**The NORMAN prioritisation concept : achievements and future goals**

Valeria Dulio1, Peter-Carsten von der Ohe2, Jaroslav Slobodnik3

1 INERIS - Verneuil-en-Halatte, France / NORMAN Association

2 Federal Environmental Agency, Dessau-Roßlau, Germany

3 Environmental Institute, Kos, Slovakia / Chairman NORMAN Association

The NORMAN network (www.norman-network.net), in its interface role between science and policy in the field of emerging contaminants, promotes the use of innovative monitoring and assessment tools for identifying the substances of emerging concern most in need of future regulation. NORMAN published in 2013 a prioritisation scheme specifically designed to deal with “problematic” substances for which knowledge gaps are identified.

NORMAN’s prioritisation concept combines the traditional risk-based ranking process with the *a priori* allocation of substances into six action categories, using a decision tree that identifies knowledge gaps and actions needed to fill them, e.g. development of more powerful analytical methods, launch of monitoring campaigns, performing additional ecotoxicity tests. The priority within each category is then evaluated by occurrence, hazard and risk criteria.

This is a transparent and rational approach to deal with the knowledge gaps which still prevent, for most emerging substances, proper risk assessment and risk ranking.

To feed the prioritisation process, NORMAN maintains various databases. In EMPODAT, geo-referenced monitoring data from research projects, national monitoring programmes, etc. are systematically collected (≥6 million records for about 400 substances). The “Ecotox“ module (soon to be published) allows systematic collection of ecotoxicity test data from databases worldwide, plus existing regulatory EQS/PNEC values and predicted (QSARs / read-across) values when experimental data are not available.

Thanks to this work, NORMAN has contributed as a stakeholder to the EC’s work for the implementation of the first EU Watch List (Art 8, Directive 2013/39/EU), which now includes eight substances proposed by NORMAN (Commission Implementing Decision EU 2015/495). Moreover, NORMAN is actively involved in the current WFD Priority Substances review.

As regards the improvement of prioritisation methodologies, NORMAN experts are currently working on the complementary application of substance-based and monitoring-based approaches for a more robust prioritisation of substances and transformation products causing toxicity at large scale, and which are not yet addressed by regulators.

For this purpose a new concept for the categorisation of substances based on identification confidence levels in high resolution spectrometry has already been approved by NORMAN experts as a basis for the integration of non-target screening results in the NORMAN prioritisation methodology.

Non-target substances are classified in categories according to the level of confidence with which their identity can be confirmed and then they are ranked via the application of indicators such as “Frequency of Exceedance” (FoE) and “Extent of Exceedance” (EoE) of the Lowest PNEC for the substances assigned to higher confidence identification levels (semi-quantitative concentration data), and “Frequency of Appearance” for substances not yet identified. Substances can thus be prioritised for further actions as target compounds. In this context, a special focus will be given to the evaluation of data quality (via the CRED system) for lab- and field-based ecotoxicity tests.

NORMAN continues to work in this field in collaboration with other research projects and in particular the FP7 SOLUTIONS project.