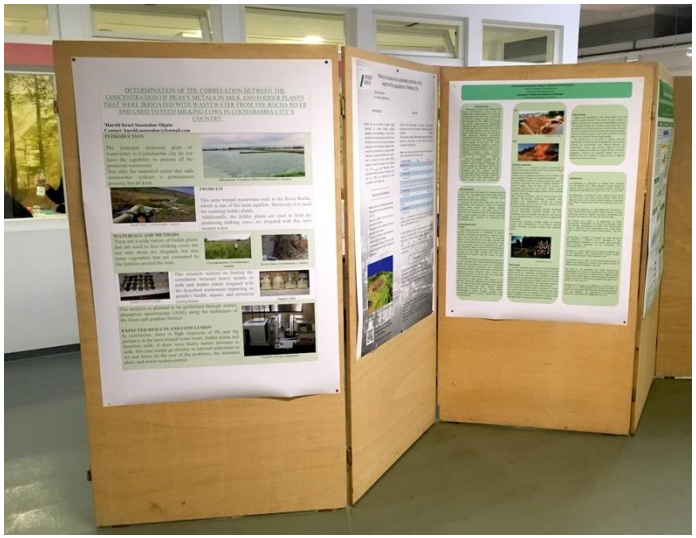
- 1-day conference
- interdisciplinary topics
- training of abstract writing
- training of review process
- oral presentation
- poster presentation
- feedback and critical discussion

previous symposia…









your tasks in module M1, symposium

➔ think about a topic of an environmental challenge
(related to environmental chemistry; preferentially from your home country)

➔ register for the symposium with your topic of choice on the webpage (next slide)
NB: register for an oral presentation
abstract can be uploaded & changed until registration deadline
poster and presentation on the same topic (→ 1 abstract, uploaded for talk only)

➔ register on Campus online (cmlife) for the course as well

➔ after the registration deadline you will receive 2 abstracts to review
using criteria that you then already learned from M1 writing seminar
provide feedback to the authors how to improve the abstract

➔ improve your own abstract using the feedback of your colleagues
meet and discuss as required

➔ upload a corrected, final version until deadline (next page)

➔ prepare an oral presentation & a poster

➔ present your talk and your poster at the symposium

https://indico.global/event/6740/

Global Environmental Challenges 2027

5 February 2027
DHF
Europe/Zurich timezone

Enter your search term

M.Sc. Environmental Chemistry, Symposium EB1

- Overview
- Scientific Programme
- Key dates
- Contribution List
- Speaker List

Organizer: Martin Obst
martin.obst@uni-bayreu…



Each of the participants of this symposium will present an individual topic of choice within the framework of "global environmental challenges". This could be environmental threats as well as challenges related to resources, agriculture etc. A possible topic, for example, could be "Heavy metal contamination of agricultural used soils caused by the application of P-fertilizers."

Each of the participants will prepare an abstract for this topic (max. 1500 characters). Abstract submission is included in the registration procedure for the symposium. Each participant should **register** for an **oral presentation**, but finally present both an oral presentation and a poster at the symposium. Submission can be uploaded and edited until the registration deadline.

These abstracts will then be reviewed by other participants. For the symposium, each of the participants will prepare a poster and a talk that will be presented in the oral session and a poster session of the symposium respectively. A detailed program will be posted on this page. For registration please refer to the link "Online-Registration" at the top of this page.

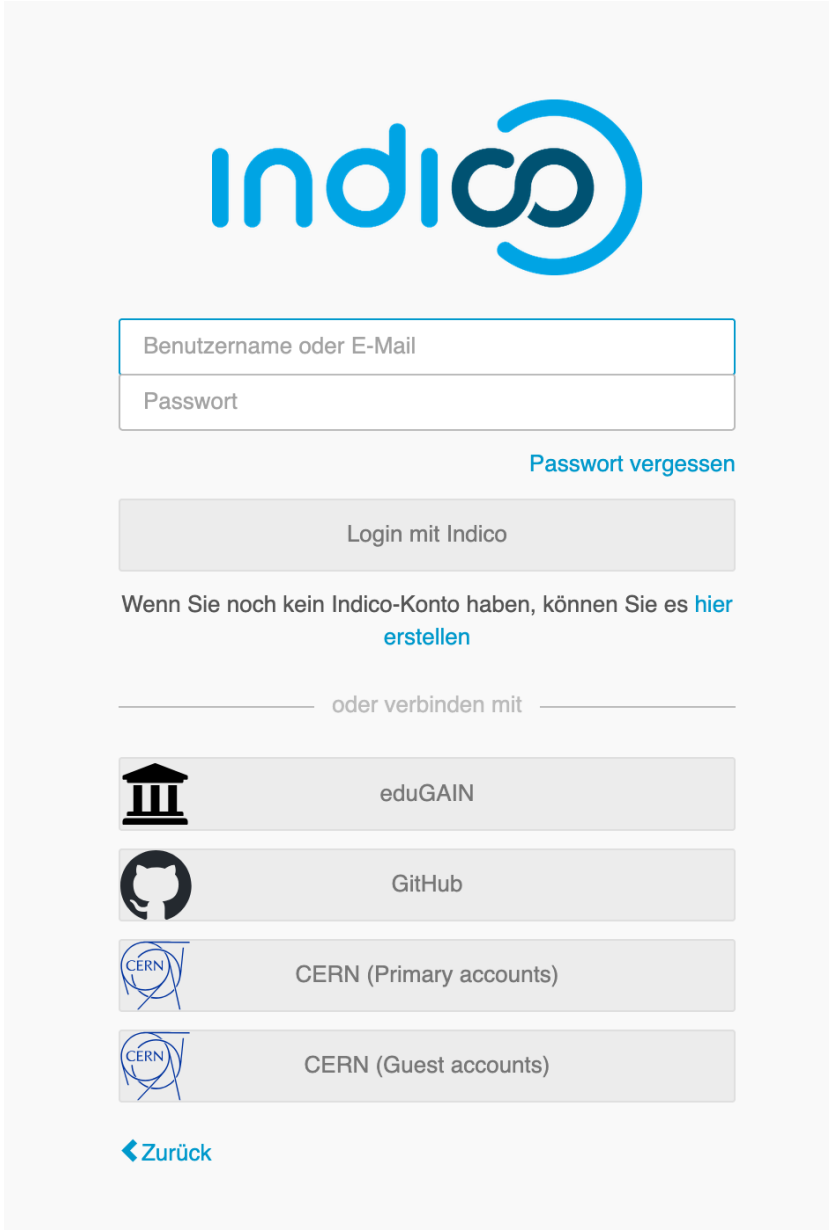
Starts 5 Feb 2027, 08:00
Ends 5 Feb 2027, 20:00
Europe/Zurich

Martin Obst

DHF
seminar room H7
Dr-Hans-Frisch-Str. 1-3

lecture slides
01_introduction.pdf
02_review_poster_talks.pdf
literature
Hites_ES&T2014 How to give a talk-pr…

https://indico.global/event/6740/



key dates

28 Oct 2026	First meeting and discussion
Nov 15th 2026	Deadline for registration and abstract submission
Nov 18th – Dec 08th	Abstract review (each participand reviews 2 abstracts)
Individually, if required	Discussion of questions regarding review
Dec 08th 2026	Deadline for submission of abstract reviews
Dec 09th 2026	Second Meeting, Discussion on how to present a talk and how to prepare a poster
Dec 20th 2026	Final submission deadline for abstract updates
Jan 17th 2027	Final deadline for poster upload for printing. Poster **MUST** be uploaded as **PDF** with a page size **A0** by midnight
Jan 24th 2027	Final deadline for presentation upload as PPT, PPTX or PDF
Jan 29th 2027	Symposium at the DHF-Str (no isotope class that day)

some examples ...

…of potential topics

(historic) mining of metal ore in Germany



River Elbe
length: 1094 km
discharge: 870 m^3/s

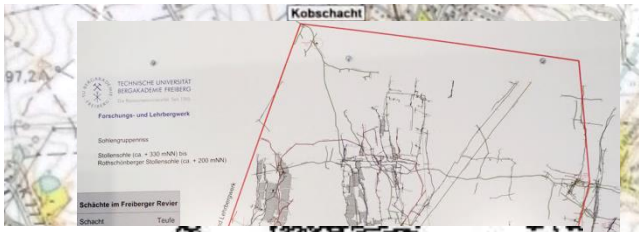
River Mulde
discharge; 73 m^3/s

Erz Mountains
Erz = ore

Freiberger Revier

- First silver ore found in year 1168
- Mining documented for ≈ 830 years
- Technical university for mining, funded in 1765

- example: mine “Reiche Zeche”, 4.12 km^2
- 110 km of mine tunnels (25 km still in use)

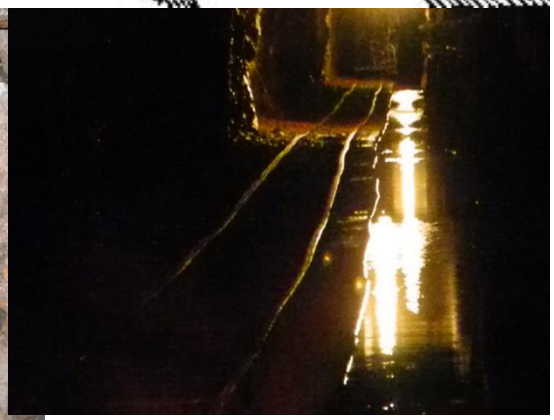












source: gupf.tu-freiberg.de

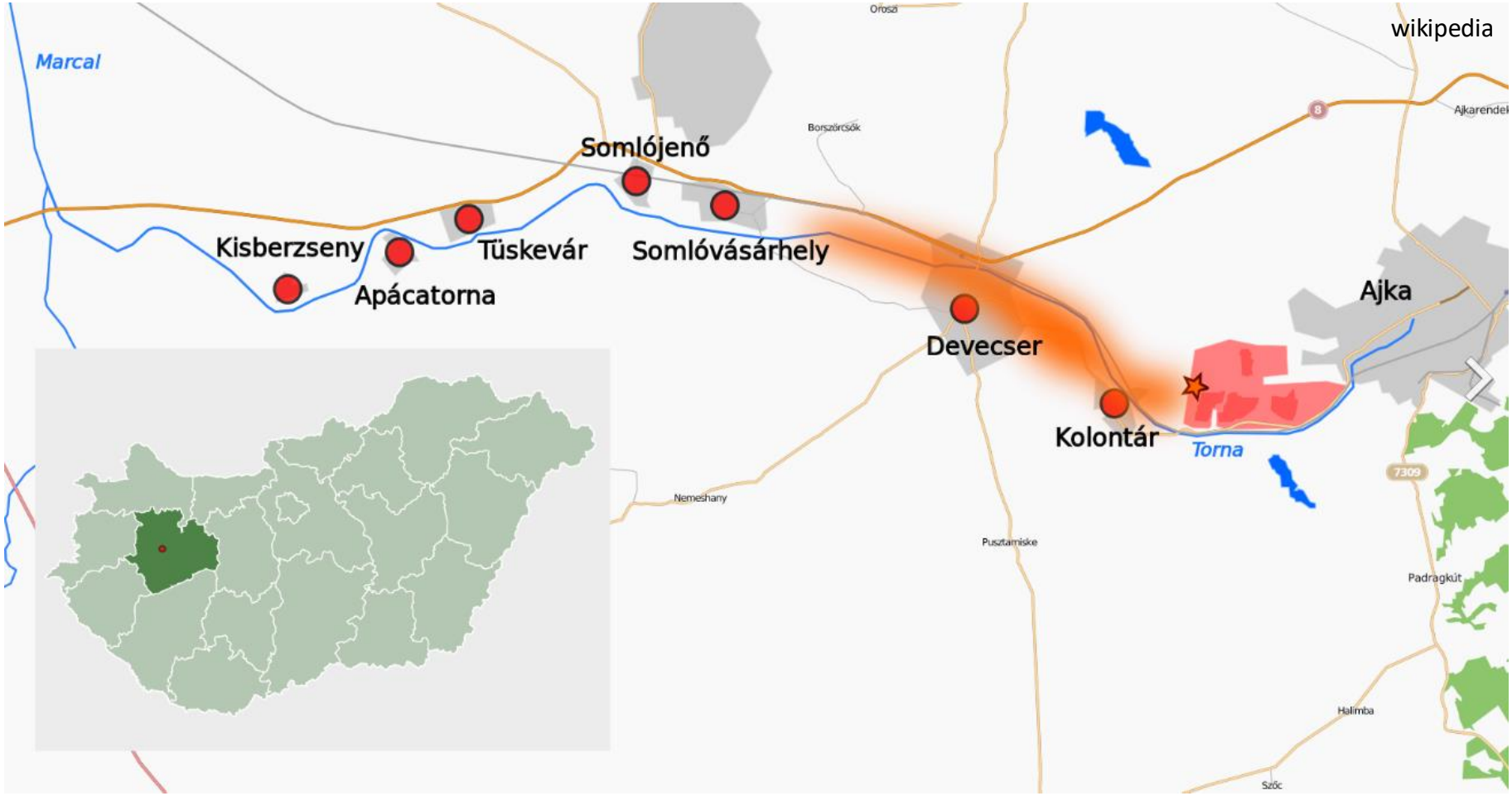
heavy metal loads of mine discharge



Rothschönberger Stolln

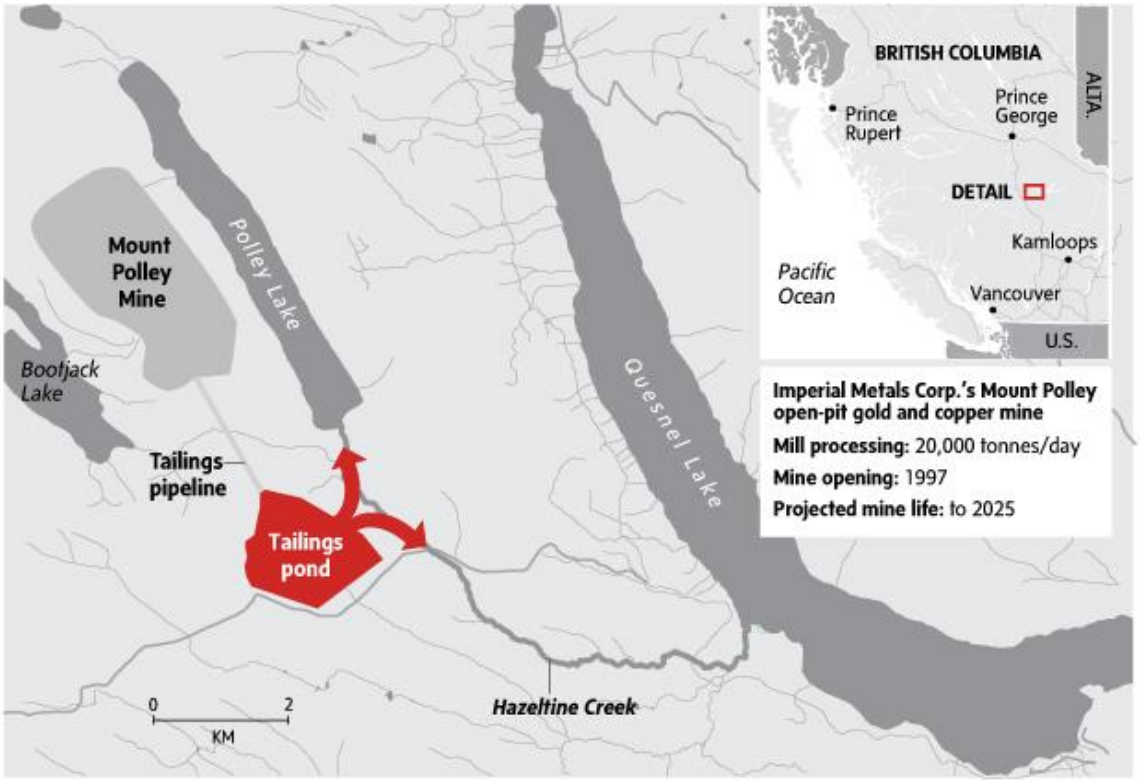
Freiberg region	average [kg/d]	flooding 06/13 [kg/d]
As	4.1	1700
Cd	2.5	85
Cu	5.5	630
Pb	10	4500
Zn	220	6400

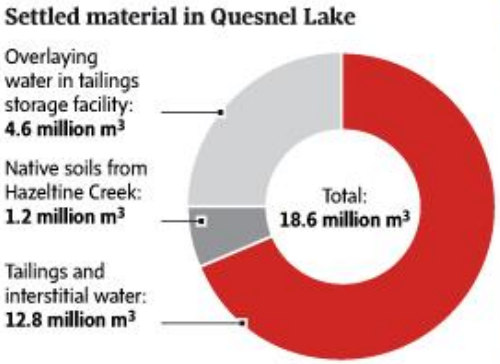
mining accidents: Hungary 2010



- Ajka alumina plant, Hungary, Oct/2010
- dam of tailings pond burst
- 1 million m^3 of iron-oxide mud flooded surrounding area (40 km^2 affected)
- metal concentrations elevated but not very high

mining accidents: Canada (BC) 2014







JOHN SOPINSKI/THE GLOBE AND MAIL » SOURCE: B.C. GOVERNMENT; IMPERIAL METALS CORP.

- dam of a tailings pond (size 4 km^2) burst
- 10 million m^3 of water + 4.5 million m^3 of sediments released into Polley Lake

mining accidents: Brasil (MG) 2015







- Samarco mine, Brasil, Nov/2015
- dam of tailings pond burst
- 60 million m^3 of iron-oxide sludge flowed into the Doce Rive

fertilizers in agriculture









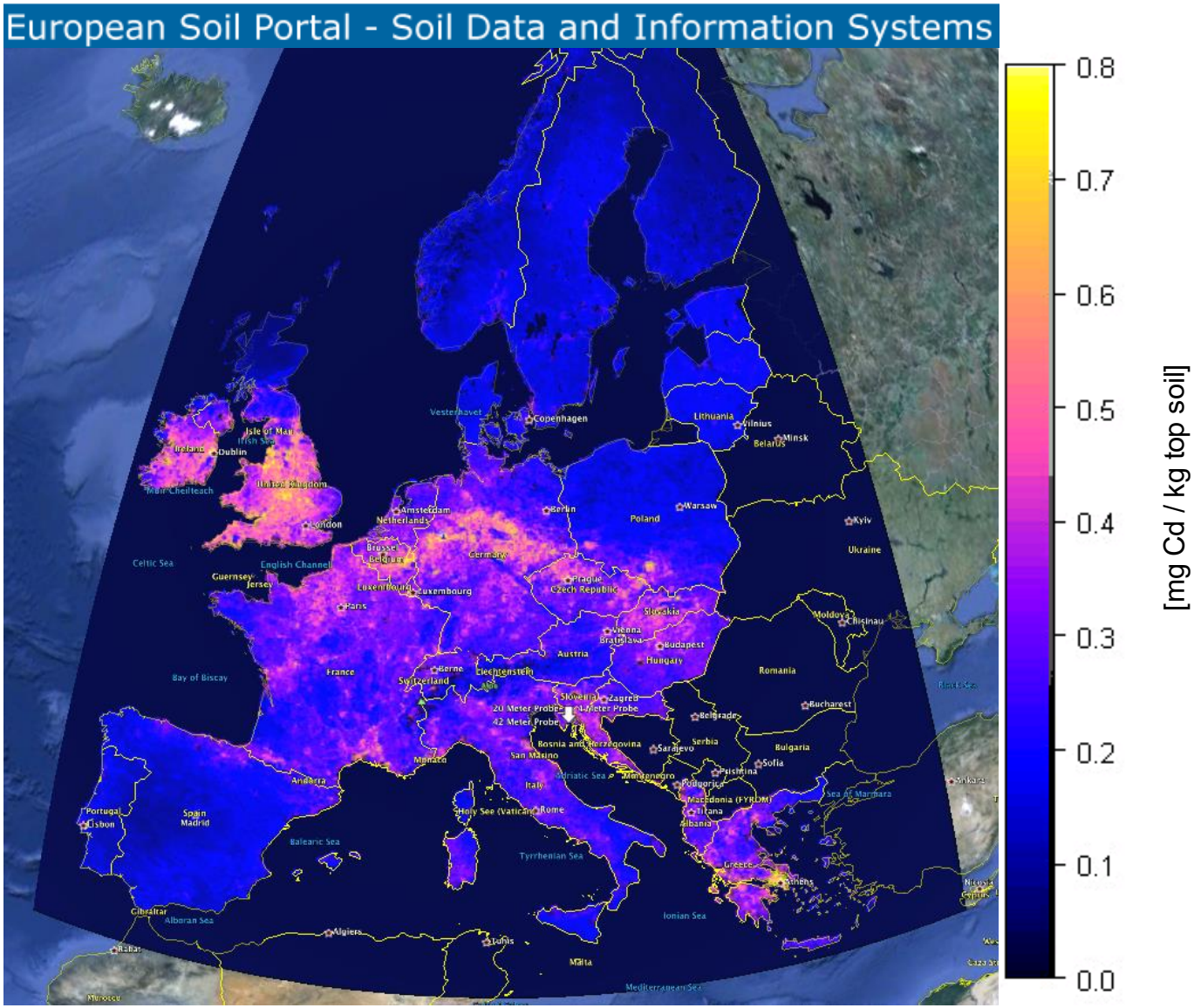


example: Cd in agricultural used soil

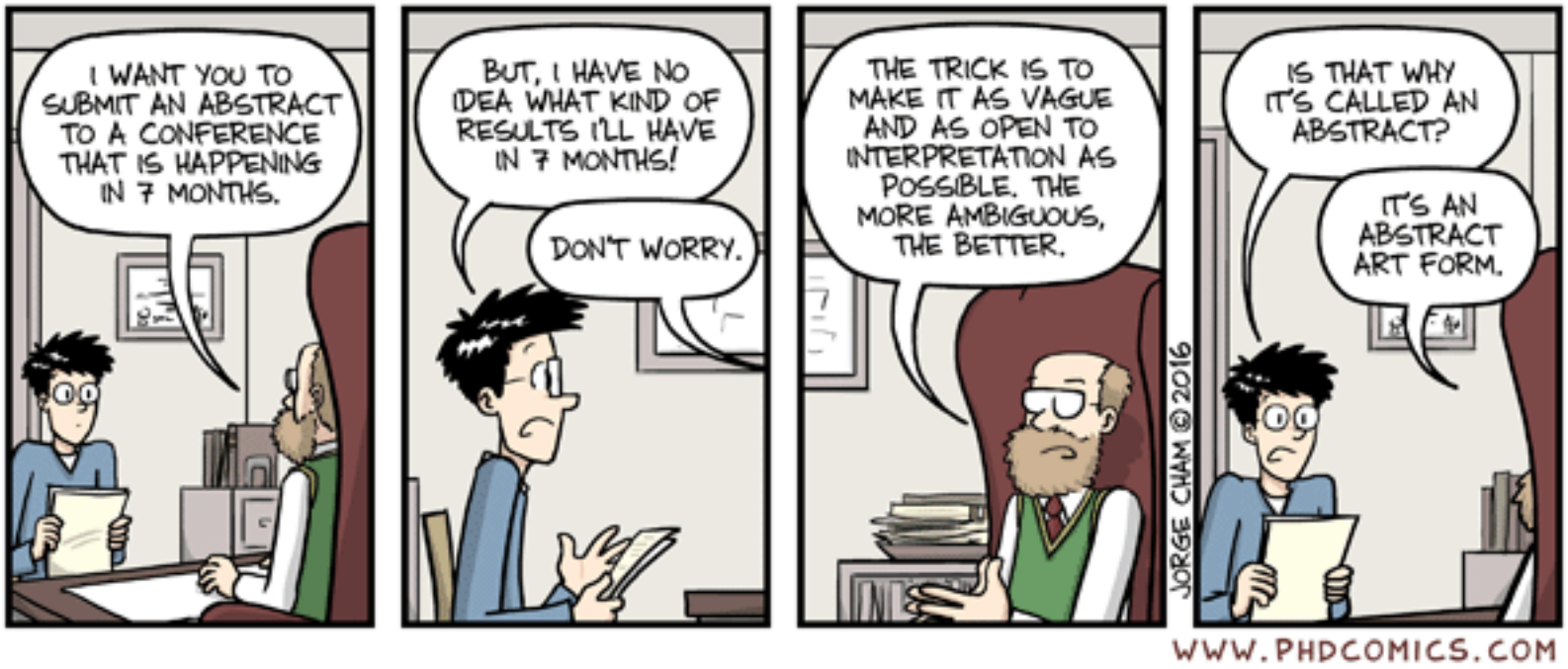


- 50 % of Cd input through fertilizers
- 80% of that through P-fertilizers, 20% through lime
- main source: sedimentary P-deposits (majority worldwide)
- up to 250 mg/kg Cd
- only 13% of phosphate mineral deposits worldwide low in Cd
- 60% of these in Russia

Cd contamination of soil



register for a conference…



the title

➔ first impression – will often decide whether or not people read any further

➔ as much information as possible

➔ as short as possible

“Influence of metals on bacteria”

→ too short! What influence? Which metals? What kind of bacteria?

“Influence of Cu^{2+} ions on geobacter metallireducens”

→ better?

“Inhibition of growth of geobacter metallireducens by Cu^{2+} ions”

best version so far

types of titles

➔ **question**

Do freeze/thaw events enhance heavy metal mobilization in C-rich soils? – A review

➔ **content**

Effects of soil frost on heavy metal mobilization a in C-rich forest soil

➔ **hypothesis**

An increasing frequency of freeze/thaw events might mobilize heavy metals in C-rich soils

➔ **results**

An increase in frequency of freeze/thaw events mobilized heavy metals in C-rich soils

abstract

➔ short and precise description of the content of your oral presentation / poster

➔ describes the open question

➔ describes the goal of the project

➔ explains briefly the methods used

➔ summarizes the results and essential data

➔ closes with the most important conclusion(s)

abstract

➔ usually one paragraph (sometimes structured with standardized subtitles)

➔ usually 250-400 words. In your case 1500 letters (incl. spaces; strict)

➔ check specifications (often “instruction for authors”)

further information → Prof. Dr. Borken





the review process

The peer review process

critical feedback is essential in science!

… some key aspects of the peer review process

- your area of expertise?
- conflicts of interest? (→ good scientific practice)

- read the text critically
- provide constructive feedback (comments such as “not like this” are inappropriate)
- be specific
- goal: to make the abstract better by identifying and pointing out weaknesses
- be polite and correct

reviewing an abstract

- well structured?
- does it contain the essential information?
- is the language precise and correct?
- (length appropriate)?
- full of typos?



an example…

https://youtu.be/6DyQwZT5c8Y