USEtox

Reducing impacts from chemicals in products and emitted to the environment

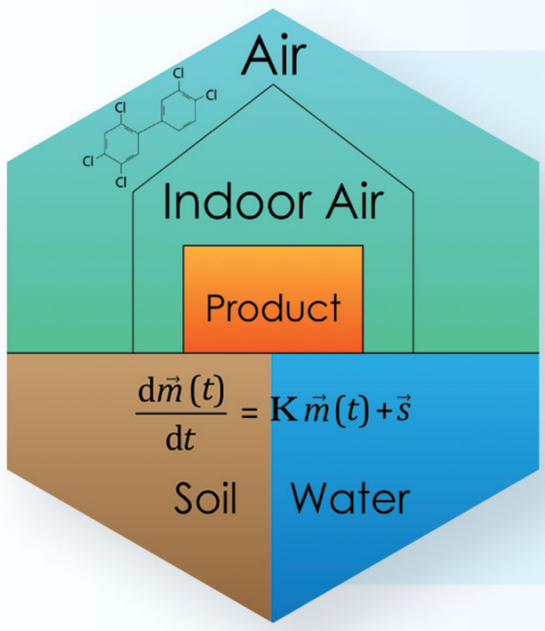
The UNEP/SETAC Scientific Consensus Model

Mission

To improve understanding and management of chemicals by quantifying exposure, risk and impacts of chemicals in products and in the environment.

Why USEtox

- What is the impact of chemicals in products on humans and the environment.
- How can we ensure that alternatives to harmful chemicals in products are better.
- USEtox helps to understand and manage risks of chemicals in products, supporting to develop future-proof products.



What is USEtox

- USEtox is the tool for assessing and replacing chemicals in personal care, toys, building materials and other products.
- It characterises human toxicity and ecotoxicity impacts for thousands of chemical emissions and product applications.
- USEtox provides a scientific foundation for the comparative assessment of chemicals.

Who is using it

- USEtox is increasingly used in a wide range of national and international projects, in life cycle assessment and risk screening.
- The model is continuously improved, used by many organizations, and recommended for chemical toxicity assessment in the Product Environmental Footprint (PEF) by the European Union and for chemical substitution by the US EPA.

How to access and use USEtox

- USEtox can be applied for life cycle assessment, footprinting, risk screening, and chemical substitution to inform public and private stakeholders.
- It can be applied by companies to assess whether chemicals present in their products could put humans and ecosystems at risk, and to evaluate safer and more sustainable (SSbD) alternatives.
- USEtox is implemented in Microsoft Excel and is easy to use by practitioners.

Up-to-date information, publications, and upcoming training and other events can be found at **usetox.org**

USEtox

What is the USEtox Framework?

Input Data

Information available for thousands of chemicals and products

Chemical mass in products or emitted to the environment

Fate & Exposure

Distribution of chemicals and contact with humans and ecosystems

Ecosystems

Multimedia environmental concentrations

Humans

Multi-pathway consumer & population intake doses

Risk & Impacts

Toxicity effects and disease severity

Ecosystem Quality

Risk quotient Species diversity loss

Human Health

Hazard quotient & risk probability DALY

How does the USEtox Product Interface Work?

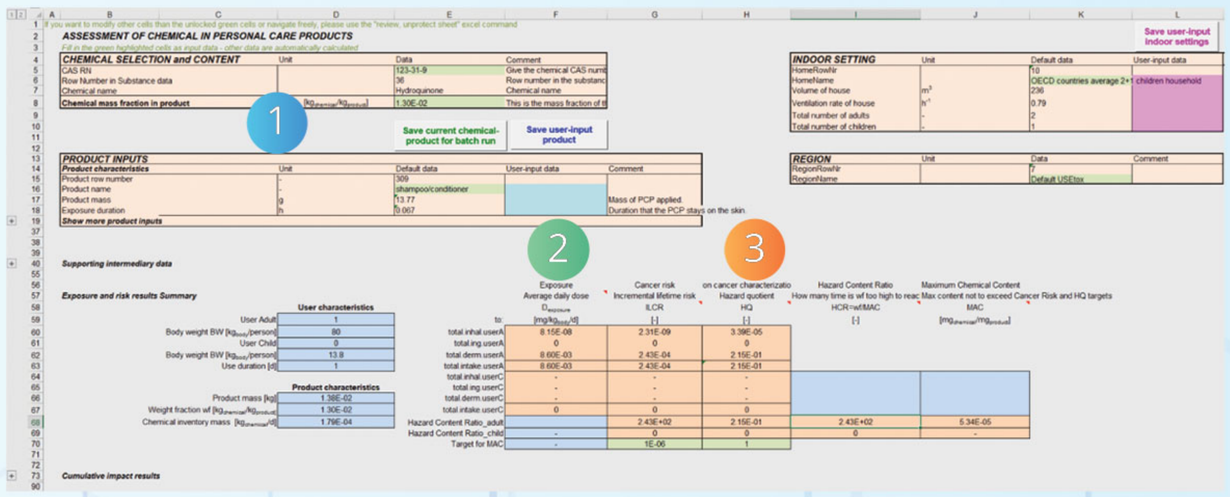
Your inputs to USEtox

1 - Select your chemical among >10000 chemicals.
- Define your product and usage characteristics.
- Provide the chemical mass fraction in product or directly emitted to the environment.

USEtox determines

2 Chemical exposure of users, the general population, and ecosystems.

3 Relative measures of risk and of cumulative impacts for use in risk screening, chemical alternatives assessment, safe and sustainable-by-design, and environmental life cycle assessment.



Interested to find out how USEtox can help you to replace hazardous chemicals in your products?
At usetox.org, you find more information about USEtox, our updates, events and our User Manual.

This leaflet is prepared under the SAICM GEF 9771 project 'Global best practices on emerging chemical policy issues of concern', funded by the Global Environment Facility (GEF). This project is implemented by UNEP, executed by the SAICM Secretariat, and acknowledges the financial contribution of GEF.

UN environment programme · saicm · gef GLOBAL ENVIRONMENT FACILITY INVESTING IN OUR PLANET · Life Cycle Initiative