



Minutes to UBA Workshop

REACH Chemical Assessment meets Environmental Monitoring: Opportunities and Challenges

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Umweltbundesamt (UBA)

Wörlitzer Platz 1, D-06844 Dessau-Roßlau, Germany

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Background

The chemicals legislation REACH defines a complex set of tasks for authorities, for manufacturers and/or importers as well as for downstream users. These different REACH tasks range from registration, restriction and authorisation of individual substances up to the effectiveness evaluation of REACH as a whole. Many of these tasks could be supported by environmental monitoring (EM) data.

In the frame of a currently conducted research project¹ – funded by the German Federal Environment Agency (UBA) – environmental monitoring programmes (EMP) have been reviewed and analysed for their methods and indicators in order to identify how existing and future EMP need to be designed so that they can be used for the different REACH tasks. A guidance document developed within the project framework intends to give instructions for the use of environmental monitoring data under specific REACH tasks.

This UBA Workshop presented preliminary research results, including the guidance document and discussed opportunities, requirements and challenges regarding the use of substance-related environmental monitoring data under REACH. In a further session indicators derived from substance-related EM and effect monitoring were discussed with respect to their adequacy for chemical assessment under REACH. In addition, lessons learnt from other regulatory areas (e.g. monitoring under the Pesticide Directive and human biomonitoring) were presented. Finally, necessary steps to support the further use of environmental monitoring data under REACH were formulated.

¹ FKZ 371 063 404: Evaluation and coordination of methods and indicators for the environmental monitoring of chemicals in Germany to implement an efficacy assessment and a success control under REACH; Groß, R.; Bunke, D.; Führ, M.; Joas, R.; Floredo, Y. and Bauer, S.; Öko-Institut e.V. in cooperation with BiPRO GmbH & sofia (in progress)

Program of the Workshop

The PowerPoint presentations to the key note sessions are provided separately. Please refer to the indicated → PPT file names.

Welcome & Opening (K. G. Steinhäuser, UBA)

→ PPT: S1_00_UBA_Grußwort_Steinhaeusser.pdf

Session 1: Regulatory tasks under REACH and environmental monitoring

Key notes

- Overview on the project "Environmental Monitoring of Chemicals under REACH" (R. Groß, ÖI)
→ PPT: S1_01_OEKO_Overview_EM_under_REACH.pdf
- Existing monitoring programmes in Germany & Europe (Y. Floredo, BiPRO)
→ PPT: S1_02_BiPRO_Review_Monitoring.pdf
- Support of environmental monitoring data for specific REACH tasks (R. Groß, ÖI)
→ PPT: S1_03_OEKO_REACH-tasks.pdf
- Effectiveness of REACH: Options at Union level and for MS authorities (M. Führ, sofia)
→ PPT: S1_04_SOFIA_Effectiveness_of_REACH.pdf

Session 2: Practical experiences in utilising environmental monitoring under REACH

Key notes

- French examples of environment monitoring actions for the identification of chemicals of concern (S. Andres, INERIS)
→ PPT: S2_01_INERIS_French-examples_Monitoring.pdf
- Project RISK-IDENT and feed-back to chemicals legislation (F. Geldsetzer, LfU Bayern)
→ PPT: S2_02_LfU_Identif_water-contam_REACH-substances.pdf
- Prioritizing emerging substances based on environmental concern (P. van Beelen, RIVM)
→ PPT: S2_03_RIVM_Prioritizing_emerging_subst.pdf
- Hot spot monitoring (I. Offenthaler, UBA Austria)
→ PPT: S2_04_UBA-AT_Hot-spot_monitoring.pdf
- Peregrine Falcon Egg Pollutants: Mirror Stockholm POPs-List (T. v.d. Trenck, LUBW)
→ PPT: S2_05_LUBW_Falcon_Egg_Pollutants_Mirror_POPs-List.pdf
- Guidance document "How to use monitoring data under REACH" (D. Bunke, ÖI)
→ PPT: S2_06_OEKO_How_use_monitoring_data_under_REACH.pdf

Session 3: Indicators derived from substance-related environmental monitoring

Key notes

- Existing indicators in environmental monitoring programmes (R. Groß, ÖI)
→ PPT: S3_01_OEKO_Indicators.pdf
- SPEAR (M. Liess, UfZ)
→ PPT: S3_02_UfZ_REACH_SPEAR.pdf
- NemaSPEAR – A chemical impact indicator for sediment pollution (M. Brinke, BfG)
→ PPT: S3_03_BfG_NemaSPEAR.pdf

Session 4: Next steps to support the use of environmental monitoring data under REACH Lessons learnt from other areas / Requirements for harmonisation

Key notes

- Plant Protection Products – Environmental Monitoring (P. Klaas, UBA)
→ PPT: S4_01_UBA_PPPs_and_Monitoring.pdf
- Lessons learnt from: Human Biomonitoring, Europe and the use of monitoring data for policy making (M. Kolossa-Gehring, UBA)
→ PPT: S4_02_UBA_Human_Biomonitoring.pdf
- Next steps to support the use of environmental monitoring data under REACH (Y. Floredo, BiPRO)
→ PPT: S4_03_BiPRO_Next-steps.pdf

Key messages and Conclusions

Session 1 and 2:

One main aim of REACH is the protection of human health and environment by the reduction of hazardous chemicals in the environment. EM could be used as an important tool to support those actions required to reach this aim.

The introductory presentation (“Overview on the project ‘EM under REACH’”, c.f. above) showed REACH and EM as “equal partners”. However, REACH is the fundamental and overarching substance related legislation, whereas EM can be used as a tool within many different sectorial regulations.

Both approaches can support each other mutually: EMP can provide data to support different REACH tasks, while REACH delivers specific substance information to adapt and optimise EMP.

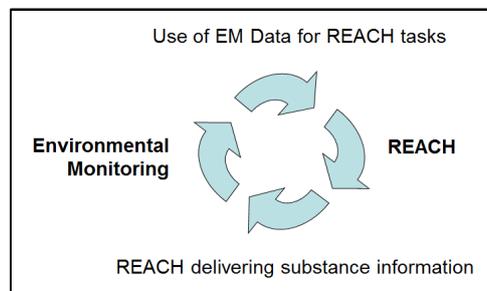


Figure 1: Mutual support of REACH and EM

The review of existing monitoring programmes in the frame of the research project identified a large variety of EM activities in Germany / EU. The compilation of EMP (in form of an Excel-Database) focuses on meta-data of the programmes. The database will be made publicly available after finalisation of the research project. The WS-Participants agreed that it is quite difficult to obtain the raw data (i.e. measured values) of EMP. Difficulties are, inter alia, that

- often, only meta-data are published, not the original data,
- concepts of EMP as well as presentation/publication of data are not harmonised,
- property rights complicate the use of data,
- administrative and organisational barriers/obstacles in data exchange between different authorities exist.

These difficulties explain why EM data are rarely used for REACH tasks at present. The workshop participants recommend a coordinated European approach for the use of EM data under REACH as well as a central data base and/or a central data access of EM data.

EMP have been established for various reasons and under different regulatory regimes, e.g. to support media-related protection targets as defined in the Water Framework Directive (WFD). Experiences show that substance identities in EMP and under REACH often do not match. Registration of a substance under REACH takes place in its commercial substance form, while in contrast EMP often monitor substances in their e.g. acidic, basic, ionic form, having different CAS numbers. Consequently, it may be difficult to match the substance lists of EMP with REACH substances. Under REACH it is unclear, to what extent metabolites are covered in the dossier, while EMP will often measure metabolites.

The research project team presented an overview on the different REACH tasks that could be supported by EM data. Field reports on the practical experiences of the participants confirmed the usefulness of EM data to prove wide dispersive uses/distributions of possible substances of very high concern (SVHC) and to prove a bioaccumulation potential. However, up to now EM data are rarely used under REACH and experiences in this field are very limited. Reasons for the limited use of EM data may inter alia arise due to the fact that up to now no adequate guidance, e.g. in form of "fact sheets" or "practical guides", exists on how to use EM data under REACH. A proposal for such a "practical guide" was presented to the participants. In regard to the proposed practical guide the workshop participants recommended to clarify, on whether the document should address different REACH actors (namely authorities and registrants) or whether it should be focused on one of them only.

The participants expressed the wish that the practical guide should also consider a proposal for a data format to include monitoring data into the IUCLID database in a structured manner. So far, the "Monitoring" section in IUCLID consists of a non-structured full text field. It was proposed that the requested template should provide a detailed structure for monitoring data instead.

In this context, the participants discussed briefly the duties of registrants and authorities, if EM data are available: It was stressed that both the registrant and the authorities have to consider all available relevant data – including EM data – within the registration and substance evaluation process.

Session 3 and 4:

The majority of EMP report concentration values of single substances in different media (e.g. µg/L). Some programmes in addition report aggregated values, such as concentrations of groups of substances /congeners (e.g. ΣHCH/kg), sum parameters as AOX (adsorbable organic halogens) and multi metal index (over 12 heavy metals). Besides concentration monitoring, effect monitoring can provide valuable information on contamination levels. For example, by means of SPEAR-² and NemaSPEAR-index³ the effects of groups of chemicals (e.g. organic substances, metals, pesticides) on the environmental compartments surface water and sediment, can be quantified. Based on the effect monitoring, the identification of individual stressors / pollutants could subsequently be conducted. Effect data from monitoring can also be used to indicate which substances or groups of substances are of high priority for further actions such as restrictions or authorisations. Furthermore, this effect monitoring could support the effectiveness evaluation of REACH as a whole.

Presentations on the performance and use of EM in the framework of plant protection products as well as on the approaches used in human biomonitoring revealed lessons learnt in other regulatory areas indicating fields where the use of monitoring data in relation to substance evaluation has successfully been established.

The workshop participants brought up the question on how a co-operation with industry could be established.

² SPEAR: SPECies At Risk

³ NemaSPEAR: Nematode SPECies At Risk

The workshop was concluded with future recommendations concerning the use of EM under REACH:

- 1) Bridge the gap between REACH and EM!
The two pillars REACH and EM need to be connected by encouraging exchange between experts of both fields and by bringing the organisational structures (e.g. ECHA responsible for REACH and EEA responsible for EM) closer together.
The exchange of information and experiences between REACH and EM experts should be continued in annual meetings.
- 2) Single access point to EMP data is needed (e.g. in form of a central database) to make the most effective use of existing EM data.
- 3) The preparation of a practical guide "How to use monitoring data under REACH" is a good starting point both to raise awareness (on EU level and in the Member States) to this topic and to provide guidance on the practical approach.
- 4) A clear political commitment is required for the use of environmental monitoring data in chemical evaluations – and for a harmonisation of the existing monitoring activities and data bases – as it has been made for human biomonitoring. This kind of policy support is necessary to achieve more success within the scientific community with regard to an intensive exchange between REACH and EM experts.

Thank you all for taking part!



Additional information

- Annex: List of Participants (below)
- Separate attachment: Key note presentations (.zip-file)

Annex: List of participants

First name	Last name	Institution
Felix	Geldsetzer	Bayerisches Landesamt für Umwelt (LfU) [Bavarian Environmental Agency]
Yvonne	Floredo	BiPRO e.V.
Sonja	Bauer	BiPRO e.V. (<i>absent with notice</i>)
Ferdinand	Zotz	BiPRO e.V.
Beate	Bänsch-Baltruschat	Bundesanstalt für Gewässerkunde (BfG) [German Federal Institute of Hydrology]
Marvin	Brinke	Bundesanstalt für Gewässerkunde (BfG) [German Federal Institute of Hydrology]
Dana	Rühl	Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA) [German Federal Institute for Occupational Safety and Health]
Heinz	Rüdel	Fraunhofer-Institut für Molekularbiologie und Angewandte Oekologie (IME) [Fraunhofer Institute for Molecular Biology and Applied Ecology]
Sandrine	Andres	French National Institute for Industrial Environment and Risks (INERIS)
Theo	von der Trenck	Landesanstalt für Umwelt, Messungen und Naturschutz BaWü (LUBW) [Environmental Protection Institute of State of Baden-Württemberg]
Patrick	van Beelen	National Institute for Public Health and the Environment (RIVM), The Netherlands
Rita	Groß	Öko-Institut e.V. – Institut für Angewandte Ökologie [Öko-Institut e.V. – Institute for Applied Ecology]
Dirk	Bunke	Öko-Institut e.V. – Institut für Angewandte Ökologie [Öko-Institut e.V. – Institute for Applied Ecology]
Martin	Führ	Sonderforschungsgruppe Institutionenanalyse (sofia) [Society for Institutional Analysis]
Matthias	Liess	Helmholtz-Zentrum für Umweltforschung (UFZ) [Helmholtz Centre for Environmental Research]
Michael	Neumann	Umweltbundesamt (UBA) [German Federal Environment Agency]
Lena	Vierke	Umweltbundesamt (UBA) [German Federal Environment Agency]
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Jan	Koschorreck	Umweltbundesamt (UBA) [German Federal Environment Agency]
Ivo	Offenthaler	Umweltbundesamt GmbH Österreich [Environment Agency Austria]