

Summary of 3.4/Dialogue Session Building a knowledge and innovation platform on diffuse and point soil contamination as base for (inter) national soil policies



3.4 Building a knowledge and innovation platform on diffuse and point soil contamination as base for (inter)national soil policies



Date Wednesday, 22 April 2015

DS

Rapporteur:

Ana Frelih Larsen (ana.frelih-larsen@ecologic.eu)

Ana Frelih-Larsen¹, Bernd M. Bussian², Violette Geissen³, Helaina Black⁴, Florence Carre⁵, Caroline Newton⁶, Julien Caudeville⁷, Ricardo Barra⁸, Ana Payá Pérez⁹, Karl-Werner Schramm¹⁰

¹Ecologic Institute, Berlin, Germany, ²UBA Federal Environment Agency, Berlin, Germany, ³Wageningen University, Netherlands, ⁴James Hutton Institute, Scotland UK, ⁵INERIS, France, ⁶OVAM Public Waste Agency Flanders, Belgium, ⁷INERIS, France, ⁸University of Concepción, Chile, ⁹European Commission-Joint Research Centre, EU, ¹⁰Helmholtz Zentrum München, Germany

Summary

This session highlighted the importance of soil contamination, both from diffuse and point source pollution. It started with a series of presentations illustrating the current understanding of soil exposed to pollutants, including the main sources of contamination, the hazards and risks that pollutants in soil present for the environment and human health, as well as the possible ways to address the problem. The presentations offered both global and EU perspectives. The presentations were followed by World Café style discussions on four themes that participants identified as the key areas for discussion: remediation of contaminated sites, alternatives to the use of chemicals and pollutants, harmonisation of monitoring and approaches and knowledge and innovation platform.



Introduction

- A rapidly increasing amount and diversity of chemicals is being used in our homes, industries and agriculture and many of these chemicals eventually end up as pollutants to our environment including soils. Market trends indicate that the use of possibly pollutant chemicals is increasing. Pollution from discrete sources, such as from industry as well as diffuse pollution, in particular from agriculture and transboundary, both represent significant threats to soils. Soils in turn are a resource that delivers many essential ecosystem services valuable to our societies. Soil pollution is also a key threat to human health as many of the pollutants in soil can end up in feed, food and water as well as our bodies. Transboundary diffuse pollution is a transboundary problem that requires joint action and collaboration among countries and regions.
- The existing legislation and international agreements (for example, the Stockholm convention) are not implemented ambitiously. Existing regulation and guidance could be sufficient to address a great deal of existing pollution issues, and potential pollutants, if there was adequate implementation. There is a need to harmonize guidance values for the allowed concentrations of pollutants in different environmental media which would reflect use, potential transfer routes from source to receptor and address risks to people and the environment.
- Examples from Belgium were presented where there are integrated, multi-stakeholder approaches for co-remediation of brownfield sites. This co-development between mainly Municipalities, Regions, practitioners, funders and academia can be the base of a Knowledge and Innovation Platform on urban brownfields regeneration, leading then to voluntary certification schemes, standards, EU-policy options.

World Café Discussion

Alternatives to pollutants

The key points included the need to be clear on the context and why alternatives are needed e.g. in the context of agriculture, is it simply to maintain current levels of yield, or is this part of an effort to ensure sufficient food for the world population. The two issues are distinct, with the food security encompassing many different elements and not simply yield levels. Moreover, in order to enable the use of alternatives, a change in consumer behaviour is needed. For this to happen, the real costs of producing food, including the externalities, needs to be identified and communicated. There is already a lot of knowledge about alternatives and initiatives to existing polluting chemicals that demonstrate their opportunities, but access to this information needs to be improved, especially to consumer. Much of the discussion focused on agriculture and the need to emphasize alternatives to pesticides and fertilisers as new strategies, not simply new products. The maintenance of the good ecological status of soils is at the core of this, as well as the need to change the way the markets work. Improved awareness of, and political appreciation for the alternatives is needed. Both consumer and farmers' behaviour needs to change, and the realities of food costs acknowledged (Who pays for the food costs and who should pay? Who benefits from the current system?). The role and responsibilities of commerce are important here as they have a large influence on consumer and farmer behaviours.

Harmonisation of monitoring and approaches

There is a lack of knowledge on how the regulation on chemicals impacts the number of chemicals in the environment and the impacts of chemical cocktails on the environment and human health. EU can offer an example to other regions with its regulatory and monitoring set-up. However, even in Europe there is knowledge lacking on diffuse pollution: there are limitations to existing mapping of diffuse soil pollution problems, where the hotspots and which the main problems are. The importance of agreement to establish a method to establish comparability between results (using a common standard, for example) was highlighted. Better bookkeeping of the use of chemicals is needed, including in agriculture, so that it can be tracked where these are applied, under what conditions, in what amounts. Bookkeeping of the use of chemicals in agriculture is widely adopted in many regions e.g. Europe and Australia as a mechanism of assessing and regulating use. Lessons from this approach could be used to establish effective monitoring where no approach exists currently.

Remediation

The discussion showed that the costs of remediation can be very high, and sometimes the only solution is to change the land use to one that reduces the risk to population and environment. Historical pollution needs to be tackled, but alongside this we need a focus of action that should be on actions to prevent pollution. This requires a global mind-shift towards more openness and transparency when new products are placed on the market. The possible effects of products on the environment and humans should be fully assessed and transparent before they are approved.

Knowledge and innovation platform

The discussion focused on testing the added-value of a knowledge and innovation platform. Co-entrepreneurship with practitioners and local and regional end-users can be a very effective approach for remediation of contaminated sites. Experience shows that additional opportunities are needed for regions and municipalities to pool resources and share experiences with integrated remediation approaches and to build capacity in regions to deal with this issue. A knowledge and innovation platform can contribute to this objective, and raise afterwards awareness on point source and diffuse pollution among the general public. Such a platform can also involve the use of consultants who can provide support on technical issues, as well as on different funding mechanisms and effective approaches. This platform should complement existing initiatives like the Common Forum, HOMBRE and TIMBRE initiatives finally; the point was raised that much progress needs to be made on identifying the real risks and hotspots coming from diffuse pollution and developing strategies and solutions for this problem.



Key messages from the session

1. Efforts are needed to increase awareness on the issue of soil pollution among the general public, including consumers and stakeholders. We need to communicate to the public that 'healthy soils are needed for healthy life' and show people the links between the problems of soil pollution and how these are linked to the everyday use of chemicals in industry, agriculture as well as in households.
2. A 'soil rating for products' could be developed to communicate to consumers what is done to protect the health of soils and reduce the risk of pollution so that they can make informed choices.
3. The discussion on soil contamination should also involve industry and commerce actors, such as supermarkets and producers of chemicals as they play an important role in finding solutions.
4. Moreover, within the soil community, we need to improve our knowledge and information base on soil pollution, both from point sources and diffuse pollution. Where are the main problems? What is good ecological status of soils? What kinds of measures are needed and effective? In this context, for example, monitoring of chemicals in soils and agricultural products are required.
5. Finally, a knowledge exchange platform is needed on soil remediation. On the one hand, such a platform can facilitate access to knowledge and exchange of experiences and best practices among practitioners and stakeholders and bottom-up policy options. On the other hand, the platform can enable a dialogue between science and policy / decision-makers at various levels. Such dialogue can guide science to provide targeted support to policy (identify the key questions that need answering to guide policy).
6. A reinforcement and co-operation of conventions needs to be supported. There is an information and co-operation deficit between UN organizations and programs (e.g. FAO, UNEP, etc.) and international standards.