

HOW CAN EUROPE LEAD THE WAY TO A NON-TOXIC ENVIRONMENT?





THE PROBLEMATIC USE OF HARMFUL CHEMICALS

HARMFUL CHEMICALS ARE EVERYWHERE:

Harmful chemicals are now ubiquitous in the environment. Routine sampling identifies many toxic and hazardous substances that affect our health, the development of our children and those of future generations. Harmful substances include pollutants from transport and energy use found in the air we breathe and the water we drink, pesticides found in our food, solvents and surfactants found in the cleaning and cosmetic products we use on a daily basis, and flame retardants found in toys our children play with and the textiles and furnishings in our homes.

CERTAIN CHEMICALS CAN DISRUPT OUR HORMONE SYSTEMS AND SOME OF THESE MAY CAUSE CANCER:

An EU commissioned study showed that EU legislation does not adequately regulate chemicals in products: out of the 35,000 chemicals on the EU market, 60% are hazardous to human health and/or the environment but they still end up in consumer productsⁱⁱ. Exposure to endocrine disrupting chemicals has been found to be linked to a variety of diseases and health conditions, including behavioural disorders such as autism and illnesses such as obesity, diabetes, reproduction disorders, and cancers such as those of the breast or prostateⁱⁱⁱ.

CHEMICAL CONTAMINATION VIA CONSUMER PRODUCTS IS AVOIDABLE:

Today it is entirely possible to produce safe detergents, cosmetics or food wrappers and visionary initiatives are leading the way to promote substitution with safer alternatives^{iv}. What is missing is the political leadership, better and quicker implementation of current laws, incentives for substitution with safer chemicals and non-chemical alternatives and real industry-commitment to make these changes.

“A non-toxic environment should be understood as an environment that is free from chemical pollution and of exposures to hazardous chemicals at levels that are harmful to human health and to the environment. This target would take into consideration the need to provide vulnerable groups with as much protection as possible, to take account of potential delays between exposure and disease expression, to prevent accumulations of very persistent substances to ensure the quality of material flows foreseen as part of the Circular Economy”ⁱ

European Commission, “Study for the strategy for a non-toxic environment of the 7th Environment Action Programme”, Final Report, August 2017

HARMFUL CHEMICALS AFFECT THE MOST VULNERABLE FIRST^v:

The most vulnerable are likely to be the most significantly exposed to toxic and hazardous chemicals, including:

- Workers exposed to chemicals, such as farmers who are the first victims of the toxic properties of pesticides that they are spraying on their fields, or factory workers breathing toxic industrial chemicals at work on a daily basis.
- Individuals and communities with low socio-economic status, who will particularly be at risk of high exposure to harmful chemicals and have reduced possibility to avoid them due to economic constraints and lack of adequate information^{vi}.
- Young children exposed to toxic chemicals that are used for cleaning purposes in their schools or crumb rubber granulates used on the sports fields that they play on.
- Babies in utero exposed to chemicals ingested by their mother during her pregnancy.
- The elderly whose health and immunological systems may be compromised by age or disease.

TOXIC AND HAZARDOUS CHEMICALS WORSEN ENVIRONMENTAL AND CLIMATE CHALLENGES:

The release of toxic and hazardous chemicals in the environment is causing environmental degradation, reducing biodiversity, and accelerating climate change. Climate change contributes to the increasing release of toxic contaminants through melting of glaciers and increasing generation of air pollution^{vii}. As seen in the case of plastics, our reliance on fossil fuels and raw materials based on petrochemicals are fuelling the production and use of toxic components. Most of the plastics we use are produced from chemicals sourced almost entirely from fossil fuels and the largest players in each industry produce both fossil fuels and plastics^{viii}.

CHEMICALS ARE NOT ADEQUATELY REGULATED:

The global production of chemicals has already increased 57-fold from 1950 to 2000, reaching 400 million tons yearly^{xi} and is estimated to represent a USD 5.2 trillion industry, generating nearly 5 percent of total worldwide gross domestic product (GDP)^x. Projections estimate chemical production will continue to grow^{xi}. Yet, only a small number of the over 100,000 chemicals available on the EU market^{xii} are thoroughly evaluated for health and environmental effects, and an even smaller number are regulated. Only 181 individual chemicals have been listed as substances of very high concern; 43 are on the authorisation list and 66 have been restricted under the European Union’s flagship legislation on chemicals (REACH^{xiii}). Even under REACH any chemical evaluation and regulation will only address chemicals one at a time. What is missing is the consideration of the effects that the real-life mix of chemicals has on human and environmental health.



THE EUROPEAN COMMISSION'S UNKEPT PROMISE

Under the seventh Environmental Action Plan, the European Commission committed to the development of a strategy for a non-toxic environment by 2018. Keeping that promise will be a game changer. It will address accelerating climate change and biodiversity loss, contamination of air, soil, water, animals and humans with health-harming chemicals. It will satisfy the public and industry demands for non-toxic circular production and safe products. And it will ensure the use of the latest scientific knowledge about chemicals and what their effects may be in promoting less wasteful, more efficient and cleaner consumption.

A European action plan to better identify and regulate toxic and other harm-causing chemicals will not only inspire European citizens and industries, but it could also lead the way towards a new economic model worldwide. In such a model, the successful transition to safer chemicals is not only contributing to a truly circular economic loop, but also spurring innovation as well as stimulating new business and economic activity.



HEAL'S VISION FOR A EUROPEAN STRATEGY FOR A NON-TOXIC ENVIRONMENT

A EUROPEAN NON-TOXIC STRATEGY MUST:

PRIORITISE ELIMINATING PEOPLE'S EXPOSURE TO TOXIC CHEMICALS AND REDUCING THE LINKED HEALTH IMPACTS

BY 2030, with clear objectives and indicators by groups of priority chemicals, priority diseases and health impacts, as well as vulnerable population groups such as babies, young children, pregnant women, workers, and high risk communities.

COMMIT TO ADDRESSING AND WHEN POSSIBLE PHASING OUT CHEMICALS OF PARTICULAR CONCERN, such as endocrine disruptors, flame retardants, fluorinated compounds, and toxic pesticides (due to their effects on vulnerable groups) and include protection measures^{xiv}.

ESTABLISH AN EFFECTIVE PROCESS OF COORDINATION AND CONSISTENCY ACROSS THE VARIOUS PIECES OF EUROPEAN CHEMICALS LEGISLATIONS IN THE MOST HEALTH PROTECTIVE WAY, meaning for example chemicals regulated under REACH should be regulated in a consistent way in other European and Member States' pieces of legislation dealing with the same substances^{xv}.

IDENTIFY PRIORITY AREAS FOR PROGRESS AT THE EUROPEAN LEVEL, including:

- **Speeding up the identification of substances of very high concerns** and the related substitution efforts towards safer alternatives.
- **Guaranteeing that toxic and hazardous chemicals are not found in food and consumer items, including those that are recycled** (such as textiles, food packaging, cosmetics and other personal care products), with particular urgency on items children consume or are exposed to.
- **Reforming the current chemical assessment process** to reflect the reality of exposure to low doses and mixtures of multiple chemicals over prolonged periods of time rather than single chemicals ("chemical cocktail").

COMMIT TO SECURING FUNDS FOR IMPROVED RESEARCH AND TESTING

METHODS as well as to support substitution of toxic chemicals with safer alternatives.

DEVELOP COORDINATED EUROPEAN-WIDE INFORMATION AND AWARENESS-RAISING CAMPAIGNS for consumers, education specialists, health professionals and local authorities (schools^{xvi}, universities), with a focus on the most vulnerable groups (workers, low income communities, pregnant women, parents of babies, young children and teenagers, and the elderly). Such campaigns should build on the necessary upgrading of the REACH right to know and its extension to other legislations.



TO MAKE THIS VISION REALITY, HEAL PROPOSES 12 PRIORITY ACTIONS:



1: PUT VULNERABLE GROUPS FIRST. While we are all exposed to toxic chemicals, those who are most at risk of their effects need protection first – individuals exposed at the workplace, individuals and communities with low income, parents to be, unborn and young children, adolescents, and the elderly. We need clear reduction targets for chemical exposure accompanied by concrete protection measures to reach them and unlock the economic potential of disease prevention.



2: TRULY REDUCE EXPOSURE ACROSS SOURCES IN OUR DAILY LIVES (TAKING INTO ACCOUNT THE LIFECYCLE AND DISPOSAL OF CHEMICALS). We are exposed to chemicals from different sources and through different uses (e.g. on pesticides, products, workplaces, food, wastes). True progress to minimise our exposure to substances of very high concern requires a comprehensive regulatory approach that applies throughout the lifecycle of products that contain them, including production and the waste and recycling stages, and to all relevant policies (e.g. beyond REACH or product-specific legislations).



3: MAKE THE PRIORITY LIST OF SUBSTANCES TRULY HEALTH PROTECTIVE: COMMIT TO TACKLING ENDOCRINE DISRUPTING CHEMICALS (EDCs). We need a new European EDC strategy^{xvii} that fills the important protection gaps across European policies (priorities should be addressing EDCs in toys, food contact materials, and cosmetics) and commits to funding new research and test methods.

COMMIT TO TACKLING FLAME RETARDANTS



4: MAKE THE PRIORITY LIST OF SUBSTANCES TRULY HEALTH PROTECTIVE: COMMIT TO TACKLING FLAME RETARDANTS. The scientific evidence about the health, environment and fire safety concerns linked to the use of flame retardants keeps increasing, while their contribution to fire prevention is increasingly uncertain^{xviii}. Yet, their regulation is too slow and fragmented. Flame retardants are routinely found in toys, furniture, building materials, vehicles, among others^{xix}, and they pose a challenge to recycling and achieving a circular economy^{xx}. It is time to reassess their regulation, in particular for new generations, such as organophosphorus flame retardants.

COMMIT TO TACKLING PFAS



5: MAKE THE PRIORITY LIST OF SUBSTANCES TRULY HEALTH PROTECTIVE: COMMIT TO TACKLING HIGHLY FLUORINATED COMPOUNDS. Highly fluorinated compounds (PFAS) – are used in numerous consumer products from kitchenware to outdoor equipment, or furniture due to their water-, stain-, or oil-repellent properties. There is a scientific consensus^{xxi} about the adverse health effects of these substances and even calls for regulating them as an entire class^{xxii}. Yet, regulation is going too slowly and is not ambitious enough.

COMMIT TO TACKLING PESTICIDES



6: MAKE THE PRIORITY LIST OF SUBSTANCES TRULY HEALTH PROTECTIVE: COMMIT TO TACKLING THE EXCESSIVE USE OF PESTICIDES, while improving the assessment process that allows pesticides to enter the market. Some pesticides that have endocrine disrupting or neurotoxic properties are currently not assessed properly and should not be on the market.



7: SPEED UP THE PACE OF IDENTIFICATION OF SUBSTANCES OF VERY HIGH CONCERN (SVHCs).

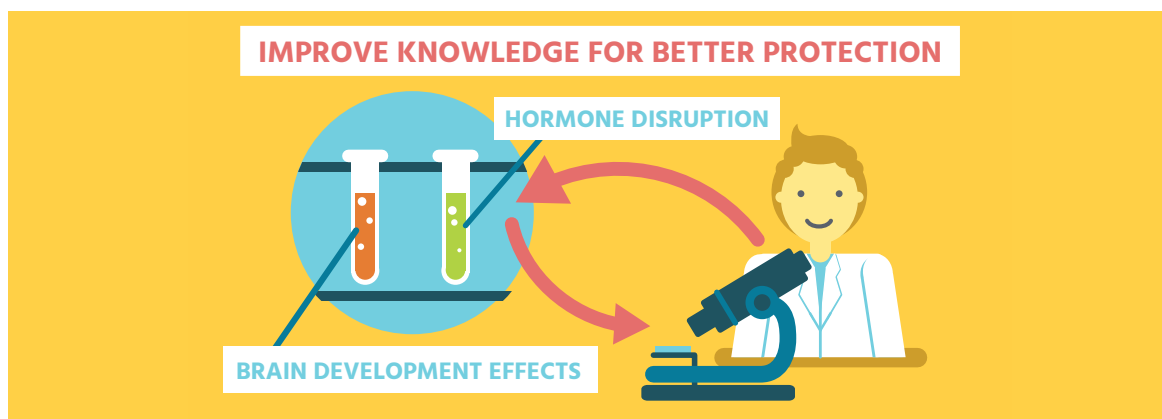
While ChemSec's highly respected SIN List already records 912 chemicals of very high concern^{xxiii}, the European Chemicals Agency (ECHA) in 10 years of REACH has only managed to identify 181 of them as substances of very high concern under the official EU classification. At this rate, it could take more than 50 years to get all 912 relevant substances listed. Meanwhile new substances appear on the market every day and substances qualifying for the SVHC identification are only the tip of the iceberg of chemical substances that require policy action.



8: MAKE BETTER REGULATION PRINCIPLES WORK TO PUT HEALTH FIRST ACROSS LAWS. Once a substance has been identified as one of concern for health under one regulation, the identification should translate across all other relevant legislations with a clear target for exposure reduction. People should be certain that only products that are safe from identified substances of concerns get on the market, whatever their use is and whichever regulation they fall under. Every existing chemical-relevant legislation should be implemented to the full extent (priorities include REACH and the pesticides and biocides regulations).



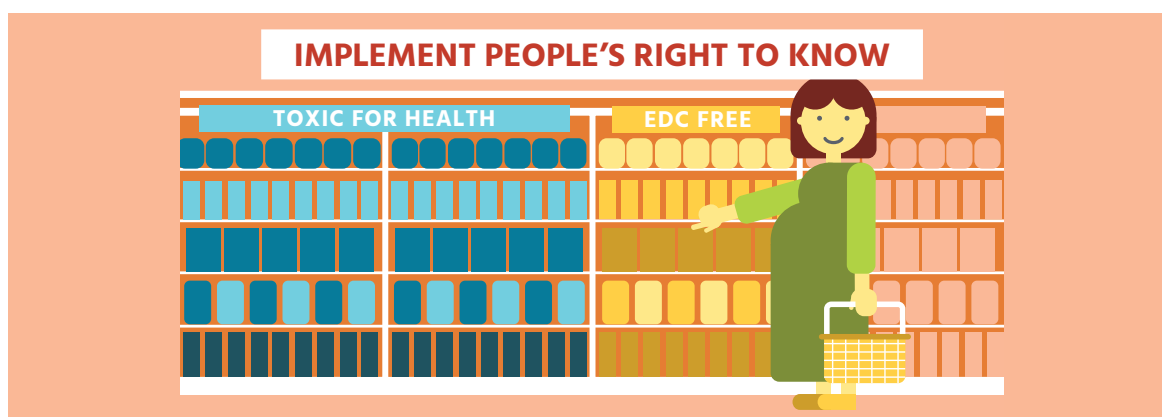
9: ADDRESS CHEMICAL COCKTAILS. Instead of assessing single chemicals, it is time to improve existing test methods and develop new methods to test groups of chemicals and chemical mixtures. This will contribute to reducing current health impacts, avoiding the regrettable substitution of one toxic chemical by another and provide more certainty for businesses.



10: IMPROVE KNOWLEDGE AND COMMUNICATE IT. A non-toxic environment strategy has to include funding for new research about health effects of chemicals. It should also serve to improve testing methods and guidelines in a way that health-sensitive endpoints can fully be accounted for in the evaluation of chemicals. This is essential for a better understanding of hormone disruption or brain development effects of chemicals.



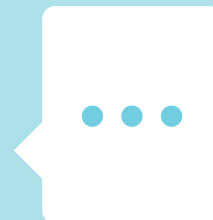
11: INVOLVE THE HEALTH COMMUNITY FOR BETTER PREVENTION. The health community has been an active promoter of ambitious policy action to reduce people's exposure to toxic chemicals^{xxiv}. Health professionals, medical doctors and nurse groups are the natural ambassadors of disease prevention both as an interface between scientists and policy-makers and also between policy-makers and citizens. Their involvement in a strategy to achieve a non-toxic environment is crucial for success and needs to be encouraged^{xxv}.



12: IMPLEMENT PEOPLE'S RIGHT TO KNOW. Promote consumers' awareness by developing EU-wide information tools about substances in ALL products as well as implementing and expanding consumers' right to know. Consumers need be able to easily get full information on the contents of products they buy and use, with transparency about potential health effects and guidance for maximum protection during use and disposal.

INSPIRATIONAL EXAMPLES

- Sweden's national non-toxic environment strategy - <http://www.swedishepa.se/Environmental-objectives-and-cooperation/Swedens-environmental-objectives/The-national-environmental-objectives/A-Non-Toxic-Environment/>
- Danish report towards a non-toxic future - http://en.mfvm.dk/fileadmin/user_upload/ENGLISH_FVM.DK/Focus_on/Chemicals_and_waste/13215_MF_Kemikonference_Rapport_A4_PRINT.pdf
- France's strategy on endocrine disruptors - <https://www.ecologique-solidaire.gouv.fr/rapport-devaluation-du-plan-national-daction-sur-perturbateurs-endocriniens-gouvernement-engage>
- Tools to help consumers detect toxic substances and make informed choices – ToxFox (<http://www.edc-free-europe.org/smart-fox-toxfax-app-helps-consumers-detect-edcs-in-cosmetics/>), Kemiluppen (<http://www.consumerchampion.eu/news/kemiluppen-successful-app-danish-consumer-council>), AskReach (under development), DetoxMe (<https://silentspring.org/detoxme/>)
- Hazardous substances and safer alternatives – Visit ChemSec's SIN list (<http://sinlist.chemsec.org/>) and marketplace (<https://marketplace.chemsec.org/>)
- Information on EDCs – Visit The Endocrine Disruption Exchange list (<https://endocrinedisruption.org/interactive-tools/tedx-list-of-potential-endocrine-disruptors/search-the-tedx-list>) and EDC Free Europe (<http://www.edc-free-europe.org/>)
- Tips for healthier consumption – Visit the Because Health website of the Collaborative on Health and Environment (<https://www.becausehealth.org/>)



FOOTNOTES

- i. European Commission, "Study for the strategy for a non-toxic environment of the 7th Environment Action Programme". Final Report. August 2017. p. 97 <http://ec.europa.eu/environment/chemicals/non-toxic/pdf/NTE%20main%20report%20final.pdf>
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- iv. ChemSec Market Place: <https://marketplace.chemsec.org/>
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- vi. Tyrell et al. "Associations between socioeconomic status and environmental toxicant concentrations in adults in the USA: NHANES 2001-2010". *Environment International*. September 2013. 59. p. 328-335. <http://www.ecehh.org/research-projects/socioeconomic-status-and-chemical-body-burdens/> World Health Organization Europe. "Environment and health risks: a review of the influence and effects of social inequalities". 2010. http://www.euro.who.int/__data/assets/pdf_file/0003/78069/E93670.pdf
- vii. Peter G. Levi and Jonathan M. Cullen, "Mapping Global Flows of Chemicals: From Fossil Fuel Feedstocks to Chemical Products," *Environmental Science and Technology*, 2018, 52, p. 1725-1734
- viii. CIEL. "Fueling Plastics - Fossils, Plastics, & Petrochemical Feedstocks". The Production of Plastic and Petrochemical Feedstocks. 2017. <http://www.ciel.org/wp-content/uploads/2017/09/Fueling-Plastics-Fossils-Plastics-Petrochemical-Feedstocks.pdf>
- ix. European Commission, "Study for the strategy for a non-toxic environment of the 7th Environment Action Programme", Final Report, August 2017, <http://ec.europa.eu/environment/chemicals/non-toxic/pdf/NTE%20main%20report%20final.pdf>
- x. American Chemistry Council (ACC). "Guide to the Business of Chemistry – 2015". 2016.
- xi. The EU chemicals industry represents 7% of EU industrial production and accounts for 1.1% of the EU GDP. Chemicals consumption amounted to 499 billion Euros as of 2017. Cefic. "Chemicals Trends Report: Monthly Summary; 20rd April 2018" http://www.cefic.org/Documents/RESOURCES/Chemical%20Trends%20Report/2018-04-23_Cefic_Chemicals_Trends_Report.pdf
- xii. European Environment Agency. "The European Environment State and Outlook 2015 – Assessment of global megatrends" 2015. <https://www.eea.europa.eu/soer-2015/global/action-download-pdf>
- xiii. European Commission, "Study for the strategy for a non-toxic environment of the 7th Environment Action Programme". Final Report. August 2017. p. 10 <http://ec.europa.eu/environment/chemicals/non-toxic/pdf/NTE%20main%20report%20final.pdf>
- xiv. European Commission, "Study for the strategy for a non-toxic environment of the 7th Environment Action Programme". Final Report. August 2017. p. 20 <http://ec.europa.eu/environment/chemicals/non-toxic/pdf/NTE%20main%20report%20final.pdf>
- xv. A core principle should be "that hazardous substances of particular concern (eg substances corresponding to SVHCs in REACH and equivalent) should as far as possibly be phased out in uses which are not sufficiently well controlled during their life cycle." European Commission, "Study for the strategy for a non-toxic environment of the 7th Environment Action Programme". Final Report. August 2017. p. 9 <http://ec.europa.eu/environment/chemicals/non-toxic/pdf/NTE%20main%20report%20final.pdf>
- xvi. Sweden's action plan for a non-toxic environment 2015-2020 includes specific measures targeting pupils at school and pre-school levels. Read the action plan on <https://www.kemi.se/en/about-us/our-work/action-plan-for-a-toxic-free-everyday-environment>
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- xix. IPEN and Arnika, "Toys or Toxic Waste? An analysis of 41 plastic toy and beauty products made from toxic recycling". December 2017. <http://www.ipen.org/news/press-release-arnika-toxic-toy-toxic-waste>
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- xxiv. Di Renzo GC, et al. "International Federation of Gynecology and Obstetrics opinion on reproductive health impacts of exposure to toxic environmental chemicals". *International Journal of Gynecology and Obstetrics*. 2015. p. 219-225 <http://dx.doi.org/10.1016/j.ijgo.>
- xxv. World Health Organization. "WHO chemicals road map". 2017. <http://www.who.int/ipcs/saicm/roadmap/en/>

ACKNOWLEDGEMENTS FOR CONTRIBUTIONS:

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Design: Lindsay Noble Design

Thanks to HEAL members as well as Dr. Kenneth Geiser, Professor Emeritus of Work Environment, University of Massachusetts Lowell for their insightful comments.

FUNDING ACKNOWLEDGEMENTS:



HEAL gratefully acknowledges the support of the European Environment and Health Initiative (EEHI) and the European Union (EU), for the production of this publication. The responsibility for the content lies with the authors and the views expressed in this publication do not necessarily reflect the views of the EU institutions and funders.

The Health and Environment Alliance (HEAL) is the leading not-for-profit organisation addressing how the environment affects human health in the European Union (EU) and beyond. HEAL works to shape laws and policies that promote planetary and human health and protect those most affected by pollution, and raise awareness on the benefits of environmental action for health.

HEAL's over 70 member organisations include international, European, national and local groups of health professionals, not-for-profit health insurers, patients, citizens, women, youth, and environmental experts representing over 200 million people across the 53 countries of the WHO European Region.

As an alliance, HEAL brings independent and expert evidence from the health community to EU and global decision-making processes to inspire disease prevention and to promote a toxic-free, low-carbon, fair and healthy future.

HEAL's EU Transparency Register Number: 00723343929-96

