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Policy Brief

Input to the first session of the Plenary of the Intergovernmental Science-Policy Panel on Chemicals, Waste and Pollution (ISP-CWP) in Geneva, Switzerland on 2-6 February 2026

Prerequisites for an Effective ISP-CWP: Considering hazards, not risk or impact

Recently Fuller et al.[1] have proposed that impact, rather than risk or hazard, guide the prioritization of environmental issues. Similarly, SETAC has proposed that a risk assessment process should guide the prioritization process. Both argue that impact (a measure of damage) or risk (probability of harm) should be used because these measures better reflect actual harm or damage.

An alternative is to consider hazard, which is the inherent property of a substance to cause harm without demonstrating that sufficient exposure could cause harm (risk) or damage (impact).

These arguments in favour of impact or risk over hazard have significant shortcomings:

(i) Demonstrated inability to mitigate harm or damage in a timely fashion once identified in an impact or risk assessment.

Factors such as financial investment in industrial production and manufacturing processes, costs and technical feasibility of switching to a safer alternative, and on-going emissions from widespread and accumulated in-use and waste stocks pose strong impediments to reducing impact once a substance(s) has been used long enough to establish evidence of impact or an estimate of risk. The effect, known as "lock-in", is difficult and costly to break, as is evident from the continued use of hazardous substances with well documented impacts.[2] Alternatives assessment can offer a way to reduce risk and impact, but many examples illustrate "regrettable substitution" in which one substance with demonstrated hazard, risk or impact is often replaced by another for which hazard, risk and impact is to be discovered. Also, impacts or risks are too often alleviated in one region by shifting the burden to another region with fewer protections.

(ii) Assumed ability to pre-empt or predict impact or risk before it happens

Acting pre-emptively to avoid impact or risk relies on establishing the hazard of a substance and managing its production and use before the impacts become so pervasive that they present a risk. It can also mean acting before it becomes locked-in, which is more efficient and cost-effective.[3] Acting pre-emptively is based on knowledge of hazard, well before widespread exposure could result in risk and then impact.

Recommendation

We urge the ISP-CWP to adopt a hazard framework in its prioritization process to effectively and efficiently avoid risk and impact and to most effectively change harmful practices.

References

1. Fuller et al. 2025 Towards a prioritization screening framework for chemicals, wastes, and pollution. Environmental Science & Policy (164): https://doi.org/10.1016/j.envsci.2025.103994

2. Blumenthal et al. 2022. Time to break the "lock-in" impediments to chemicals management. Environ Sci Technol 56(7): 3863-3870. https://doi.org/10.1021/acs.est.1c06615

3. United Nations Environment Programme. 2024. Global Resources Outlook 2024: Bend the Trend – Pathways to a liverable planet as resource use spikes. International Resource Panel. Nairobi. https://wedocs.unep.org/20.500.11822/44901

Full open access paper on potential outputs of the ISP-CWP

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For detailed background information, please refer to our publication: Diamond, Sigmund et al. 2024. Exploring Outputs of the Intergovernmental Science-Policy Panel on Chemicals, Waste and Pollution Prevention. ES&TL https://pubs.acs.org/doi/10.1021/acs.estlett.4c00294

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