QUALITY CRITERIA FOR AN INTERNATIONAL POPs MANAGEMENT: NECESSITY AND STRATEGIES FOR REALIZATION

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Introduction

Persistence, bioaccumulation, toxicity and the ability to be transported over long distances are typical properties of Persistent Organic Pollutants (POPs). Their emissions from stationary, mobile and diffuse (product derived) sources are of global relevance and require management activitiesworld-wide. Product derived sources in this context include also contamination of products such as food andfeedstuff.
Responding to the mandate issued by the United Nations Environmental Programme (UNEP) international negotiations are underway to reach agreement to reduce or eliminate emissions and discharges of POPs.[1]

POPs management activities on an international basis are starting from source identification, via inventory compilation to initiation of minimisation strategies and control activities. They have to support objectives of POPs agreements world-wide and have to guarantee keeping requirements of such agreements.

However, to achieve comparable POPs management results world-wide, comparability of methods or criteria for evaluating comparability are necessary. At present, POPs management activities are mostly based on national or regional methods and comparability of activities and results are not guaranteed due to lacking international harmonisation.

Demand for harmonisation or comparability of POPs management activities world-wide does not inevitably mean appointment of standardised international methods. Rather, installation of detailed and harmonised quality criteria should enable all participants in POPs management to evaluate methods, results and comparability of management activities.

Combining POPs management methods and well defined and standardised quality criteria will provide an internationally standardised "language" on POPs to establish the possibility for a comparative evaluation and assessment of POPs related questions world-wide. A POPs management will be more efficient and successfully if all experts involved act on the basis using comparable methods including harmonised evaluation strategies, sampling and analytical methods, quality assurance demands etc. This will facilitate communication between and improve acceptance by governments, agencies and not at least by international trade partners. It will help avoiding confusions due to differing national or regional approaches and use of non-scientific criteria.

Therefore, Oekometric initiated a process (expert forum) on defining quality criteria for an international POPs management. Objective of our efforts is to establish a guideline including comprehensive methodical and quality related aspects and defining a minimum standard both quantitatively and qualitatively for POPs related projects. Thus, concrete quality requirements for detailed methods should be formulated. This document should be addressed to all who are concerned in practice with POPs related questions to enable and guarantee fulfilment of quality criteria and thus guarantee comparability and evaluation of management activities.

Basic CMT-Principle for Quality Criteria

The "CMT principle" can be an appropriate basis on which quality criteria can be developed. CMT considers competence, standardised/validated methods and transparency and includes appointment of quality criteria to personnel, equipment, methods, execution of methods and documentation[2] (Figure 1).

CMT - Principle	
Competence	Proof of personnel POPs expertise Proof of technical equipment etc.
Standardised/ Validated Methods	Proof of the ability to follow agreed standard methods and to meet quality criteria of validation
Transparency	Installation of a participatory process and disclosure of details of the decision finding process, method execution etc.

Figure 1: CMT Principle

A quality criteria guideline for POPs management has to concrete CMT principle for corresponding media and methods. Criteria should be developed separately for different media such as air, soil, water, biota, waste food, feedstuff or chemicals and should cover both the inventory, monitoring (sampling, analysis) and assessment sector. Furthermore it should be focused on the question who defines and evaluates CMT for a POPs management.

Necessity: Examples from Chemical Analysis

Chemical analysis plays a central role in POPs management in supplying basic and compound related data. However, evaluation of such data is closely related to regulatory aspects. Finally, appointment of threshold or limit values has direct consequences on analytical requirement (fixing of relevant compounds, requirement of detection of limit value). Therefore, demand on stipulating limits for POPs world-wide is one step to concrete CMT. Such limits should be fixed for individual media and should be harmonised considering individual compounds to be analysed for individual media. Dioxins and furans are examples where such a harmonisation is well developed (detection of 17 2,3,7,8 chlorine substituted congeners, TEFs etc.), while there are significant deficits for PCBs for example. The case of the dioxin and PCB contamination of food and feedstuff in Belgium, 1999, has disclosed such deficits in Europe, where different countries use different numbers or isomers for screening and evaluation of PCB contamination e.g.

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Quality criteria guideline for an international POPs management can support those who are responsible for the appointment of thresholds or limits in supplying media or matrix related information on compounds, analytical requirements etc. Focusing on analytical details for example, concreting CMT principle covers competence, know-how and experience of personnel, minimum standards of laboratory equipment, detailed internal and external quality assurance and quality control measures on used methods, detailed information on methods and requirements to be used for individual media and detailed information on documentation of the whole analysis procedure. So, quality criteria guideline can contribute to both supporting regulatory activities and ensuring comparability and evaluation of POPs management activities in practise.

Conclusion

Concerning the progress in international management activities on POPs comparability of management activities has to be demanded world-wide. A discussion on harmonised quality criteria within an expert forum has been initiated and will work towards an international guideline on quality criteria for a POPs management.

References

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