PAX is a Netherlands-based non-governmental organization that works together with involved civilians and partners in areas of war to protect human security, to prevent and end armed violence, and to build peace with justice.

The Center for Constitutional Rights (CCR) is a United States-based legal and educational non-profit organization dedicated to advancing and protecting the rights guaranteed by the United States Constitution and the Universal Declaration of Human Rights.

(1) Studies in various countries have found hundreds of toxic chemicals from various sources in newborn babies and children, as well as mothers who are pregnant or breastfeeding. Are you aware of any mechanisms to monitor children’s exposure to hazardous substances nationally or internationally? If so, please summarize the most recent results and advise whether such information is made publicly available, where it may be accessed and how it is used to inform decisions.

Iraq

Research and documentation of the health effects of toxic munitions in Iraq has in fact become politicized to the degree that agency reports, such as the report conducted by the Iraq Ministry of Health in partnership with the World Health Organization (WHO), diminish, rather than report, the effects of toxins on children and on civilians. Former WHO staff members and scientists specializing in toxicology have spoken out against this practice. Nonetheless, individual toxicologists have completed studies that suggest that birth defects have increased dramatically among children born within areas of conflict in Iraq. Local NGOs and civil society organizations have also documented severe health effects among children. Additionally, the issue of transparency has become a barrier to improved studies of the effects of toxic munitions. For example, the U.S. continues to refuse to release targeting

---


data regarding the use of depleted uranium munitions, despite the fact that organizations have sought this information via domestic legal mechanisms.\(^5\)

With the absence of institutional support for monitoring and treatment of birth defects and health issues among children, Iraqi NGOs and civil society organizations have taken on the work of providing care by running local clinics and fundraising for necessary medical equipment.\(^6\)

**Syria**

While Syria’s population is suffering from the humanitarian consequences of the civil war, there are grave concerns regarding environmental exposure of children to hazardous substances as a result of this conflict. In particular, there have been reports of children involved in Do-It-Yourself munitions factories, exposing them to toxic munitions constituents such as TNT, PBX, RDX, and heavy metals.

Another area of concern is the increase in civilian-operated makeshift oil refineries, often involving children and exposing them to toxic substances. Anecdotal evidence demonstrates that they are suffering from severe health effects.\(^7\)

(2) Childhood exposure to hazardous substances can produce adverse effects, including adverse health impacts, which may not manifest for years if not decades after exposure. Please provide your views on good practices by Governments to assess the risks of childhood exposure to hazardous substances, and/or deficiencies in current practices. Answers may focus on systems present at the national, regional and/or the global level. You may wish to consider factors such as: sensitive periods of development; latency periods between exposure and manifestation of health impacts; the impacts of exposure to several different hazardous substances (combination effects); and to what extent a rights-based approach informs risk assessment and mitigation.

Given the documented health effects of toxic exposure in conflict zones, a reasonable practice would be for nations responsible for the deployment of munitions to engage in research regarding the effects of those munitions on civilians both immediately and in the long-term, in order to better assess what care might be needed for individuals who have been exposed to these materials. Governments should also conduct testing of the soil, water, and other elements of the natural environment in regions in which munitions were used to better understand how the toxic materials might transfer into food systems and amplify exposure.

(3) The principle of the best interests of the child (CRC Article 3) is a guiding principle that should be taken into consideration in all matters concerning the rights of the child, including environmental decision-making. Please provide information regarding specific measures either nationally or internationally to prevent childhood exposure to hazardous substances,

---


Iraq

In the aftermath of both the 1991 and 2003 wars in Iraq, concerns were raised over exposure of children to toxic remnants of war, in particular munitions residue such as depleted uranium and other hazardous substances present in military scrap metal. Destroyed tanks, armoured vehicles, and other military equipment were often repurposed as playgrounds for children, thereby potentially exposing them to hazardous materials. Anecdotal reports indicated an increase in congenital birth defects and cancer among civilians in conflict-affected areas, linking the increase to the exposure to hazardous substances, though substantial and thorough research has never been undertaken to establish a causal link.  

Problems with exposure to toxic remnants of war were identified in the United Nations Environment Programme (UNEP) 2005 Iraq study, which noted in particular that children were a vulnerable group that can be exposed to a range of conflict-originated hazardous materials such as PCBs, depleted uranium, and cyanide.

Though research on depleted uranium has been inconclusive as to its health effects, concerns among Iraqi health specialists, members of civil society, and local communities need to be taken seriously and warrant a committed response from the international community to clean up affected sites, considering the toxic and radioactive nature of this heavy metal.

The Iraqi government has addressed these concerns with specific measures in its 2014 State of Environment and Outlook Report, drafted with UNEP and the United Nations Development Programme, which outlined measures to monitor and evaluate radioactively contaminated sites and wastefill and to monitor individual exposure.

Internationally, WHO noted in its report to the UN Secretary-General that:

> Risk communication campaigns may be needed in the affected areas to educate local populations on potential hazards and risks for their health. This is especially important in areas where scrap metal is collected and melted for sale. This may impose a significant risk to health of people and especially children due to the inhalation of toxic vapours resulting from metal melting.

---


National authorities for the affected post-conflict zones should be advised to take action to control and regulate such activities in local communities.11

(4) Often the need to establish causation is an insurmountable obstacle for victims of hazardous substances, in particular, for children. Please describe any positive efforts undertaken to remove causation as an obstacle for children who are, or may have been exposed to, toxic chemicals during development, but do not exhibit adverse health impacts such as cancer, developmental impacts, or other non-communicable diseases until much later in life. Such examples may include increasing the statute of limitation for litigation or reducing the burden of proof on victims to establish causation.

Unfortunately, without comprehensive research studies providing better assessment of the effects of exposure to toxic materials in the short- and long-term, in addition to the lack of publicly available information about the locations where munitions were used and which weapons were engaged, it is difficult for individuals experiencing health effects to establish causation. We are not aware of any positive developments in this regard.

(5) Please describe any specific judicial and non-judicial processes to hold perpetrators accountable for hazardous substance-related claims of adverse impacts on health and other rights of the child. Please provide the most relevant court cases on childhood exposure to hazardous substances and judicial attempts to ensure an effective and timely remedy, including both domestic and transnational cases as relevant.

We are not aware of any relevant ongoing judicial or non-judicial processes related to the rights of the child. One case, on behalf of military personnel and individual contractors who were exposed to toxins and carcinogenic materials while serving and working in Iraq and Afghanistan, is proceeding against companies who contracted with the U.S. military to provide waste disposal and water treatment services on military bases. In particular, the military contractor companies utilized open-air burn pits to dispose of waste on the sites, exposing the plaintiffs to harmful toxins that they allege contributed to subsequent health issues. Parties are currently engaged in discovery in the United States District Court for the District of Maryland.12 However, the case does not examine the effects of the burn pits on children residing near the military bases.

(6) Please outlines what steps could be taken by Governments and businesses to further assess, monitor, prevent and mitigate children’s exposure to hazardous substances.

Governments and relevant international UN, humanitarian, and environmental organizations should work towards setting up a monitoring and identification system during and after armed conflict. Such a system would support immediate identification of potential environmental hotspots that can present an acute or chronic health risk to the civilian population. Concerns

12 In re KBR, Inc. Burn Pit Litig., 744 F.3d 326 (4th Cir. 2014).
over the environmental impact of conflict on health and the environment have been addressed by UN agencies, humanitarian organisations, and civil society.\(^\text{13}\)

In addition to monitoring and identification, governments and international agencies must engage in comprehensive research to better understand the effects on civilians, in particular children, of the use of certain munitions in conflict zones. Alongside further research, governments must provide funding for full remediation of locations where toxic weapons were used as well as for comprehensive medical treatment and compensation for individuals experiencing the effects of exposure to these materials.

(7) Please provide any additional information you believe would be useful to understand efforts made and challenges confronting Government and businesses in their efforts to protect the rights of the child from hazardous substances.

Governments must understand their responsibilities following engagement in conflict and occupation. International systems must make robust efforts to encourage governments to engage in thorough reparations processes that include reparations for health effects in the aftermath of military engagements.

\(^\text{13}\) See Thomas Curran, *Environmental Dimensions of Sustainable Recovery: Learning From Post-Conflict and Disaster Response*, NEW SECURITY BEAT (July 16, 2014),