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New academic paper condemns pesticide risk assessment practices ahead of Farm to Fork Strategy and REFIT

"Green recovery" from COVID-19 crisis demands healthy and sustainable food system

A new peer-reviewed paper authored by a group of experts in law, policy, and toxicology has identified systemic failings in Europe’s pesticide risk assessment process. The experts have proposed a comprehensive agenda for far-reaching reform after their paper outlined how these failings could seriously undermine ambitions for sustainable agriculture and a “green recovery” from the COVID-19 pandemic.

Calls for such a “green recovery” have arisen from 13 European climate and environment ministers, from 180 policy makers, business leaders, researchers and non-governmental organisations (NGOs), and from WWF. On 16 April, Frans Timmermans, executive vice-president of the European Commission in charge of the European Green Deal, added his voice, demanding an end to old, polluting models of production and a shift to a “circular, sustainable and highly competitive economy”.

These thought leaders agree that business as usual is not an option.

Regulatory failings

According to the new paper, published in the European Journal of Risk Regulation, Europe is consistently failing to implement and enforce its own regulations on pesticides. While the EU’s pesticides Regulation 1107/2009 is, in theory, one of the most stringent in the world, it has yet to achieve its aim of “an independent, objective and transparent assessment of pesticides and achieve a high level of protection for health and environment”. The paper presents a series of recommendations to resolve these problems.

Focusing on glyphosate as a case study of scientific and regulatory controversy, the paper highlights:

**Pesticide Action Network (PAN) Europe** is a network of NGOs working to reduce the use of hazardous pesticides and have them replaced with ecologically sound alternatives. We work to eliminate dependency on chemical pesticides and to support safe sustainable pest control methods. Our network brings together 40 consumer, public health, and environmental organisations, and women’s groups from across Europe.
Widespread misuse and misinterpretation of scientific research, with cherry-picking of favorable studies, plagiarism and uncritical repetition of findings presented as independent validation, and misuse of statistical and analytical tools.

Ongoing failure to address mixture effects, including of additives which, even though they can change the toxicity profile of the active ingredient, are not part of the pesticide approval process.

Failure to properly address conflicts of interest within regulatory agencies, undermining the independence and objectivity of pesticide assessments.

As a result of these failings, multiple pesticides are passing through the regulatory process and being authorized in spite of their potential to harm human and animal health and the environment.

Proposed solutions

The authors find that for the most part, the law itself is not at fault. Instead, the problem lies with a failure on the part of regulatory bodies to implement or enforce the hard or "soft" laws governing how pesticides are regulated.

The authors propose ways to improve the system, requiring changes in the way in which regulators carry out the risk assessment process, as well as in the way that current scientific knowledge and scientific analytical tools are applied.

These include:

- Wider use of “systematic review” methods to ensure objectivity and transparency in evaluating scientific research results.
- Proper use of the “weight-of-evidence” approach to integrate different lines of evidence, so that, for example, different types of evidence indicating that a pesticide is carcinogenic are not evaluated and dismissed separately but are considered together in an integrated fashion.
Evaluating the toxicity of pesticide formulations as sold and used rather than just the isolated “active” ingredients that are tested and assessed for safety in regulatory purposes – since the formulations can be far more toxic

Avoidance by regulators of the common practice of plagiarising industry’s own interpretations of safety data – instead, regulators must carry out objective and independent evaluations of data.

Details of the new paper
Achieving a High Level of Protection from Pesticides in Europe: Problems with the Current Risk Assessment Procedure and Solutions
Claire ROBINSON, Christopher J. PORTIER, Aleksandra ČAVOŠKI, Robin MESNAGE, Apolline ROGER, Peter CLAUSING, Paul WHALEY, Hans MUILERMAN and Angeliki LYSSIMACHOU
DOI: https://doi.org/10.1017/err.2020.18
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Background
The new paper builds on the work of an interdisciplinary group of scientists, lawyers, and policymakers – including the authors of this paper – who in 2018 formed the coalition Citizens for Science in Pesticide Regulation. More than 140 NGOs signed up to the Coalition’s manifesto demanding reform in risk assessment in order to ensure that pesticide use causes no harm to humans, animals, and the environment.
The new paper is published as the EU Commission prepares to publish its Farm to Fork (F2F) Strategy as part of the European Green Deal. F2F aims to "secure a fair, healthy and environmentally friendly food system" and will include "measures to significantly reduce the use and risk of chemical pesticides".

Dr Angeliki Lyssimachou, one of the authors of the new paper and science policy officer at Pesticide Action Network Europe, said, "Risk reduction cannot happen unless the risk assessment is done properly. Some pesticides that have passed through the authorization process should not be on the market at all as they are toxic. Regulators must ensure that the latest scientific knowledge and objective assessment methods are implemented throughout the whole evaluation procedure."

As well as the F2F, the Commission will publish its long overdue REFIT evaluation of the EU pesticide legislation assessing “if the regulations meet the needs of citizens, businesses and public institutions in an efficient manner” and giving recommendations on future actions. Concerns have been raised that REFIT appears to be focused on making EU regulations "better" for industry and that the pesticides regulations will be deliberately weakened as a result.

The publication of F2F as well as the REFIT of the pesticide Regulation has been postponed due to the COVID-19 crisis, and the farmers' association COPA-COGECA has lobbied for the publication to be delayed until autumn – or for an impact assessment to be carried out first.

But Claire Robinson, editor at GMWatch and first author of the new paper commented, "COVID-19 has shown us that human health must be the priority and that sustainable food production is crucial. We cannot afford more delays in implementing a healthy, sustainable, and resilient food system."

This call is backed by an open letter signed by 40 NGOs, asking the Commission not to further delay the F2F publication and “to show that it is actively steering the EU towards a greener future, of which sustainable and resilient food systems are an essential part”.

According to recent information given by a Commission official, the launch date of F2F strategy is currently under review.
Quotes from the authors

Dr Apolline Roger, Law and Policy Advisor, ClientEarth, Brussels, Belgium, said: "The pesticides Regulation has great elements. For the most part, it is not the law that needs to be reformed, but the way it is implemented. We detail the reforms that are needed in our recommendations."

Prof Christopher Portier, Senior Contributing Scientist, Environmental Defense Fund, and former Director, US National Center for Environmental Health, USA, said: “Scientific rigour and complete transparency are critical to both the evaluation of data used in regulatory decision making and to the trust the public will have in those evaluations. This article describes improvements that will strengthen both scientific rigor and transparency.”

Paul Whaley, an academic at Lancaster University in the UK specializing in novel methods for evaluating health risks from chemical exposures, said: “The European Food Safety Authority has been a world-leading agency in proposing reforms to how scientific research is used in pesticide risk assessment, particularly in applying systematic review methods to analyze evidence of potential health risks. The problem is, these reforms are being implemented too slowly and too unevenly, leaving too many chemicals being assessed with methods which are obsolete, opaque, and produce unreliable results.”

Dr Peter Clausing, toxicologist at the Pesticide Action Network Germany, said: "The 'weight-of-evidence' approach is an important concept to consolidate scientific data. Our paper shows that there is considerable room for improvement in the way the European authorities make use of this concept during risk assessment of pesticides."

Professor Aleksandra Čavoški, University of Birmingham, said: “EFSA has made significant strides in improving its independence policy with the aim of preventing the revolving door effect. However, EFSA’s independence policy does not go far enough to prevent conflicts of interest that may result from the provision of research funding.”

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