A new framework has been developed to examine the chemical risks to European biodiversity. It analyses the driving forces that trigger chemical pressures on biodiversity in the context of REACH (Regulation on the Registration, Evaluation and Authorisation of Chemicals). REACH has streamlined over 40 existing directives and regulations to manage the risks of chemicals to human health and the environment. Although this should indirectly reduce the negative effects of chemicals on biodiversity, REACH does not include direct risk assessments for biodiversity.

The study was conducted as part of the EU project ALARM and applied the DPSIR (Driving forces-Pressures-State-Impacts-Responses) framework to the case of chemical risks for biodiversity. The researchers focused on driving forces. This is because pressures, state and impacts are difficult to measure on a large scale. For example, chemicals originate from a wide range of sources and can transform in the environment, producing unforeseen pressures.

The framework identifies three types of driving force that lead to the production and release of chemicals that represent a risk. Primary drivers are the accidental and deliberate release of chemicals, in intensive agriculture and chemical waste management, for example. Secondary drivers are the policies and regulations that govern the use and release of chemicals. Tertiary drivers are social and economic processes that shape policy.

The research examined the secondary and tertiary levels of driving forces. It evaluated the potential influence of REACH on chemical risks to biodiversity using several criteria such as its technical merit, its methodological merit, the quality of the risk assessment process and the quality of the policy itself. It analysed official documents, stakeholder consultations, as well as national policy programmes and reports.

The results indicated that REACH provides significant improvements compared with earlier regulation. However, although REACH represents a major step in the right direction, there are some criteria that could be improved. For example, REACH does not require field monitoring for chemical risks on biodiversity or risk assessments of interactions between chemicals and other pressures such as climate change. Neither is there sufficient opportunity for stakeholders and consumers to consult risk assessment information.

The analysis also highlights the importance of tertiary drivers. Consumer attitude has a strong influence on the production of chemicals, and public concern about their environmental impact is increasing. In addition, the economic value of the chemical industry has a strong influence. In 2007 it contributed 1.2 per cent of the total EU GDP.

The research suggests that with sufficient pressure from society and policymakers, the chemical industry could develop strategies to assess and reduce the risk to biodiversity. This is in line with the REACH framework where responsibility for risk assessment and management is with industry.

2. ALARM (Assessing Large Scale Risks for Biodiversity with Tested Methods) was supported by the European Commission under the Sixth Framework Programme. See www.alarmproject.net


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Theme(s): Biodiversity, Chemicals, Risk Assessment