

Workshop: Tackling 'toxic ignorance' Generating evidence about chemicals and their effects *by other means*

**Helmholtz-Centre for Environmental Research - UFZ in Leipzig
31.01.-01.02.2019, Building 1, Room 254**

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Tackling toxic ignorance by other means

Missing data, undone science and non-knowledge about environmental pollution can be considered as 'toxic ignorance' and an obstacle to effective environmental management and preventive healthcare (Boudia et al. 2018; Brown 2013; Gross 2007; Frickel et al. 2010; Frickel and Edwards 2014). This workshop addresses this issue by focusing on data gaps in scientific evidence production. Our point of departure is that data gaps challenge existing methods of evidence production and call for knowledge generation by other means.

'Other means' thereby refer to innovative and unconventional ways and methods of data production, collection and aggregation, including big data techniques, biomonitoring and citizen science approaches and the epistemic as well as political changes they may induce. We further argue that data gaps are closely intertwined with social negotiations and political decisions and have various institutional and socio-political causes. They call for a challenging identification and combination of data from different fields and depend on accessible infrastructures for collecting and sharing data.

Workshop objectives

The workshop aims to explore *data gaps and 'other means' of evidence production* in research on chemical management and exposure. We thereby hope to initiate and deepen collaborations between scientists from IRSTEA in Montpellier, the UFZ in Leipzig and their partners. Both research institutions conduct inter- and transdisciplinary environmental research on chemicals in the environment, generating knowledge about pollution, toxic exposures and health risks. Research areas include sustainable water management, landfill mining, agriculture and the remediation of contaminated post-industrial sites.

In the workshop, we will compare data generation by other means in France and Germany areas and discuss their societal causes and consequences. Based on presentations and the participants' expertise we will explore how innovative and unconventional methods help tackle 'toxic ignorance' and how they relate to current societal, technological and environmental challenges such technological developments or climate change.

References:

- Boudia, S., Creager, A. N. H., Frickel, S., Henry, E., Jas, N., Reinhardt, C., & Roberts, J. A. (2018). Residues: Rethinking Chemical Environments. *Engaging Science, Technology, and Society*, 4, 165-178. doi:0.17351/ests2018.245
- Brown, Phil (2013). *Toxic exposures: contested illnesses and the environmental health movement*: Columbia University Press.
- Brown, P. (2013). *Toxic exposures: contested illnesses and the environmental health movement*: Columbia University Press.
- Frickel, Scott, and Michelle Edwards (2014). "Untangling ignorance in environmental risk assessment." *Powerless science*: 215-233.
- Frickel, Scott, Sahra Gibbon, Jeff Howard, Joanna Kempner, Gwen Ottinger, and David J Hess (2010). "Undone science: charting social movement and civil society challenges to research agenda setting." *Science, Technology, & Human Values* 35 (4):444-473.
- Gross, Matthias (2007). "The unknown in process: Dynamic connections of ignorance, non-knowledge and related concepts." *Current Sociology* 55 (5):742-759.

Program

Time	First Day - 31.1.2019
9.00 - 9.15	Welcome and introduction to the workshop and following keynotes
9.15 - 10.30	<p>Jeanne Garric (IRSTEA): <i>The ERA of chemicals: A story of uncertainties</i></p> <p>David Demortain (INRA): <i>The politics of regulatory knowledge: defining and authorizing alternative regulatory science.</i></p>
10.30 - 10.45	Coffee Break
10.45 - 11.15	Interactive round of introduction
11.15 - 12.00	Jana Schor (UFZ): <i>Big Data in Toxicology - Challenges and Chances</i>
12.00 - 13.00	Lunch break
13.00 - 13.45	Jean-Noel Jouzel (Sciences Po): <i>Toxic ignorance in farming - The role of farmers in closing or producing data gaps.</i>
13.45 - 14.30	Christelle Gramaglia (IRSTEA) and François Mélard (University of Liège): <i>Fos- sur-mer: How participative biomonitoring change the way pollution science is made</i>
14.30 - 15.00	Coffee Break
15.00 - 15.45	Annika Jahnke (UFZ): <i>The idea of a chemometer: Engaging people and measuring mixture exposure on/in their bodies</i>
15.45 - 16.30	Maximilian Überham (UFZ): <i>Mobile sensing - evaluating urban exposures while moving through the city.</i>
16.30 - 17.00	Wrap up discussion
17.00	End of the day
19.00	Dinner

Time	Second Day (half day) - 01.02.2019
9.00 – 9.45	Stefan Bösch (RWTH Aachen): <i>Chemicals: ignorance dynamics in a highly regulated field</i>
9.45 – 10.15	Exploring key themes and open questions of our workshop Wrap up by ‘witness’ Pierre Levasseur (IRSTEA) and introduction to group discussions by Alena Bleicher (UFZ) and Nona Schulte-Römer (UFZ)
10.15 – 11.00	Group work synthesizing the points brought to the forth during the discussions
11.00 – 11.15	Coffee Break
11.15 – 11.45	Feedback from the groups discussion
11.45 – 12.30	Final discussion, summary and outlook
12.30	The End - Lunch