GENDERJUST CHEMICALS POLICY

TOGETHER FOR A TOXIC-FREE FUTURE

A background paper by WECF (Women Engage for a Common Future) and Wen (Women's Environmental Network).

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DISCLAIMER

This paper discusses the different effects of chemical exposure on people with female versus male bodies. When using terms e.g., 'women', it should be noted that unless otherwise stated this describes those with female bodies because currently there is a lack of data regarding trans and intersex people in the European Union. We recognize this gap in the research and in using the terms women, men, female, male we make no assumption about the gender identity of individuals and place no normative assumptions on bodies.

GENDER GLOSSARY

Sex and Gender
The terms sex and gender are not the same. Sex is assigned at birth and based on the different biological and physiological characteristics of males and females, such as reproductive organs, chromosomes, hormones, etc. A person's gender is the complex interrelationship between three dimensions body, identity, and social gender. It is an interplay of biological and social factors. Gender is not naturally given but rather determined between three dimensions: The social, cultural, and economic organization of the society and its normal values. Thus, gender is changeable.

Intersex
Also referred to as Disorders/Differences of Sexual Development. About 1% of children are born with chromosomes, hormones, genitalia and/or other sex characteristics that are not exclusively male or female as defined by the medical establishment in our society. In most cases, these children are at no medical risk, but most are assigned a binary sex identity (male or female) by their doctors and/or families.

Transgender
Sometimes this term is used broadly as an umbrella term to describe anyone whose gender identity differs from their assigned sex. It can also be used more narrowly as a gender identity that reflects a binary gender identity that is "opposite" or "across from" the sex they were assigned at birth.

SUMMARY

Plasticisers in plastic products, per- and polyfluorinated substances (PFAS) in outdoor clothing, carpets or food packaging, formaldehyde in cosmetics - every day we are exposed to chemicals that are harmful to health and the environment. Women, men, diverse genders, and children are affected differently by exposure to toxic chemicals and do not react in the same way to the impacts. This has to do with biological differences, social gender roles and gender specific division of tasks or occupational roles - in Germany and worldwide. These differences are often not taken into account in risk assessment and political regulations. However, in order to better protect women and girls in particular, it is imperative to introduce a gender-differentiated view into the topic of harmful chemicals and chemicals policy.

The use of synthetic chemicals is widespread, we are exposed to them in almost every product we use in our daily lives. We can also be exposed to them in the workplace. These chemicals used are very persistent and, due to other negative properties, harmful to health. They can be found everywhere: in the Arctic, in deep-sea trenches, and in our bodies. There they can trigger allergies, irritate the respiratory tract and skin, impair fertility, disrupt the hormone system or cause cancer. Some chemicals are difficult to break down and pollute the environment for decades and longer. Analyses show that everyone is exposed to a wide variety of pollutants.[3] As a result, consumers come into contact with a wide range of different chemicals and ingest them without knowing or being aware of their harmful properties.

Along with the climate crisis and biodiversity loss, the United Nations calls pollution, including exposure to toxic chemicals, the third major environmental crisis of our time. The widespread use of toxic chemicals is a major cause of millions and millions of illnesses and deaths.[4] Similar to the issue of climate change and biodiversity, the issue of chemical safety affects many professional and working areas, e.g. ministries, agencies and organisations in the fields of environment, health, social affairs, labour, transport, education, economy, women, family and youth, finance, international cooperation and development, and last but not least, industry and commerce. Chemical pollution, however, receives far less attention in the public arena than climate catastrophy or the destruction of biodiversity. But in October 2021 the United Nations Human Rights Council (HRC) recognised for the first time that having a clean, healthy and sustainable environment is a human right.

[3] UNEP (2016): Global Gender and Environment Outlook: The Critical Outlook. Nairobi, S. 39.
[4] Landrigan et al (2017), The lancet Commission on pollution and health.
https://www.thelancet.com/commissions/pollution-and-health [14.11.2021].

At Women Engage for a Common Future, we support women around the world, to be seen and heard in their commitment to a toxic-free future for adults, youth and children. With this background paper, developed and written originally from a German perspective, we would like to bring the issue of chemicals and women home to you. To raise awareness of the far-reaching effects of toxic chemicals and to campaign for stricter and at the same time gender-responsive regulations.

With this background paper, we are also targeting women's associations and organisations, gender equality officers, experts and scientists. Their commitment and influence on political decisions are immensely important.

The right to a healthy environment

Pollution and toxic chemicals affect our human right to a healthy life and endangers future generations: It impedes access to safe food and clean water and, in some countries, curtails the right to a healthy environment. It particularly affects socially disadvantaged or marginalised populations, including people living in poverty, indigenous peoples, workers, migrants and women and children. At WECF, we support the UN's work for a right to a toxic-free environment.[5]

Many toxic chemicals and substances are (very) persistent and, once in the environment, cannot be removed. In addition, the environmental and health impacts of many chemicals are simply not well understood. Together with you, we want to change that.

It is essential that everyone can participate equally in political and economic decisions that affect their health. They must not remain largely excluded, as it is often the case today.

We need the experience and know-how of women and men, inter* and trans* at all levels and in decision making positions where social and biological gender perspectives can contribute to better protection against toxic chemicals. Current political processes - such as the discussion on the Supply Chain Act, the implementation of the EU Chemicals Strategy for Sustainability, the work on a possible Plastics Convention and the negotiations of a new strategic approach to international chemicals management (SAICM Beyond 2020) - offer opportunities in politics, science, industry and civil society to contribute to gender-equitable protection from toxic chemicals and a toxic-free future for all.

[5] WECF (2019). Das Menschenrecht auf eine giftfreie Umwelt.
https://www.wecf.org/de/das-menschenrecht-auf-eine-giftfreie-umwelt/ [16.11.2021].

THE FACTS

- More than 1.6 million deaths are attributed to exposure to certain chemicals each year, according to the World Health Organisation (WHO).[6]

- There are an estimated 350,000 different chemicals on the global market.[7] Most of these have not been tested for their hazards and are unregulated worldwide.

- The production of chemicals is expected to double by 2030.[8]

- According to Eurostat, 63 per cent of all chemicals produced and used in Europe are hazardous to human health and/or the environment.[9]

- Personal care and consumer products can contain more than 100 different chemicals. Many of them have hormonal effects. 25% of women in western industrialised countries use approx. 15 different personal care products daily. [10] Young women and girls in particular are targeted by the cosmetics industry that reinforce traditional gender roles.

- Menstrual products such as pads and tampons can be up to 90 per cent plastic; they have been found to contain hormonally active bisphenol A (BPA) and phthalates.[11]

- Women who work with plastics in the automotive industry show a fivefold higher risk of developing breast cancer than other women.[12]

- In 1990 - 2.3 million tonnes of pesticides were used worldwide, today the figure is about 4.1 million tonnes.[13]

[6] WHO (2018). Public health impacts of chemicals: known and unknowns. https://www.who.int/ipcs/publications/chemicals-public-health-impact/en/ [16.11.2021].
[7] UNEP (2019). Global Chemical Outlook II: ICCA talk of 40,000 to 60,000 chemicals on the global market; others of up to 350,000 chemicals. https://www.unitar.org/sites/default/files/media/file/Thomas%20Backhaus%20-%20Chemicals%20of%20Global%20Concern.pdf [16.11.2021].
[8] UN environment (2019). Global chemicals outlook II. https://www.unenvironment.org/explore-topics/chemicals-waste/what-we-do/policy-and-governance/global-chemicals-outlook [13.06.2021].
[9] EUROSTAT. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env_chmhaz&lang [16.11.2021].
[10] WECF (2017). Women and Chemicals: The impact of hazardous chemicals on women. Utrecht/München/Annemasse, S. 27.
[11] Gao, CJ. Phthalates, bisphenols, parabens, and triclocarban in feminine hygiene products from the United States and their implications for human exposure. Environment International 136 (2020) 105465.
[12] Brophy et al. (2012). Breast cancer risk in relation to occupations with exposure to carcinogens and endocrine disruptors: a Canadian case-control study. Environ Health, doi: 10.1186/1476-069X-11-8.
[13] EU-Pesticides database. https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=homepage&language=EN: zitiert in PAN Germany (2019). Giftige Exporte. https://pan-germany.org/download/giftige-exporte-ausfuhr-hochgefaehrlicher-pestizide-von-deutschland-in-die-welt/ [13.06.2021].

- In some countries, 85 per cent of pesticide applicators on commercial farms are women, often without protective clothing, working while pregnant and lactating.[14]

- On average, seven percent of plastic products can be comprised of additives such as plasticisers, fluorinated compounds and brominated substances. In the case of a PVC shower curtain, plasticisers can account for up to 70 per cent of the total weight.[15]

- In the USA, 56 different industrial chemicals were found in the blood of pregnant women. Many of these substances are used in plastic products or during their manufacture.[15]

- A European study for PFAS[16], the so-called forever chemicals, in fast food packaging and disposable tableware found that 32 out of 42 samples tested contained PFAS.[17]

- 54 per cent of the global burden of disease attributable to environmental exposures affects children under the age of 15.[18] Worldwide, nearly every child is born pre-exposed to toxic chemicals. The WWF study "Compromising our children"[19] shows that toxic chemicals such as polychlorinated biphenyls (PCBs) and possibly polybrominated diphenyl ethers (PBDEs) can impair children's intelligence (general brain development and motor abilities).

- In the WHO European region, the cost to burden of disease in the WHO Europe region caused by endocrine disrupting chemicals (EDCs) amounts to €163 billion per year.[18]

[14] Watts Meriel (2012). Breast Cancer, Pesticides and you, PAN AP.
[15] Kallee & Fernandez (2019). Gesundheit: Chemie im Körper. https://www.boell.de/de/2019/05/27/gesundheit-chemie-im-koerper [13.06.2021].
[16] There are 4700 per- and polyfluorinated alkylated substances PFAS, they are water, grease and dirt repellent, extremely durable and can, among other things, affect seed quality. PFAS are used in outdoor clothing, saucepan coating, carpets, textiles, food packaging, fire-fighting foams and other industrial areas. A ban on PFAS in food contact materials has been in place in Denmark since 2020.
[17] CHEMTrust (2021). Europaweite Studie stellt allgegenwärtige PFAS-Belastung in Lebensmittel-Einwegverpackungen fest. https://chemtrust.org/de/europaweite-studie-stellt-allgegenwaertige-pfas-belastung-in-lebensmittel-einwegverpackungen-fest/ [16.11.2021].
[18] WHO (o. J.). Data and statistics. http://www.euro.who.int/en/health-topics/environment-and-health/chemical-safety/data-and-statistics [13.06.2021].
[19] WWF-UK (2004). Compromising our children. Chemical impacts on children's intelligence and behaviour. https://www.detoxmetals.com/wp-content/uploads/pdf/toxicity-articles/1children-and-chemicals.pdf [24.07.2021].

ENDOCRINE DISRUPTORS EDCs

Endocrine disrupting chemicals (EDCs), also known as hormone disruptors, are substances that disrupt the hormone, also known as the endocrine, system. They can for example block or mimic natural hormones, triggering important processes in the body too early, too late or not at all. Women are particularly sensitive at certain times of their lives such as puberty, pregnancy, breastfeeding and menopause. Disruptions caused by EDCs can have serious consequences.

EDCs are found in many everyday products, and in pesticides residues and leaching from certain food packaging. Endocrine disruptors have also been detected in personal care products such as hair wax, sunscreen, shower gels and lipsticks. According to a study by BUND[20], one third of all cosmetics in Germany, Austria and Switzerland contain EDCs.

EDCs are associated with testicular and breast cancer, diabetes, obesity, neurological disorders and infertility, among other things. [21] EDCs can have an effect even in very small quantities. In fact, there are no safe levels. The WHO speaks of a "global threat" in connection with EDCs. The European Society of Endocrinology calls for the strict application of the precautionary principle in relation to EDCs to protect human health and the environment. Production, distribution and exposure to pesticides, biocides or end products containing EDCs must be avoided.[22] WECF, together with other NGOs, is also calling for a long overdue national action plan from the German government to improve protection against EDCs.[23]

[20] BUND (2013). Der Kosmetikcheck. Hormoncocktail im Badezimmer. BUND-Studie zu hormonell wirksamen Stoffen in Kosmetika. https://www.bund.net/fileadmin/user_upload_bund/publikationen/chemie/kosmetik-check_studie.pdf [13.06.2021].
[21]More information: Caterbow, Hausmann, Smolka, 2020: Endokrine Disruptoren. Hintergrundpapier. https://www.wecf.org/de/wp-content/uploads/2018/10/EDCs_HIntergrundpapier-_Juni.pdf
[22] European Society of Endocrinology (2021), Hormones in European Health Policies: How endocrinologists can contribute towards a healthier Europe, S. 8.
[23]WECF (2021). Hormongifte Stoppen – NGOs fordern einen EDC Aktionsplan von der Bundesregierung. https://www.wecf.org/de/hormongifte-stoppen-ngos-fordern-einen-edc-aktionsplan/ [16.11.2021].

THE FOREVER CHEMICALS PFAS / PFC

Per- and polyfluorinated alkyl substances (PFAS) belong to the group of PFCs (per- and polyfluorinated chemicals). Due to their physical-chemical properties, they are used in many consumer products, such as non-stick cookware (Teflon), outdoor clothing and, due to their grease- and water-repellent effect, also in food packaging. This group of industrial chemicals is comprised of more than 4,700 different compounds and only a few have been sufficiently investigated for their possible harmful properties. They are reprotoxic, hormonally active and liver-damaging.[24]

All PFAS have in common their extreme longevity in the environment and their ability to accumulate in organisms. Humans absorb these substances mainly through food and drinking water, and babies through breast milk or placenta.[25] Per- and polyfluorinated alkyl substances (PFAS) can remain in the environment for over 1,000 years, polluting soil, water, plants and animals, even in the most remote regions of the earth.

Because of their extreme longevity, they are also referred to as "forever chemicals". We are committed to regulating and preferably banning PFCs as a group.

[24] BMU (2021). Pollution of soils by PFAS/PFC. https://www.bmu.de/en/topics/water-resources-waste/soil-conservation/pollution-of-soils-by-pfas-pfc [03.11.2021].
[25] Environment International (2019). Concentrations of perfluoroalkyl substances (PFASs) in human embryonic and fetal organs from first, second, and third trimester pregnancies. https://www.sciencedirect.com/science/article/pii/S0160412018326102?via%3Dihub [03.11.2021].

TOXIC CHEMICALS: THE INVISIBLE DANGER

Toxic chemicals surround us everywhere: They leach from products or are discharged during manufacture, they are released during the application of pesticides and in the open burning of waste in landfills. They get into the air, soil, water and food and can be absorbed into our bodies through breathing, the food we eat and through our skin. Mostly without our knowledge. Chemicals can exhibit numerous negative properties. Among other things, they can be

- carcinogenic
- harmful to reproduction (reprotoxic)
- mutagenic
- persistent, so-called persistentorganic pollutants (POPs)
- toxic (poisonous)
- Accumulates in fatty tissue (bio accumulative)
- endocrine disrupting (endocrine disrupting chemical) and
- strongly allergenic (sensitising).

Numerous scientific studies show that toxic chemicals are (partly) responsible for the development and increase of cancer, diabetes, infertility, neurological diseases, disorders of the endocrine system and other diseases. Analyses of blood samples, including those from the umbilical cord, sperm or fatty tissue, show that every human being is contaminated with a cocktail of harmful chemicals and substances[26]. A large proportion of the chemicals on the market have not been studied for their harmful effects on health and the environment, and their specific effects on men's and women's health are hardly analysed.

Chemicals are present everywhere in everyday life.

A selection:

FOOD, e.g. pesticides, herbicides, perfluorinated substances like PFAS, food packaging...

PLASTIC PRODUCTS, e.g. phthalate plasticisers, bisphenol A and other bisphenols...

CLOTHING, e.g. perfluorinated substances in outdoor clothing, PVC, nylon, nonylphenol...

COSMETICS, e.g. microplastics, parabens, formaldehyde, phthalates...

FURNITURE, e.g. phthalates, brominated flame retardants, formaldehyde, PFAS...

[26] UNEP (2016): Global Gender and Environment Outlook: The Critical Outlook. Nairobi, S. 39.

CALL FOR A GENDER-RESPONSIVE CHEMICALS POLICY

Women, men and intersex people differ in their biology. In addition, social gender roles determine exposure to toxic chemicals and pollution and the impact of exposure. Therefore, a gender- and gender-differentiated assessment of chemicals is essential.

Biological Factors

Women are particularly susceptible – particularly because of their biology

- Women accumulate fat-soluble and bio-accumulative chemicals to a greater extent because they have more fat tissue.

- The developmental stages of the female body (puberty, menstrual cycle, pregnancy, lactation, menopause) are controlled by the hormone system. During these phases, women are particularly sensitive to toxic chemicals. Exposure to endocrine disrupting chemicals (EDCs) such as bisphenol A or phthalates can disrupt hormonally controlled developmental processes and have critical health effects, including on the developing foetus, especially during pregnancy.

- Women and men have different metabolisms and gut flora or microbiomes and absorb and metabolise chemicals differently. Differences in the reproductive, cardiovascular and nervous systems result in different impacts from chemical exposure at different doses.

- The placenta is not a true barrier to toxic chemicals. They can pass through the mother, and the placenta and potentially harm the developing foetus. Women can also unwittingly pass harmful chemicals to new-borns through breast milk.[27]

Recent research confirms that many chemicals can be harmful to health even below supposedly safe limits. This is particularly true of endocrine disrupting chemicals such as bisphenols, PFAS or phthalates. Bearing in mind that safe levels are only ever determined for a single chemical. In everyday life, however,

[27] Padmanabhan et al (2021). Praegnatio Perturbatio—Impact of Endocrine-Disrupting Chemicals. Endocrine Reviews, Vol. 42, No. 3, 295–353 https://academic.oup.com/edrv/article/42/3/295/6060059 [16.11.2021].

we are exposed to many different chemicals at the same time, which together can intensify their harmful effects (so-called combination or cocktail effects).

Pregnant women are the first environment for their children and women often have responsibilities for health of their families

Pregnant women are their children's first environment. Chemicals can unwittingly pass through the mother to the child and harm future generations. Many babies are born pre-exposed - with up to 200 exogenous toxic chemicals in their little bodies. Exposure to endocrine disrupting chemicals like bisphenol A and phthalates can interfere with the bodies messenger system (the endocrine system) and so disrupt hormone-controlled development processes, particularly during pregnancy.[28] Developing fetuses are specifically sensitive to EDCs because the body's own hormonal system controls the healthy development and functions of the body. If it is disturbed, this may result in health problems which either are present at birth or much later in life.

Women working in small-scale gold mining, for example, are often exposed to mercury. Exposure to this toxic substance can lead to serious birth defects, even long after exposure. In addition, women who give birth to a disabled child are often socially stigmatised. Moreover, if children suffer health impairments, it is usually the women who are responsible for time-consuming and costly health care in the families.

Childbearing and endocrine disrupting chemicals

Family planning can be compromised by the toxic chemicals that surround us. EDCs, even in the smallest amounts[29][30], affect the hormonal and reproductive systems and can, for example, lead to fertility disorders such as menstrual irregularities, endometriosis, premature onset of puberty or infertility[31]. In many societies, women with fertility disorders are exposed to domestic violence, psychological abuse and social exclusion.[32]

Men are also affected by EDCs. One possible cause for the worldwide increase in testicular cancer rates and the decreasing sperm count in industrialised

[28] ScienceDirect (2015). International Federation of Gynecology and Obstetrics opinion on reproductive health impacts of exposure to toxic environmental chemicals. https://www.sciencedirect.com/science/article/pii/S0020729215005901 [16.11.2021].
[29] Vandenberg et al (2012). Hormones and endocrine-disrupting chemicals: low-dose effect and nonmonotonic dose responses. Endocr Rev, 33 (3), 378-455.
[30] Gore et al. (2015). EDC-2: The endocrine society´s second scientific statement on endocrine-disrupting chemicals. Endocr Rev, 36 (6), E1-E1.
[31] UN environment (2019). Global chemicals outlook II, https://www.unenvironment.org/explore-topics/chemicals-waste/what-we-do/policy-and-governance/global-chemicals-outlook [16.11.2021].
[32] Raheb et al (2019). Relationship between domestic violence and infertility Eastern Mediterranean Health Journal: http://www.emro.who.int/emhj-volume-25-2019/volume-25-issue-8/relationship-between-domestic-violence-and-infertility.html [16.11.2021].

countries is believed by scientists to be hormonally active chemicals.[33] In addition to reduced sperm quality in men, other conditions involving the endocrine system, such as genital malformations, diabetes II and cancer, are becoming increasingly common and have been linked to chemical exposure, according to a review of EDCs.[34]

Social gender roles and the workplace

Socially constructed gender roles and people's occupation influence exposure to chemicals. Due to the division of labour between the sexes, women and men are differently exposed to toxic chemicals. Examples of female-dominated industries with high exposure to chemicals are the health and cleaning sectors. Cashiers (bisphenols in receipts) as well as employees in textile retail, floristry, beauty salons or hairdressing salons are exposed to numerous harmful chemicals. Chemical-intensive industries such as textiles, plastics and electronics also have a high proportion of female employees. About 75 million people work in the textile industry worldwide, 80 percent of them are women between the ages of 18 and 35. Women in textile factories are permanently exposed to synthetic fibres such as acrylic, nylon and other petroleum products. They have an increased risk of developing breast cancer later in life.[35]

In the health care and cleaning professions, which are dominated by women, exposure to chemicals in cleaning products and personal care products is widespread. Nurses have a 50 percent higher rate of breast cancer than women in other professions.[36] Women also suffer 'triple jeopardy' through exposure to toxic chemicals from the work they do i.e., as cleaners, then again during housework and then in the wider environment once the cleaning products are released into the environment.

It is not only in traditional societies that women are still primarily responsible for housework. Even in EU countries like France and Germany, women do 72 percent of the housework[37]. They are therefore more affected by indoor air pollution, for example through the burning of household fuels or chemical emitted from home furnishings or cleaning products.

Globally, women are also disproportionately exposed to toxic chemicals in agriculture - e.g., in flower or vegetable farming. On commercial farms and

[33] Background information: Swan, Shanna (2021). Count Down. How Our Modern World Is Threatening Sperm Counts, Altering Male and Female Reproductive Development, and Imperiling the Future of the Human Race.
[34] WHO & UNEP (2013). State of the Science on Endocrine Disrupting Chemicals - 2012: https://www.unep.org/resources/report/state-science-endocrine-disrupting-chemicals [13.06.2021].
[35] Labrèche et al. (2010). Postmenopausal breast cancer and occupational exposures. https://oem.bmj.com/content/67/4/263 [16.11.2021].
[36] BCPP (2015). Working Women and Breast Cancer: The State of the Evidence. https://www.bcpp.org/wp-content/uploads/2017/03/Report_Working-Women-and-Breast-Cancer_August_2015.pdf [16.11.2021].
[37] Statista (2019). So ungleich ist Hausarbeit verteilt. https://de.statista.com/infografik/15857/verteilung-von-hausarbeit-bei-maennern-und-frauen/ [14.06.2021].

plantations in the global South, up to 85 percent of pesticide applicators are women. And they often work without protective clothing, even during pregnancy and breastfeeding.

Increasing numbers of women are employed in the informal sector, poorly paid, and with no adherence to labour law and fewer protections than men. For example, the vast majority of the 1.5 million waste pickers in India are women and girls from marginalised social groups who are regularly exposed to infectious and toxic substances such as dioxins or furans from open burns. In the process, they work with, for example, toxic plastic or electrical waste that comes from the Global North. In some countries, men lead the manual work, such as collecting electronic waste, and women are exposed to the hazardous chemicals involved in extracting the valuable metals of the equipment.

Of course, men are also exposed to these emissions, pollutants or the increased use of highly hazardous pesticides - some of which are produced in the EU for export, despite being prohibited for use in the EU - and suffer health consequences such as an increase in testicular cancer, a decrease in sperm quality, respiratory and cardio-vascular diseases.

Economic consequences: Chemical exposure

The health consequences of chemical exposure not only cause suffering for those affected, but they also impact the national economy. In the European Union, exposure to endocrine disrupting chemicals costs an estimated 163 billion euros per year in damage to health. This corresponds to 1.28 percent of the European gross domestic product. Only the EDCs with the best evidence of a causal relationship were included in this research. The actual costs to health by chemical exposure are therefore likely to be many times higher.[38]

Our joint commitment to safe and gender just chemicals - Right now!

Some policy developments, right now, offer opportunities to take steps towards a toxic-free future. A prerequisite for success is political will and consistent implementation of chemicals policy measures.

The new EU Chemicals Strategy for Sustainability[39] recognises the risks of harmful chemicals and the need for better regulation, including bans. It's action plan comprises 70 measures. However, none of these measures specifically address gender issues. Yet, the text of the strategy expands the concept of

[38] Trasande et al. (2015). Burden of disease and costs of exposure to endocrine disrupting chemicals in the European Union: an updated analysis. Andrology, doi: 10.111/andr.12178.
[39] European Commission. Chemicals Strategy. https://ec.europa.eu/environment/strategy/chemicals-strategy_en [16.11.2021].

vulnerable populations to include "those populations that are more susceptible to exposure to chemicals", opening up the scope for addressing gender issues, although the only mention of women once again refers to "pregnant and lactating women as typical examples of vulnerable populations".

Similarly, the revision of REACH, the European chemicals regulation, offers the possibility to strictly regulate substances of concern, e.g., EDCs or polymers, for plastic production[40]. But even the REACH regulation only mentions women once in its legal text (Art. 1.4.1), when it clarifies that it may be necessary to identify different thresholds (Derived No-Effect Levels (DNEL)) "for specific vulnerable subgroups (e.g. children, pregnant women)".

Internationally, there have been efforts for years to minimise the obvious collateral damage caused by hazardous chemicals. However, in various UN processes, such as the Basel, Rotterdam, Stockholm and Minamata Conventions, only 53 chemicals have been regulated to date. In the meantime, however, the gender aspect has also found its way into these processes with gender focal points and gender action plans.

The current negotiation of a follow-up process to the Strategic Approach to International Chemicals Management (SAICM[41][42]), in which Germany holds the presidency, is an opportunity for us at WECF, together with other civil society organisations, to formulate demands for a healthy and toxic-free future for all. Our particular concern is the gender aspect.

Currently, supply chain legislation is being developed in several EU countries and a binding agreement on business and human rights is being negotiated in the United Nations.[43] The discussion on harmful chemicals, and also the particular burden they place on women, must be brought into these processes.

[40] ECHA. Understanding REACH. https://echa.europa.eu/regulations/reach/understanding-reach [16.11.2021].
[41] Strategic Approach to International Chemicals Management. www.saicm.org [16.11.2021].
[42] WECF. SAICM Beyond 2020. https://www.wecf.org/de/saicm-mehr-chemikaliensicherheit [16.11.2021].
[43] Deutsches Institut für Menschenrechte. UN-Treaty Prozess. https://www.institut-fuer-menschenrechte.de/themen/wirtschaft-und-menschenrechte/un-treaty-prozess [16.11.2021].

TAKE ACTION

1. Women in civil society

Women want "system change", i.e., fundamental structural change. Women - half of the world's population - possess knowledge and experience, and at the same time have specific needs. Individually and organised in professional associations, trade unions, civil society organisations, they can contribute decisively to overcoming chemical and waste problems: as trainers, decision-makers, educators. In many countries, women are underrepresented in key positions in politics, business, academia, media, and economic and political decision-making to drive necessary action to improve the management of toxic chemicals and waste and to incorporate the gender aspect. For example, according to UN Women, only 25 per cent of all national parliamentarians are women[44].

Women, especially in countries of the Global South, need equal access to education, resources, funding, social protection or training, particularly in the technical or economic fields. There is a high level of inequality in terms of exposure. There is a high level of inequality in terms of exposure, especially in low-income countries, where marginalised people or people living in poverty, are often exposed to toxic chemicals without protection. This maybe because they cannot afford protective clothing or do not understand safety instructions due to the lower literacy rate or have no possibility to avoid the use of toxic chemicals because they are dependent on the workplace. In a globalised world, this is also our responsibility.

2. Women as entrepreneurs

Entrepreneurs are responsible for the use of toxic chemicals in production and for the production of toxic -free products. Workers want and need a healthy workplace but are often unaware of the toxic chemical and substances they are exposed to every day at work.

According to a WHO report (2016), a very conservative estimate of two to eight percent of cancers are caused by chemical exposure in the workplace.[45] In addition, there are diseases of the respiratory tract, skin allergies, heart disease, nervous system disorders etc.

[44] UN Women (2021). Facts and figures: Women's leadership and political participation. https://www.unwomen.org/en/what-we-do/leadership-and-political-participation/facts-and-figures [03.11.2021].
[45] WHO (2016). The public health impact of chemicals: knowns and unknowns. https://www.who.int/publications/i/item/WHO-FWC-PHE-EPE-16.01-eng [14.11.2021].

As decision-makers in companies, women are responsible for the working conditions of their employees. A lack of knowledge about the properties of the materials used prevents adequate protective measures for the safe handling of toxic chemicals and substances in the workplace. This applies to production processes as well as to perceived 'safe' workplaces such as offices with toxic-free furnishing from carpets to printers. What is not taken into consideration are chemicals with little or no health and safety information, the effects that arise from the cumulative and combined interactions of these and other chemicals in the workplace. Responsible employers have a responsibility to eliminate or minimise hazards to a safe level. We urgently need labelling and full disclosure of chemicals in products along the whole life cycle, and information about negative effects of chemicals we are exposed to, e.g., in the workplace. Only the informed decisions can be taken concerning safety in the company.

3. Women as consumers

We take a multitude of purchasing decisions every day - for ourselves and for our families. Women are generally the main shoppers for everyday needs and choose which products to buy.

A large number of products are exclusively used by women, girls and people who menstruate such as menstrual health products and therefore, they are disproportionately exposed to toxic chemicals in these products. On average, a woman, girl, or person who menstruates uses 125 to 200 kilograms of these products in their lifetime. Some period products are made of up to 90 per cent crude oil plastics and may contain hazardous chemicals like, BPA, BPS, phthalates, parabens, dioxins, etc., which are linked among others to hormonal disruption and to many diseases.[46] Tampon applicators also may contain phthalates. This does not only effect our health, but single use disposable products also end up blocking sewage systems and buried in landfills, in our oceans and rivers or were burnt in incinerators.

Greater accessibility to safe, non-harmful reusable and single use disposable products and more information could help to improve the situation. In addition to ensuring accessibility and affordability, there is also a need to break down the stigma that surrounds menstruation in order to learn how to manage it in a healthier and sustainable way. The responsibility for the accumulation of waste enriched with pollutants and plastics cannot be placed on women, girls and people who menstruate.

Cosmetic and personal care products are a source of toxic chemicals, especially EDCs. Everyone who uses personal care products can be exposed but women in

[46] Women Voices. What's in Periods Products? Timeline of Chemical Testing: https://www.womensvoices.org/whats-in-period-products-timeline-of-chemical-testing/ [14.11.2021].

particular as they tend to use the most - including colour cosmetics. Women use up to 15 different products daily, and it is not uncommon for those to contain up to 100 chemicals, some of them harmful to health. Cleaning products containing harmful substances also effect women more than average due to the fact that in most countries women are still responsible for dealing with cleaning. All this exposure accurses without our knowledge. That is why consumers must be empowered to make informed purchasing decisions (and to call for consumer boycotts).

Without a full list of ingredients or meaningful labels, it is not possible to choose safe products that are not harmful to health. That is why we need labels: Even if the first priority is to ban toxic chemicals in products, mandatory, complete and generally understandable labels of ingredients in products such as period or DIY products, toys... etc. are necessary to make informed purchasing decisions. Except for food and cosmetics, there is no obligation to declare ingredients in the EU.

In addition, government education and information may provide more protection - especially for young people, pregnant women, and young mothers.

CHOOSE!

With informed and critical consumer behaviour, women can actively increase the pressure on production, trade and politics.

The EU chemicals regulation REACH grants consumers the right to know and ask for information from product suppliers about the presence of "Substances of very high concern" (SVHC) in their products. As of June 2021, this currently applies to 211 chemicals listed on the so-called REACH Candidate List[47]. The smartphone app Scan4Chem from the Federal Environment Agency is a useful tool for the enquiry.

[47] ECHA. Candidate List of substances of very high concern for Authorisation. https://echa.europa.eu/candidate-list-table [16.11.2021].

OUR DEMANDS ON POLITICS

Improved protection against hazardous substances affects us all - in Europe, globally and especially in countries of the Global South. The responsibility for the occupational health and safety in domestic and international companies and protecting the health of all employees must become a global human right.[48] As Germany is the No. 1 chemical producer in Europe and the No. 4 worldwide it has a special responsibility.[49]

1. Regulation

- The rights of women, inter* and trans*, especially their rights to political participation, in all aspects of decision-making, chemical production, use and disposal must be strengthened.
- Industry and other polluters must contribute to the costs of paying for damage caused by chemicals.(Polluter-Pays-Principle).
- Products we buy must be free of toxic chemicals. This is the responsibility of the manufacturers; politicians must create the legal framework for this.
- Risk assessment should set safety limits (if any) for those most vulnerable i.e., children and pregnant women.
- Gender aspects must be considered in risk assessments and integrated into national, European and global frameworks for chemicals and existing support programmes and funding allocation.

2. Prohibition

- Chemicals that are harmful or suspected of being harmful to human health and the environment must be subject to the strict implementation of the precautionary principle and, if necessary, banned.
- The use of toxic substances must be banned along the entire production chain, also with a view to a safe circular economy. Therefore, proper labelling is integral to ensure all toxic chemicals are listed, especially if products are going to be reused, recycled or disposed of.

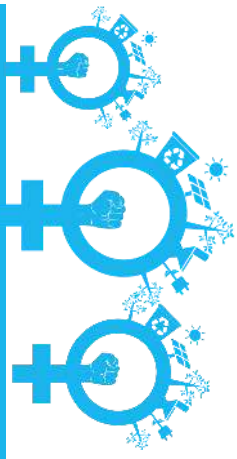
[48] United Nations Human Rights Council (2021). Joint Statement by UN human rights experts - UN human rights experts urge States to create a global level playing field for responsible business conduct: https://www.ohchr.org/EN/HRBodies/HRC/Pages/NewsDetail.aspx?NewsID=27672 [14.11.2021].
[49] Umwelt Bundesamt. Chemikalien. https://www.umweltbundesamt.de/themen/chemikalien#strap1 [14.11.2021].

3. Information

- To ensure the right to know, all ingredients, both in product development and in the final product, must be listed on the packaging in an understandable way.
- We need proactive education from the government on harmful chemicals in everyday life, especially for pregnant women and young parents.

EMPOWERMENT

We need a political system in which people's health and a healthy environment take precedence over economic interests. Politicians shape the framework conditions of our society and thus have an important responsibility for our environment and health. Their commitment to minimizing the use of hazardous chemicals is indispensable for a toxic-free future for all.



Further aspects and more detailed information on the topic of women and chemicals can be found in our publication Women and Chemicals. The impact of hazardous chemicals on women. A thought starter based on an expert's workshop and on our website wecf.org.

For more information on EDCs, see our info page on endocrine disruptors (DE).

WECF also provides information on how to avoid harmful chemicals via WECF's information homepage of the nesting programme.

Wen.

www.wen.org.uk

wecf

www.wecf.org

Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit

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