**Using REACH registration data for the identification of persistent, mobile and toxic substances to protect raw water resources**

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The European Chemicals Regulation REACH (1907/2006 EG) requires industry to register their chemicals at the European Chemicals Agency (ECHA) in case a substance is manufactured or imported in the European Union in quantities above 1 ton per year. The registration covers information on e.g. the identity of the substance, physical-chemical properties and information on the sector of intended use and related operational conditions. With the registration industry should provide evidence for the safe use of chemicals throughout the whole life cycle. The set of data provided due to the registrations can be used by stakeholders e.g. with a scientific or regulatory background, to identify priority chemicals for different questions. Furthermore, it builds the basis for regulatory measures by authorities if they see a concern for one of the REACH-registered substances.

One possible measure by authorities is the identification of substances of very high concern, which are then listed on the so called REACH candidate list. Substances of very high concern are for examples substances with persistent, bioaccumulative and toxic (PBT) properties. These substances degrade only very slowly in the environment and enrich in biota. Their long-term effects can not be predicted and REACH foresees that emissions of these substances into the environment have to be minimzed. But what happens to substances which are persistent but do not bioaccumulate?

Persistent and mobile substances if emitted to the environment might end up in raw water ressources which are then used for drinking water production. So far, a potential for raw water contamination is not part of the standardized assessment in REACH done by industry. But from an authority point of view such a contamination is of concern. Based on the REACH registrations substances with persistent, mobile and toxic properties can be identified and information on emission in the environment can be obtained. For the first time assessment criteria for the identification of persistent and mobile substances with a potential release in the environment were developed and applied by two projects (Kalberlah et al. 2015: Guidance for the precautionary protection of raw water destined for drinking water extraction from contaminants regulated under REACH FKZ: 371265416 so far unpublished and Protecting Water Resources from Mobile Trace Chemicals (PROMOTE) [www.ufz.de/promote/](http://www.ufz.de/promote/)). Details of both approaches will be presented and their application in a regulatory context will be explained.

At the end of prioritizing chemicals which might end up in raw water ressources additional data from monitoring can be used to proof the concept as done by Kalberlah et al. (2015) or in a scientific context to develop methods for monitoring as it will be done within the PROMOTE project.