

The Gendered Effects of Toxics in The Environment

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An Introduction to Toxics and Gender Disparities

Toxic substances, encompassing a wide array of pollutants, chemicals, and hazards, present a pervasive threat to human health and well-being, permeating various aspects of our lives. These hazards not only jeopardize physical health but also extend their reach to mental, social, and environmental realms. The effects of toxic exposure are far from uniform, as they intricately intertwine with intersecting factors such as gender, race, age, and socioeconomic status. For instance, studies have shown that certain chemicals may affect men and women differently due to variations in metabolism, hormone levels, and even occupational exposure patterns. Moreover, marginalized communities, often disproportionately burdened with environmental hazards, face compounded risks stemming from systemic inequalities, lack of access to healthcare, and limited resources for relocation or remediation. Understanding the intricate dynamics at play within these diverse contexts is paramount in crafting nuanced and effective strategies to mitigate the multifaceted harms inflicted by toxic substances. This necessitates interdisciplinary collaboration, robust data collection, and targeted interventions that prioritize the needs and vulnerabilities of affected populations, fostering a more equitable and resilient society in the face of environmental challenges.

Toxic substances have gendered impacts on health and well-being in several ways. For example, toxins like lead and certain pesticides can disrupt the normal functioning of the reproductive system. Specifically, PFAS (per- and polyfluoroalkyl substances) exposure can interfere with hormone production and affect ovulation in women, potentially leading to

difficulties in conceiving.¹ Moreover, pesticides and other chemicals can also disrupt fetal development, leading to pregnancy loss.² Toxins can also increase the risk of preterm birth, which is when a baby is born before 37 weeks of gestation.³ Pesticides, for example, have been linked to an increased risk of preterm birth, presumably due to their effects on hormone levels and uterine function. Lastly, exposure to toxins such as lead during pregnancy can also result in low birth weight, which is associated with an increased risk of health problems for the baby. Toxins like lead can interfere with fetal growth and development, leading to lower birth weights.⁴

The issue of toxic substances and their dire gendered effects on the environment have been exacerbated by several factors such as poverty, politics, etc. However, the most exacerbating factor seems to be climate change. For example, climate change leads to more frequent and severe natural disasters, such as hurricanes, floods, and wildfires. These disasters often damage industrial facilities, release harmful chemicals into the environment, and damage infrastructure, which eventually leads to increased exposure to toxics for both men and women.⁵ However, women, especially those of color, bear the brunt of the effects of toxic exposure due to compounded societal issues such as discrimination, stigma, and other societal forces that limit their autonomy and ability to mitigate exposure as much as possible. Additionally, climate change natural disasters often lead to displacement and forced migration, which

¹ Exposure to Chemicals Found in Everyday Products Is Linked to Significantly Reduced Fertility | Mount Sinai - New York, MOUNT SINAI HEALTH SYSTEM (2023), <https://www.mountsinai.org/about/newsroom/2023/exposure-to-chemicals-found-in-everyday-products-is-linked-to-significantly-reduced-fertility>.

² The National Institute for Occupational Safety and Health, *CDC - Reproductive Health - - NIOSH Workplace Safety and Health Topic*, CENTERS FOR DISEASE CONTROL AND PREVENTION (2019), <https://www.cdc.gov/niosh/topics/repro/pesticides.html> (last visited Mar 29, 2024).

³ Emily Cooke, *Chemicals in plastics and cosmetics tied to preterm birth risk*, LIVE SCIENCE (2024), <https://www.livescience.com/health/fertility-pregnancy-birth/chemicals-in-plastics-and-cosmetics-tied-to-preterm-birth-risk> (last visited Mar 29, 2024).

⁴ World Health Organization, *Lead Poisoning and Health*, WORLD HEALTH ORGANIZATION (2023), <https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health> (last visited Mar 29, 2024).

⁵ Susan C. Anenberg & Casey Kalman, *Extreme Weather, Chemical Facilities, and Vulnerable Communities in the U.S. Gulf Coast: A Disastrous Combination*, 3 GEOHEALTH 122 (2019).

disproportionately affects women more than men.⁶ In many cases, people who are displaced do not end up in safer chemical environments. Instead, displacement can increase vulnerability to exposure to toxics, especially for women and marginalized groups who may face greater challenges in accessing safe living conditions, healthcare, and essential services.

Regression on the rights of women and other vulnerable groups such as the LGBTIQ+ community have also exacerbated the gendered effects of climate change. Restrictions on the education rights of women and LGBTIQ+ people, which exist in several countries, can limit their access to information about toxics and harmful substances, as well as access to healthcare services, including reproductive health services. Additionally, backlashes on the rights of these individuals can undermine efforts to achieve environmental justice, including the right to a safe and healthy environment, as women and members of the LGBTIQ+ community often occupy influential roles within the environmental justice movements.⁷ This can exacerbate existing environmental inequalities and disproportionately impact marginalized communities, including other women and LGBTIQ+ individuals, who may face greater exposure to toxics due to factors such as discriminatory land-use practices and lack of access to clean water and sanitation.⁷ There are also political implications of the regression of women and LGBTIQ+ rights. Restrictions on the rights of women and LGBTIQ+ people can limit their political participation and influence in decision-making processes related to environmental and health policies.⁸ This can hinder efforts

⁶ Rachel Yavinsky, *Women More Vulnerable Than Men to Climate Change*, PRB (2012), <https://www.prb.org/resources/women-more-vulnerable-than-men-to-climate-change/> (last visited Mar 29, 2024).

⁷ Karen Bell, *Bread and Roses: A Gender Perspective on Environmental Justice and Public Health*, 13 INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH 1005 (2016), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5086744/>.

⁸ Independent Expert on sexual orientation and gender identity, *Effective inclusion of LGBT persons*, OFFICE OF THE UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS, <https://www.ohchr.org/en/special-procedures/ie-sexual-orientation-and-gender-identity/effective-inclusion-lgbt-persons> (last visited Mar 29, 2024).

to advocate for stronger regulations and policies to protect against gendered harms from toxics and harmful substances.

Recommendations:

Governments can be very impactful in addressing the gendered effects of climate change on the environment. Specifically, governments should ban or restrict the use of certain chemicals in consumer products or industrial processes to protect women and girls from exposure.

Governments could also adopt gender-sensitive approaches in environmental impact assessments and risk assessments to better understand and address the specific vulnerabilities of women and girls to toxics.

Additionally, governments should provide training to medical, public health, and research practitioners on the gendered impacts of toxics and harmful substances. This includes training on how to identify and treat health issues related to toxic exposures that may disproportionately affect women and girls, such as reproductive disorders, breast cancer, and respiratory illnesses. Training will emphasize the importance of considering gender differences in susceptibility to toxics and the need for tailored interventions.

Lastly, governments should launch public awareness campaigns to educate the public, especially women and girls, about the risks of toxic exposures and how to reduce them. These campaigns should emphasize the importance of safe handling and disposal of toxic substances, as well as the need for regular health screenings to detect and prevent toxic-related health issues.