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**Promotion and protection of all human rights, civil,
political, economic, social and cultural rights,
including the right to development**

Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes

Note by the Secretariat

In recent years, numerous cases have called into question the adequacy of State measures to protect human rights from toxics, in particular children's rights.

The intoxication of children with lead-contaminated drinking water raised questions of race, poverty and discrimination. The deadly impact of an untested consumer product on pregnant women and children laid bare the magnitude to which industries fail to conduct reasonable amounts of due diligence, and the failure of States to require basic information on health and safety. Poisonings around the world by pesticides, extractive industries and industrial emissions to air and water — and their crippling impacts on the health, development and life of children — reinforce the need for strong measures to protect those most at risk.

However, the problem is not limited to poisoning. Childhood exposure is a systemic problem everywhere. All around the world, children are born with dozens, perhaps hundreds, of hazardous substances in their bodies. This is leading to what doctors are referring to as a “silent pandemic” of disease and disability affecting millions during childhood and later in life. For a number of reasons, children are left without access to an effective remedy or justice for the harms of toxics and pollution, which enables perpetrators to remain unaccountable. Prevention of exposure is the best remedy. The best interests of the child must be a primary consideration of States in protecting children's rights to life, survival and development, physical integrity, health, being free from the worst forms of child labour, and also to safe food, water and housing, and other rights implicated by toxics and pollution that are enshrined in the Convention on the Rights of the Child. States have a human rights obligation and businesses a corresponding responsibility to prevent childhood exposure to toxic chemicals and pollution.

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Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes

Contents

	<i>Page</i>
I. Introduction	3
II. The “silent pandemic”	3
III. State obligation to prevent childhood exposure	7
A. Best interests of the child	7
B. Right to be heard	7
C. Right to life, survival and development	8
D. Right to physical and mental integrity	8
E. Right to an effective remedy	10
F. Right to the highest attainable standard of health	11
G. Right to a healthy environment	12
H. Right to an adequate standard of living, including food, water and adequate housing	12
I. Right to non-discrimination	12
J. Right to be free from the worst forms of child labour	13
K. Right to information	13
IV. Business responsibility to prevent exposure by children to toxics	14
A. A framework for solutions	15
B. Due diligence by businesses to prevent childhood exposure	16
C. Responsibility to prevent exposure through businesses’ activities	17
D. Responsibility through business relationships	19
E. Responsibility to ensure an effective remedy	20
V. Future work	21
VI. Conclusions and recommendations	21

I. Introduction

1. In the present report, the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes examines the impacts of toxics and pollution on children's rights, and the obligations of States and responsibilities of businesses in preventing exposure by children to such substances, in accordance with Human Rights Council resolution 27/23. The Special Rapporteur has held a broad consultative process with States, international organizations, civil society, national human rights institutions and other stakeholders. He is grateful for all the responses to a questionnaire on the subject.¹

II. The “silent pandemic”

2. Children everywhere are suffering from the impacts of toxics and pollution. These impacts materialize in different forms, at various stages of life, and from a myriad of routes of exposure. Children have higher levels of exposure and are also more sensitive to it, which makes them more vulnerable than adults. Such impacts can be irreversible and can even be passed down from one generation to the next.²

3. The World Health Organization (WHO) estimates that over 1,700,000 children under the age of 5 died in 2012 from modifiable environmental factors, such as air pollution (over 500,000 deaths) and water contamination.³ This figure accounts for 26 per cent of the deaths of children under 5 years of age.

4. However, the 1,700,000 deaths are only the tip of the iceberg. There is a “silent pandemic”⁴ of disability and disease associated with exposure to toxics and pollution during childhood, many of which do not manifest themselves for years or decades. Child victims may die prematurely after the age of 5 or be debilitated throughout their lives. Toxic chemicals that interfere with the normal expression of genes, brain development, the function of hormones and other processes necessary for children to grow into healthy adults pervade our economies and persist in our environment.⁵

5. Children are born “pre-polluted”⁶ with numerous contaminants that impact on their rights to survival and development, to be heard, to physical integrity and to the highest attainable standard of health, to name but a few. Representative studies have measured at least dozens,⁷ if not hundreds,⁸ of toxic and otherwise hazardous chemicals in children

¹ All submissions are available from www.ohchr.org/EN/Issues/Environment/ToxicWastes/Pages/TheRightsoftheChildandHazardousSubstancesandWastes.aspx.

² Committee on the Rights of the Child, general comment No. 16 (2013) on State obligations regarding the impact of the business sector on children's rights, para. 4 (a).

³ WHO, *Preventing Disease through Healthy Environments* (2016).

⁴ Philippe Grandjean and Philip J. Landrigan, “Neurobehavioural effects of developmental toxicity”, *The Lancet Neurology*, vol. 13, issue 3.

⁵ See, for example, United Nations Environment Programme (UNEP) and WHO, *State of the Science of Endocrine Disrupting Chemicals 2012*.

⁶ National Cancer Institute (United States), “Reducing environmental cancer risk” (2010).

⁷ “International Federation of Gynecology and Obstetrics opinion on reproductive health impacts of exposure to toxic environmental chemicals”, *International Journal of Gynecology and Obstetrics*, vol. 131, issue 3.

⁸ Environmental Working Group, “Body burden: the pollution in newborns”.

before birth through their mother's exposure. Exposure to toxics and pollution (toxics)⁹ continues incessantly after birth. While the studies primarily come from certain countries, every child is a victim of this "toxic trespass", in varying degrees.

6. Children in low-income, minority, indigenous and marginalized communities are at more risk, as exposure levels in such communities are often higher and are exacerbated by malnutrition, with the adverse effects inadequately monitored. Hence, questions arise of "environmental racism" and "environmental injustice" that undermine human dignity, equality and non-discrimination. The situation regarding childhood exposure in developing countries is already known to be grave, however the actual magnitude of impacts is still insufficiently measured.¹⁰

7. This assault on children's rights is largely invisible. Toxics contaminate air, water, food, playgrounds, houses, schools and other sources of exposure, contrary to the child's right to adequate housing and safe food, water and play, producing deadly or lifelong impacts on mental and physical health. Missing information about who manufactures, sells, uses, trades in, releases or disposes of hazardous substances is compounded by information deficits on the health risks and impacts of exposure,¹¹ enabling perpetrators to evade accountability.

8. Many factors contribute to children being exposed around the world. Policies that prioritize businesses' instead of children's best interests, gaps in legislation,¹² outrageous failures to enforce existing laws,¹³ the lack of capacity for monitoring and oversight, corporate misinformation campaigns,¹⁴ fragmented governance¹⁵ and disengaged health and labour ministries¹⁶ are but a few of the problems that leave children in both the wealthiest and the poorest countries bearing the brunt of an assault from toxic chemicals and pollution.

9. Cancer now figures among the leading causes of morbidity and mortality worldwide, with approximately 14 million new cases of cancer and 8.2 million cancer-related deaths in 2012.¹⁷ The incidence of childhood cancer has risen during periods of rapid increase in the use of industrial chemicals; this increased incidence cannot be explained by genetics or lifestyle choices alone.¹⁸ The incidence of testicular, breast and other cancers that may be triggered by childhood exposure to toxics has also increased in recent decades. Six hundred thousand children develop irreversible intellectual disabilities every year, from lead alone.¹⁹ Beyond lead, an untold number of neurotoxicants are believed to be eroding intelligence, and contributing to developmental abnormalities and behavioural disorders. Type 2 diabetes, which was previously seen only in adults,²⁰ is predicted to be the seventh leading

⁹ In the present report, "toxics" refers to all types of hazardous substances and wastes that may constitute a threat to children, including pollution, toxic chemicals, radioactive substances, explosives, and others.

¹⁰ A/HRC/30/40.

¹¹ Danish Environmental Protection Agency, *Exposure of Pregnant Consumers to Suspected Endocrine Disruptors*, p. 7; UNEP, *Global Chemicals Outlook* (2012); and A/HRC/30/40.

¹² Submissions from Uzbekistan (noting the need for a clear legal framework) and Loyola University Chicago.

¹³ See joint letter of allegation (footnote 13 above).

¹⁴ See, for example, www.chicagotribune.com/ct-met-citizens-for-fire-safety-20120902-story.html.

¹⁵ Submission from International Service for Human Rights, p. 5.

¹⁶ A/HRC/30/40/Add.1, A/HRC/33/41/Add.1 and A/HRC/33/41/Add.2.

¹⁷ WHO, cancer fact sheet, No. 297 (2015).

¹⁸ National Cancer Institute (United States of America), *Surveillance, Epidemiology and End Results programme*, monograph (1999).

¹⁹ WHO, lead poisoning and health fact sheet, No. 379 (2014).

²⁰ WHO, diabetes fact sheet, No. 312 (2016).

cause of death of children by 2030. Asthma is one of the most common chronic diseases among children, with rates rising by 50 per cent every decade on average.²¹ Sperm counts and testosterone levels have fallen dramatically among men since the 1940s, suspected to be linked to endocrine (hormone)-disrupting chemicals.²² These are some of the health impacts linked with exposure to toxic chemicals and pollution.

10. Some States have recognized these grave risks and are prioritizing the issue of childhood exposure to toxics. However, the issue is often reduced to a question of cost versus benefit, with human rights considerations divorced from and inconsequential to the equation. Prevention measures taken by States are increasingly outpaced by scientific evidence of grave impacts, the rapid acceleration in toxic chemical production and use²³ and inadequate chemical and waste treaties to protect children.²⁴ With the melting of arctic ice as a result of global warming, toxics released by past generations but sequestered are increasingly being liberated and are entering the food chain and water supplies.²⁵

11. There is clear evidence that more precaution is warranted globally in protecting children from exposure.²⁶ Despite tests being available to identify chemicals that may affect the health of children, tens of thousands of industrial chemicals have not been tested for such impacts. Furthermore, regulators assess the likelihood of harm from toxics on the basis of the exposure of an average adult to a single substance, not on the basis of real-life conditions, as children are exposed to multiple substances (that may result in combination effects) during sensitive periods of childhood development.²⁷ Businesses implicated insist that exposure levels are too low to produce adverse impacts, without providing evidence of safety for children who may be exposed to multiple toxics during their development.

12. Most children whose lives are irreversibly or fatally altered by toxics and pollution have no access to an effective remedy. The burden is placed on children to prove that a toxic chemical was the cause of their injuries, not on the businesses that profit from these activities to prove that they do no harm.²⁸ The evidentiary burden is noted to be “very effective against the victims”.²⁹ Even unquestionably toxic sites of contamination, whether from the dirty legacy of businesses or the toxic remnants of war, escape remediation and accountability that could prevent future human rights violations.

13. The economic costs borne by governments and the public, externalized by businesses to a large degree, are estimated to range from hundreds of billions to trillions of United States dollars for selected toxics.³⁰ The use of lead in paint is estimated to cost low- and middle-income countries \$1 trillion in health-care expenses, lost productivity and other

²¹ WHO, bronchial asthma fact sheet, No. 206 (2015).

²² Submission from Denmark.

²³ UNEP, *Global Chemicals Outlook*.

²⁴ Less than thirty out of thousands of hazardous substances are regulated from production to final disposal under global treaties on chemicals and wastes.

²⁵ UNEP and Arctic Monitoring and Assessment Programme, “Climate change and POPs: predicting the impacts” (2011).

²⁶ Submissions from Italy and Denmark. See also European Commission Scientific Committees, opinion on toxicity and assessment of chemical mixtures (2011).

²⁷ European Commission Scientific Committees, opinion on toxicity. Submissions from Colombia and Denmark.

²⁸ Submissions from Denmark (noting that “the issue of causation for human health effects as a result of chemicals exposures is extremely difficult to establish, and only exists from sporadic knowledge following chemical accidents, occupational exposures and for some pharmaceutical uses”), from Sweden and from PAX and the Center for Constitutional Rights.

²⁹ Submission from Senegal.

³⁰ UNEP, *Costs of Inaction on the Sound Management of Chemicals*.

economic costs.³¹ Endocrine-disrupting chemicals in food and cosmetics and from other sources are estimated to burden the European Union with over €100 billion in economic costs per year, and there is inadequate information to estimate the costs externalized on developing countries.³² Hazardous pesticides are estimated to cost sub-Saharan Africa more than the official development assistance it receives per year.³³

14. The problem is increasingly criminal in nature. The illegal disposal of waste across borders is an ongoing problem.³⁴ The International Criminal Police Organization (INTERPOL) notes that between 60 and 90 per cent of electronic waste is disposed of illegally.³⁵ The illegal use of banned pesticides and toxic chemicals, as well as of counterfeit products, continues to be a major problem globally, a serious threat to children of the workers affected, to communities and to consumers. Recent estimates show that the global market for illegal pesticides may have doubled between 2007 and 2011.³⁶ And yet, human rights defenders seeking to protect children from further exposure to toxics are harassed, imprisoned or even killed.³⁷

15. Tens of millions of children are engaged in hazardous work, where they are often exposed to toxic chemicals.³⁸ For example, children around the world continue to work in artisanal and small-scale mines, where they are exposed to mercury and other toxic chemicals.³⁹ The United Nations Children's Fund (UNICEF) has estimated that 40,000 children toil in mines, extracting a known carcinogen (cobalt) to be used in cell phones, laptop computers and cars by companies that undoubtedly have resources for human rights due diligence.⁴⁰ Children working in agriculture continue to use hazardous pesticides despite the bans on such products in several countries, raising questions of double standards and discrimination.

16. Toxic remnants of war inflict pain and suffering on communities long after the conflicts have concluded. In Iraq, independent studies suggest that birth defects have increased dramatically among children in conflict areas, who in many cases do not have access to medical care and treatment.⁴¹ Unexploded munitions, landmines, chemical weapons, pesticides, and other hazardous remnants of war and conflict persist worldwide.⁴²

³¹ Teresa Attina and Leonardo Trasande, "Economic costs of childhood lead exposure in low- and middle-income countries", *Environmental Health Perspectives, Children's Health*, vol. 121, issue 9.

³² Leonardo Trasande and others, "Estimating burden and disease costs of exposure to endocrine-disrupting chemicals in the European Union", *Journal of Clinical Endocrinology and Metabolism*, vol. 100, No. 4.

³³ UNEP, *Global Chemicals Outlook*.

³⁴ UNEP, *Waste Crimes – Waste Risks: Gaps in Meeting the Global Waste Challenge* (2015).

³⁵ Ibid. p.7; and INTERPOL, *Countering WEEE Illegal Trade Summary Report* (2015).

³⁶ From 5-7 per cent to 10 per cent, according to OECD estimates; see also the United Nations Interregional Crime and Justice Research Institute report entitled "Illicit pesticides, organized crime and supply chain integrity", p. 11.

³⁷ Submission from International Service for Human Rights; and Global Witness, *On Dangerous Ground* (2016).

³⁸ Submissions from Italy and Peru; and International Labour Organization (ILO), *Children in Hazardous Work: What We Know, What We Need To Do* (2011).

³⁹ Submission from Human Rights Watch.

⁴⁰ Amnesty International, "This is what we die for" (2016).

⁴¹ Submission from PAX and the Center for Constitutional Rights; and UNEP and Environmental Law Institute report entitled "Assessing and restoring natural resources in post-conflict peacebuilding" (2013).

⁴² Submission from Colombia.

III. State obligation to prevent childhood exposure

17. Four principles guide the interpretation and implementation of the Convention on the Rights of the Child. States must take these into consideration when designing, implementing and enforcing public health, environmental and labour laws to protect children's rights from toxics and pollution.

18. The Convention on the Rights of the Child makes it clear that States have an obligation to prevent exposure to toxics by children, as well as by women of reproductive age.⁴³

A. Best interests of the child

19. The best interests of the child — including future generations who will inherit the toxic legacy of previous generations — must be a “primary consideration” in the interpretation and implementation of the rights enshrined in the Convention on the Rights of the Child (art. 3, para. 1). States parties must integrate and apply this guiding principle and substantive right “in all actions”, including legislative, administrative and judicial proceedings that relate to toxic substances or pollution, bearing in mind children's unique vulnerabilities to toxics, pollution, and known and unknown risks factors. States should be in a position to explain and be held accountable for how they respected the right of present and future children to have their best interests considered in decision-making, including how this right has been weighed against other considerations.⁴⁴

20. States must pursue the “full implementation” of the child's right to health, and must be guided by the right of the child to have his or her best interests taken into account as a “primary consideration” when considering “the dangers and risks of environmental pollution” to health.⁴⁵

21. The best interests of the child are best served by preventing exposure to toxic chemicals and pollution, and taking precautionary measures with respect to those substances whose risks are not well understood. Unfortunately, industrial competitiveness, risk management options and cost-benefit considerations are prioritized over the best interests of the child.

B. Right to be heard

22. The right to be heard is a guiding principle of the Convention on the Rights of the Child, and is inextricable from public health and environmental threats such as toxics and pollution.⁴⁶ The right is closely linked with the question of consent, and with the phenomenon of children being born “pre-polluted”.

⁴³ Committee on the Rights of the Child, general comment No. 15 (2013) on the right of the child to the enjoyment of the highest attainable standard of health, para. 49. The Special Rapporteur notes increasing evidence of the possibility that exposure by males to toxic chemicals can affect the health of their children.

⁴⁴ Committee on the Rights of the Child, general comment No. 14 (2013) on the right of the child to have his or her best interests taken as a primary consideration.

⁴⁵ Convention on the Rights of the Child, art. 24.

⁴⁶ Committee on the Rights of the Child, general comment No. 12 (2009) on the right of the child to be heard, para. 87.

23. Every child capable of forming his or her own views has the right to be heard and to influence decision-making processes that may be relevant in his or her life.⁴⁷ Such views are to be given due weight in accordance with the age and maturity of the child.

24. Critical from a human rights perspective is that children are exposed to harmful substances before they are capable of forming their own opinions, and this is in the period in their lives when they are most at risk from toxic exposures that can lead to the development of associated diseases, disorders and illnesses.

25. When children are capable of forming their views, they are not being heard on important decisions related to toxics and pollution. Article 12 is the key participation right in the Convention on the Rights of the Child, as it recognizes the child as a full human being with the ability to participate in society and in decisions about his or her well-being.

26. While parents and guardians have primary responsibility for the upbringing and development of the child,⁴⁸ they are, for many reasons, powerless to protect children from exposure to toxics from a myriad of unavoidable sources. States must prevent childhood exposure, in recognition of the right of present and future generations to be heard.

C. Right to life, survival and development

27. Every child has the inherent right to life and States are duty-bound to ensure to the maximum extent possible the survival and development of the child.⁴⁹ A holistic concept of childhood development should include consideration of factors such as freedom from exposure to toxics and pollution, as such exposure can have an adverse impact on the child's physical, mental, psychological and social development.⁵⁰ The child's right to life, survival and development is contingent upon the realization of the rights to health, to food, water and adequate housing, and to a healthy environment, as well as to physical integrity and to information.

28. Exposure to toxic chemicals during crucial periods of development can affect the way in which genes are expressed, leading to deadly or adverse developmental outcomes for some children. Often these are not seen at birth, when a seemingly healthy child may in fact have suffered disruptions to his development that may lead to a higher probability of diseases and disabilities later in life, and in many cases premature death. States must prevent childhood exposure to toxics to protect the right of all children to life, survival and development.

D. Right to physical and mental integrity

29. The right to physical and mental integrity is well established under international human rights law.⁵¹ This right encapsulates the right of each human being, including children, to autonomy and self-determination over his or her own body. It considers a non-consensual physical or mental intrusion against the body to be a human rights violation.

⁴⁷ Convention on the Rights of the Child, art. 12; see also A/HRC/25/35.

⁴⁸ Convention on the Rights of the Child, art. 18.

⁴⁹ *Ibid.*, art. 6.

⁵⁰ Committee on the Rights of the Child, general comment No. 5 (2003) on general measures of implementation.

⁵¹ Committee on the Rights of the Child, general comment No. 13 (2011) on the right of the child to freedom from all forms of violence.

30. Childhood exposure to toxics occurs without the child's (or parent's) consent. Even if a parent were somehow able to identify every product and possible source of exposure to toxics that might harm their child, they are often powerless to do anything about it, particularly when it involves food, water or air pollution. Young children lack the physical and/or mental ability to vocalize opinions and understand the dangers and potential consequences of toxics until long after harm has been inflicted. This, for example, is why children are not allowed to buy cigarettes or alcohol until a certain age in many countries and are prohibited from working in hazardous conditions.

31. Both the International Covenant on Civil and Political Rights and the Convention on the Rights of the Child protect the physical and mental integrity of children. States must protect children from "all forms of physical or mental violence, injury or abuse, neglect or negligent treatment".⁵² The Convention on the Rights of the Child (art. 37) and the International Covenant on Civil and Political Rights (art. 7) require States to protect children from torture and other cruel, inhuman or degrading treatment or punishment.⁵³ All regional human rights instruments recognize the right to physical integrity.⁵⁴

32. The right to physical integrity is implicated by actions or inactions that give rise to contact, not by whether the contact resulted in adverse health impacts. For example: "The common law over the centuries has always protected individuals from unwanted intentional contacts with their person... The common law action of battery developed out of the law's recognition of an individual's interest in personal autonomy and bodily integrity — that is, the right of a person to participate in and make decisions about his own body."⁵⁵

33. Under international law, no derogation is allowed from the right to physical integrity.⁵⁶ Under the American Convention on Human Rights, the right of respect for physical integrity is explicitly non-derogable.⁵⁷ Courts have interpreted strictly the right to physical integrity, such that even the medical, life-saving exposure to hazardous substances is a violation of a child's right to physical integrity if without consent. Children have an unqualified right to effective prevention and protection from violence.⁵⁸ No form of violence against children is justifiable and all forms of violence against children are preventable.⁵⁹

34. While the right to physical and mental integrity has traditionally been raised in connection with incarceration, interrogation and medical experimentation, this right is implicated by human exposure to toxics. Although acute poisonings and high levels of intoxication present an unquestionable violation of the right to physical integrity, this right also extends to chronic, low-level exposure to toxic substances.

35. The pervasive intrusion of toxics, a phenomenon and legal argument also known as "toxic trespass", raises the question of whether States have taken the right of physical and mental integrity into account in the design of laws and policies. Policies are typically

⁵² Convention on the Rights of the Child, art. 19; and Committee on the Rights of the Child, general comment No. 4 (2003) on adolescent health and development in the context of the Convention, para. 8.

⁵³ Human Rights Committee, general comment No. 20 (1992) on article 7, paras. 2 and 5. See also Committee on the Rights of the Child, general comment No. 4, para. 8.

⁵⁴ American Convention on Human Rights, art. 5 (1); Charter of Fundamental Rights of the European Union, art. 3; and African Charter on Human and Peoples' Rights, art. 4.

⁵⁵ See *People v. Medina*, 705 P 2d 961 (1985).

⁵⁶ Human Rights Committee, general comment No. 20, para. 3.

⁵⁷ American Convention on Human Rights, art. 27.

⁵⁸ See A/61/299, para. 6.

⁵⁹ *Ibid.*, para. 1.

geared towards the risk that accompanies exposure, rather than preventing exposure at the outset.

36. Violence — likewise, torture and cruel, inhuman or degrading treatment — can take many different forms.⁶⁰ Incessant exposure to toxics and pollution can be violent, torturous, degrading, cruel and inhumane. Parents of children exposed incessantly to pollution or toxic chemicals bear an enormous level of psychological stress and anxiety, worrying what the impacts may be in the future. Children who live in or around locations of widespread pollution or contamination may be subject to painful harassment and discrimination.⁶¹

37. States have an obligation to ensure that laws and policies do not permit the production, use, emission or disposal of hazardous substances in a manner that results in children being exposed to them.

38. States must also take active measures to ensure that children are not exposed to chemical substances with unknown properties. States must ensure that individual substances and combinations of substances are well characterized as safe before children are exposed, in order to protect the child from “scientific experimentation”⁶² and actions or inactions not in their best interests.

E. Right to an effective remedy

39. States have a duty to ensure that children have access to an effective remedy for violations of their rights, including those due to exposure to toxics.⁶³ To be effective, remedies should be appropriately adapted for children, taking into account their special needs, risks, and evolving development and capacities.⁶⁴ An effective remedy includes (a) the right to equal and effective access to justice; (b) effective and prompt reparation for harm suffered; and (c) access to relevant information concerning violations and reparation mechanism. This includes, inter alia, compensation and satisfaction, rehabilitation and guarantees of non-repetition.⁶⁵

40. The right to an effective remedy requires the remediation of contaminated sites, the cessation of actions or inactions that give rise to impacts, the provision of health care, and the dissemination of information to ensure that parents and children know how to prevent recurrence. Timely reparation to prevent recurrence is essential.⁶⁶

41. Prevention is the best and often only means of ensuring access to an effective remedy. Children exposed are at risk of life-long impacts, many of which are irreversible, for example the impacts on brain function from lead. The elevated risks of cancer, diabetes, respiratory problems, behavioural disorders, hormonal dysfunctions and other health impacts linked to the hundreds of toxic chemicals children are exposed to cannot be erased. Even if medical treatments are available, the mental suffering that accompanies a child’s exposure to toxics cannot be remedied.

⁶⁰ WHO, *World Report on Violence and Health* (2002); and A/HRC/22/53.

⁶¹ Studs Terkel, *The Good War* (1984), p. 542.

⁶² International Covenant on Civil and Political Rights, art. 7.

⁶³ Committee on the Rights of the Child, general comments No. 5 and No. 16; and International Covenant on Civil and Political Rights, art. 2 (3).

⁶⁴ Human Rights Committee, general comment No. 31 (2004) on the nature of the general legal obligation imposed on States parties to the Covenant, para. 15; see also Committee on the Rights of the Child, general comment No. 16, para. 31.

⁶⁵ See General Assembly resolution 60/147, and Convention on the Rights of the Child, art. 39.

⁶⁶ Committee on the Rights of the Child, general comment No. 16, para. 31.

42. The violation of a child's physical integrity from toxics cannot be undone. Causation presents a largely insurmountable obstacle to remedy, with numerous variables and missing information enabling perpetrators to escape accountability. As information is made available, the hazardous substance exposure levels previously considered "safe" continue to fall and increasing numbers of industrial chemicals and pesticides are identified as hazardous — helping to prevent harms in the future, but of far less use to child victims of the past in realizing their right to an effective remedy. Businesses that have left the present generation with contamination are often no longer in existence, financially unable or unwilling to pay for complete remediation.

43. States have a duty to prevent recurrence of human rights violations. The inadequate emphasis on prevention and precaution, in favour of an emphasis on risk management without adequate information on which to calculate the risks, has failed to protect human rights, including children's rights.

F. Right to the highest attainable standard of health

44. States have a duty to protect and realize the right of the child to the "highest attainable standard of health".⁶⁷ This includes measures to prevent disease and other health impacts, as well as to ensure access to health care for treatment.

45. States have a duty to ensure the social determinants of health, including safe food, water, and housing, as well as healthy occupational and environmental conditions, for children.⁶⁸ Moreover, the rights to food, water and adequate housing are inextricably related to the right to the highest attainable standard of health, and should also be seen in conjunction with the rights to human dignity, life, survival and development, among others.⁶⁹

46. The best interests of the child in attaining his or her right to the highest standard of health require the prevention of exposure to toxic chemicals and pollution.⁷⁰ While the magnitude depends on the age of the child, as well as the level and duration of exposure, exposure to toxic chemicals or pollutants reduces the likelihood that a child will attain the highest standard of health. Adverse health effects from childhood exposure to toxics are often irreversible and may not manifest themselves for years or decades, affecting the full realization of the right to health later in life. Health impacts are linked to industrial activities of the present and to the toxic legacy of past decades that persists in food, water, air and soil — a serious challenge to accountability.

47. For certain exposures, the risk of death, injury or illness can be reduced or avoided with timely medical intervention, in parallel with interventions by communities, health-care workers, government officials and other actors. However, for children of the communities most at risk, particularly indigenous, low-income, rural or marginalized communities, access to the necessary health care is often physically or economically unattainable. For example, 53 per cent of countries do not have a poison centre,⁷¹ let alone mechanisms to enable access to costly cancer and diabetes treatments for all.

⁶⁷ Convention on the Rights of the Child, art. 24, and International Covenant on Economic, Social and Cultural Rights, art. 12.

⁶⁸ Committee on Economic, Social and Cultural Rights, general comment No. 14 (2000) on the right to the highest attainable standard of health, para. 11.

⁶⁹ *Ibid.*, para. 3.

⁷⁰ *Ibid.*, paras. 15 and 21-27.

⁷¹ WHO, "The public health impact of chemicals: knowns and unknowns" (2016).

48. States have an obligation under international law to enact and enforce laws to prevent childhood exposure to hazardous substances.⁷² The failure to do so constitutes a violation of the right to health.⁷³

G. Right to a healthy environment

49. As noted above, the quality of the environment is a determinant of human health. Toxics released into air, wind and water can directly or indirectly lead to childhood exposure, impacting on the child's right to health. In 2010, over 70 per cent of the world's national constitutions included explicit references to environmental rights and/or responsibilities.⁷⁴ As regards laws, court decisions and international treaties or declarations, the figure rises to more than 90 per cent.⁷⁵ The realization of a healthy environment requires that States take effective measures to prevent childhood exposure to toxics.

H. Right to an adequate standard of living, including food, water and adequate housing

50. Children have a right to an adequate standard of living, including the rights to safe food, clean and safe water, and adequate housing.⁷⁶ The rights to food, water and adequate housing are necessary to ensure that children enjoy a standard of living adequate for their health and well-being. The realization of the child's right to an adequate standard of living requires States to prevent exposure to hazardous substances. States are required to ensure that food, water and housing are free from hazardous substances and do not interfere with the enjoyment of health and other human rights.⁷⁷

I. Right to non-discrimination

51. Every child has the right to enjoy human rights and fundamental freedoms. States must respect, protect and fulfil rights for each child in their jurisdiction without discrimination of any kind.

52. States must ensure that all legislation and all policies and programmes are not intentionally or unintentionally discriminatory towards children in their content or implementation.⁷⁸ States are required to protect children from discriminatory practices by businesses.⁷⁹ States must be accountable for how laws, policies and programmes regarding toxics and pollution, including those on the provision of safe and clean water, food and housing, are non-discriminatory to children, of both the present and future generations.

⁷² Convention on the Rights of the Child, art. 4. See also Committee on Economic, Social and Cultural Rights, general comment No. 14, paras. 15 and 51; and Committee on the Rights of the Child, general comment No. 15, para. 49.

⁷³ Committee on Economic, Social and Cultural Rights, general comment No. 14, para. 15.

⁷⁴ See A/HRC/19/34, para. 30.

⁷⁵ David Boyd, *The Right to a Healthy Environment* (2012).

⁷⁶ Convention on the Rights of the Child, art. 27; and International Covenant on Economic, Social and Cultural Rights, art. 11.

⁷⁷ Committee on Economic, Social and Cultural Rights, general comments No. 4 (1991) on the right to adequate housing, paras. 8 (d) and (f); No. 12 (1999) on the right to adequate food; and No. 14, para. 12; and Committee on the Rights of the Child, general comment No. 15, paras. 48 and 49.

⁷⁸ Committee on the Rights of the Child, general comment No. 16, para. 13.

⁷⁹ *Ibid.*, para. 14.

53. States must also take action to prevent discrimination against and stigmatization of persons who have been exposed to toxics, due to their ill-health, disabilities or other adverse impacts as well as to their opposition to the activities of States and industries.

J. Right to be free from the worst forms of child labour

54. Under the Convention on the Rights of the Child, States have an obligation to protect children from performing any work likely to be hazardous or harmful to their health or development.⁸⁰ The ILO Worst Forms of Child Labour Convention, 1999 (No. 182), in article 3, describes work that harms a child's health as one of the worst forms of child labour. This has been further clarified to include "work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes... damaging to their health".⁸¹

55. Legislative, enforcement and other measures must be taken by States to prevent children from handling hazardous substances or working in hazardous conditions.⁸² Each State party to ILO Convention No. 182 is required to "take immediate and effective measures" to prohibit and eliminate labour practices harmful to the health or development of child workers.⁸³ ILO recommendation No. 190 states that criminal penalties should apply for violations.⁸⁴

56. States must also protect and fulfil the right of parents to safe work, especially women and girls of reproductive age.⁸⁵ As parents' exposure to toxic chemicals can affect the development of the child, this is inextricably linked to the realization of several rights of the child. Cases of children born with disabilities because their mothers worked with toxic chemicals before or during pregnancy, or harmed by toxic residues brought into the home from work ("take-home exposures") by their parents or others illustrate the importance of protecting not only women and girls of reproductive age, but the population at large.

K. Right to information

57. Children and their caregivers have a right to information about hazardous substances and wastes. The Convention on the Rights of the Child emphasizes the need for information for the promotion of the physical and mental health of the child.⁸⁶ The right to information is essential to the child's right to freedom of expression,⁸⁷ right to be heard and other rights.

58. Health and safety information about hazardous substances must be available and accessible, in a form that functions to protect the rights of everyone, in particular those most at risk, such as children.⁸⁸ As such, children must have access to environmental health information that is "understandable and appropriate to children's age and educational

⁸⁰ Convention on the Rights of the Child, art. 32, and International Covenant on Economic, Social and Cultural Rights, art. 10.

⁸¹ ILO recommendation No. 190, para. 3 (d).

⁸² Convention on the Rights of the Child, art. 32, and International Covenant on Economic, Social and Cultural Rights, art. 10.

⁸³ Worst Forms of Child Labour Convention, 1999 (No. 182), art. 1.

⁸⁴ See para. 13.

⁸⁵ International Covenant on Economic, Social and Cultural Rights, art. 7 (b), and Chemicals Convention, 1990 (No. 170) and conventions and recommendations cited therein.

⁸⁶ Convention on the Rights of the Child, art. 17.

⁸⁷ *Ibid.*, art. 14 (1).

⁸⁸ See A/HRC/30/40.

level”.⁸⁹ Child-specific disaggregated data must be available to account for differences in exposure among specific groups of children.

59. During sensitive periods of development, children cannot process or use information about the risks of toxics. Moreover, information about health risks and possible sources of exposure is neither available nor accessible to parents and guardians for tens of thousands of substances manufactured and used by industries in food and consumer products, which often end up contaminating air and water.⁹⁰

60. Even if information is available and accessible, parents are often powerless to comprehend, assess and use the information to prevent exposure. Incomplete information, including on prevention and mitigation measures, can exacerbate impacts.⁹¹

61. States have an obligation to monitor and evaluate the impact of laws, policies and mechanisms in protecting children from toxics. States have a duty to ensure that parents and children have information about children’s health and are supported in using it.⁹² States should engage in data gathering, collaboration with civil society, and investigations, and should ensure transparency, as well as complaint mechanisms for consumers, communities and other populations at elevated risk.⁹³ States have an obligation to monitor childhood exposure to toxics, as well as the incidence of cancer, diabetes and other diseases linked to childhood exposure, and other related impacts. Monitoring emissions into the environment and the presence of toxics in products and food has helped States prevent exposure and reduce the risk of adverse health impacts.

IV. Business responsibility to prevent exposure by children to toxics

62. Directly and indirectly, business activities account for most childhood exposures to toxics. Many emblematic cases of human rights violations from business activities share hazardous substances and wastes as a common denominator.

63. Independently of a State’s ability and/or willingness to fulfil its own human rights obligations,⁹⁴ businesses have a responsibility to respect the rights of the child.⁹⁵ The State’s duty to prevent childhood exposure to toxics is mirrored by the responsibility of businesses to prevent childhood exposure to hazardous substances and wastes. The responsibility of businesses to respect children’s rights exists independently of and does not diminish the obligations of the State.

64. Nearly every businesses sector is directly or indirectly involved in the production, use, release or disposal of hazardous substances. Each of these sectors — extractive industries, energy, chemical manufacturing, construction, food and agriculture, household

⁸⁹ Committee on the Rights of the Child, general comment No. 15 (2013), para. 58.

⁹⁰ Swedish Chemicals Agency, “Increasing children’s protection through REACH” (2014); Danish Environmental Protection Agency, *Exposure of Pregnant Consumers*, p. 7.

⁹¹ It is reported that in Flint, Michigan (United States), mothers boiled water to remove lead, but this only concentrated the presence of lead in the water before it was used in infant formula. See footnote 13 above.

⁹² Convention on the Rights of the Child, art. 24 (2) (e), and Committee on the Rights of the Child, general comment No. 15, para. 59.

⁹³ Committee on the Rights of the Child, general comment No. 16.

⁹⁴ Guiding Principles on Business and Human Rights, principle 11.

⁹⁵ *Ibid.* See also the OECD Guidelines for Multinational Enterprises (2011); and Committee on the Rights of the Child, general comment No. 16.

products, cosmetics, furniture, clothing, electronics, recycling, waste disposal, the automotive sector, and others — has a responsibility, as do the financiers and investors and the lawyers who advise these industries, to prevent childhood exposure to toxics. Businesses have a responsibility to prevent children from being exposed to toxics from their activities, both directly and indirectly.

A. A framework for solutions

65. While the impacts are grave and widespread, solutions are possible and the benefits of past efforts are measurable.

66. The health and economic benefits of such a framework are documented. For example, the phaseout of lead in gasoline translated into annual cost savings of \$2.4 trillion (4 per cent of global GDP) by preventing childhood exposure to lead and its impacts on cognition.⁹⁶ Following the phaseout of lead from gasoline in the 1970s in the United States, the average IQ increased nationally by 2.2-4.7 points.⁹⁷ Economically, this is estimated at between \$153 billion and \$443 billion (at present-day value) in benefits for each birth cohort in the country.⁹⁸

67. Requiring chemical manufacturers to submit health effects data conforming to current scientific standards has led to the withdrawal of hundreds of toxic substances that were allowed for use. The Birth Defect Prevention Act of the State of California (United States) led to over 400 of 703 previously registered pesticides being withdrawn from the market by manufacturers or being suspended by regulators between 1992 and 2010 — simply by requiring information on associated health risks to children.⁹⁹

68. National and international efforts to reduce second-hand exposure to tobacco smoke show recognition of both the vulnerability of children to exposure and their right to physical integrity. Smoking has been increasingly restricted from indoor spaces to protect the rights of the child, among others.

69. Other examples of addressing certain sources of exposure to toxics by young children include the European Union directive on the safety of toys, which prohibits the presence of substances in toys that are classified as carcinogenic, mutagenic or toxic for reproduction,¹⁰⁰ and United States legislation to protect children working on tobacco farms from toxic pesticides.¹⁰¹ Globally, a new treaty on mercury pollution holds promise, but only addresses one element of a much larger problem. States and businesses still have a long way to go.

70. States are not adequately protecting children from toxics from business activities, as is clearly indicated by rates of exposure, death, disease and disability. Laws and policies must prioritize the protection of children, women and girls of reproductive age, and other

⁹⁶ See

www.unep.org/newscentre/default.aspx?DocumentID=2656&ArticleID=8917#sthash.q9BV3Pgv.dpuf.

⁹⁷ S.D. Grosse and others, “Economic gains resulting from the reduction in children’s exposure to lead in the United States”, *Environmental Health Perspectives* (2002).

⁹⁸ WHO, *Childhood Lead Poisoning* (2010), p. 35 (the original calculation was between \$110 billion and \$319 billion, at the year 2000 value of the United States dollar).

⁹⁹ California Environmental Protection Agency, *A Guide to Pesticide Regulation in California* (2011), p. 22.

¹⁰⁰ Submission from Slovenia.

¹⁰¹ Submission from Human Rights Watch.

at-risk groups; States parties to the Convention on the Rights of the Child have a duty to take legislative and administrative measures to do so.¹⁰²

71. The global nature of the challenge, including the transnational nature of corporate structures and business relationships, requires strong international cooperation. Severe limitations in the capacities of developing countries also necessitate strong international cooperation, as well as cost-recovery mechanisms by States, particularly in developing countries.

72. In its general comment No. 16, the Committee on the Rights of the Child outlined a useful framework to ensure that businesses respect the right of the child not to be exposed to toxics. This framework consists of effective legislation, regulation and enforcement, as well as policy, remedial, monitoring, coordination, collaboration and awareness-raising measures. The framework also articulates a strong basis for the implementation of extraterritorial obligations.

73. The principles of good governance, namely transparency, responsibility, accountability, participation and responsiveness, are essential to the implementation of such a framework.¹⁰³

74. Under this framework, businesses have a responsibility to undertake child rights due diligence to identify risks and prevent children from being exposed to toxics and pollution through their activities, and to prevent and mitigate exposure through their business relationships.¹⁰⁴

B. Due diligence by businesses to prevent childhood exposure

75. At its most basic, human rights due diligence for toxic chemicals consists of identifying potential adverse impacts from businesses' activities and business relationships and taking active measures to prevent such impacts from materializing. Failure to conduct a reasonable degree of human rights due diligence for toxic chemicals can subject corporate executives to criminal charges.¹⁰⁵

76. In the Republic of Korea, potentially over 1,200 people suffered health impacts, including pregnant women and children, of whom at least 95 died because companies had sold a humidifier sterilizer to consumers without evidence that the chemicals would be safe for those who would inevitably inhale the substance.¹⁰⁶

77. It is unclear whether the chemical manufacturer, SK Chemicals, knew where the chemicals they sold were being used, or even attempted to ask. The consumer product was marketed and labelled as "safe" and "healthy", despite no indication that it had tested as such. It appears that children were among those most affected, and the extent to which others may have been injured or killed is unknown. The company that sold the vast majority of the suspected product was a health-care company, Reckitt Benckiser, which also manufactures pharmaceuticals and has the expertise to assess the risks from toxics to human health.

¹⁰² Convention on the Rights of the Child, art. 3.

¹⁰³ See www.ohchr.org/EN/Issues/Development/GoodGovernance/Pages/GoodGovernanceIndex.aspx.

¹⁰⁴ Guiding principles Nos. 13, 15 and 18.

¹⁰⁵ See <http://mobile.nytimes.com/2016/07/05/business/dealbook/south-korea-targets-executives-pressed-by-an-angry-public.html>.

¹⁰⁶ See A/HRC/33/41/Add.1.

78. Businesses must pay specific attention to the potential for children to be exposed to toxics by their activities, through the products that they manufacture or sell, and due to emissions into the environment and child labour conditions in upstream supply chains.

C. Responsibility to prevent exposure through businesses' activities

79. Businesses should prevent exposure to toxics and to substances with unknown risks as the best measure of respecting human rights, including children's rights. The tragic deaths and injuries due to toxic humidifier sterilizers in the Republic of Korea illustrate this clearly.¹⁰⁷ The profound lack of precaution in the Samarco mining waste disaster in Brazil¹⁰⁸ also illustrates the extent to which businesses are failing to do basic human rights due diligence with respect to hazardous substances and wastes.

80. Businesses have a responsibility, first and foremost, to avoid causing or contributing to impacts on the rights of the child through their activities, and to address such impacts when they occur.¹⁰⁹ The best way to prevent impacts on the rights of the child from hazardous substances is through prevention of exposure.

81. The responsibility to prevent children from being exposed to toxics and pollution will require the modification, cessation or relocation of certain activities that present unmanageable or simply unknown risks to children. However, businesses consistently argue that precaution is not "science-based", in an effort to disregard the science behind the need for precaution when it comes to children and toxics.¹¹⁰

82. Businesses often complain about the cost implications of protecting human rights from toxics.¹¹¹ However, the protection of profit margins by industries is not a legitimate or justifiable derogation from any human right. Businesses have a responsibility to prevent childhood exposure to toxics and pollution, throughout the supply chain. If a business's activity or relationship continues to expose children to toxics, it should explain why it cannot be avoided and how this respects the rights of children.

83. An emblematic case of child rights violations due to failure to prevent emissions and releases of hazardous substances into the environment is the case of Chisso Corporation in Minamata Bay, Japan.¹¹² From 1932 to 1968, waste containing mercury flowed from Chisso's chemical factory into Minamata Bay. Thousands of children were poisoned by contaminated fish consumed by themselves or their mothers, suffering tragic impacts on their right to life, development and health. Among many health impacts known collectively as "Minamata Disease", congenital disorders were observed in children born to mothers who did not display any health impacts. Economic considerations were the primary reason why the government did not require the company to stop emitting mercury into the Bay for twelve years after the first cases were first identified in 1956.

84. The Government of Japan acknowledges that: "Even taking historical and social conditions at the time into consideration, the governmental failure to prevent harmful impacts on human health from increasing, due to not taking strict measures against the

¹⁰⁷ A joint letter of allegation was sent to the Government on 12 February 2016 and a response was received on 20 April 2016. See A/HRC/32/53.

¹⁰⁸ A joint letter of allegation was sent to the Government on 24 November 2015. See A/HRC/32/53.

¹⁰⁹ Guiding principle No. 13 (a).

¹¹⁰ See, for example, United States Chamber of Commerce, "Precautionary principle" (2010).

¹¹¹ International Chemical Secretariat, "Cry wolf", (2015).

¹¹² Ministry of the Environment, Japan, "Lessons from Minamata disease and mercury management in Japan".

responsible companies for a long time, still provides valuable lessons today; it shows how important it is to take countermeasures quickly as well as how preventive countermeasures should be taken even when there is scientific uncertainty over the cause of the problem.”¹¹³

85. Extractive industries are consistently the source of emissions and residual contamination that has an impact on the rights of the child.¹¹⁴ As the Special Rapporteur highlighted in his previous report, 19 children and 3 adults suddenly lost consciousness and began having seizures in the village of Berezovka, Kazakhstan, about 5 kilometres from one of the world’s largest oil and gas condensate fields (Karachaganak).¹¹⁵ A medical examination of the residents of Berezovka revealed that 80 per cent of the children were suffering from lung diseases.¹¹⁶

86. Businesses are also required to remediate contamination. The lack of remediation of contaminated sites is a grave problem for the rights of the child. In the case of Chisso Corporation, remediation of extreme levels of mercury contamination took decades to begin and remained insufficient, according to court settlements, 50 years later.¹¹⁷ The case of lead pollution in Kabwe, Zambia, shows how difficult this is in countries with few resources to cope with environmental liabilities. Neither the World Bank nor the Government of Zambia have so far been able to find a sustainable solution for the pollution caused by an old lead mine in the city.¹¹⁸

87. While some businesses act responsibly and in good faith, others behave with impunity. For example, Occidental Petroleum and Pluspetrol have left thousands of contaminated sites in the Peruvian Amazon from approximately 40 years of oil production, contaminating the food and water of local indigenous communities.¹¹⁹ Pluspetrol abandoned the sites without remediating contamination, despite a contractual obligation to clean the contamination left by both companies. A new operator, Pacific Stratus Energy, continues to produce oil in the region, despite heavily corroded pipelines that frequently rupture and spill large quantities of oil, adding to the contamination.

88. Businesses must ensure their products do not contain toxic or otherwise hazardous substances. Toys imported to Europe are regularly found to contain high levels of toxics.¹²⁰ In 2008, a toxic chemical that can cause renal failure was found in tainted milk powder sold in China. Nearly 40,000 children required urgent medical attention, 12,892 of whom required hospitalization. Four children tragically died in that incident, which followed a similar incident in 2003 that killed 12 children.¹²¹

89. Businesses that generate waste, or products that become waste, also have a responsibility. The emblematic case is the illegal dumping of toxic waste in Côte d’Ivoire by Trafigura that killed at least 17 people and injured more than 100,000, with the full extent of the contamination in and around Abidjan unknown.¹²²

¹¹³ Ibid., p. 6.

¹¹⁴ Submission from Equidad, Peru.

¹¹⁵ See A/HRC/30/40/Add.1, para. 58.

¹¹⁶ Ibid., para. 59.

¹¹⁷ Jane Hightower, *Diagnosis: Mercury* (2008).

¹¹⁸ Submission from Terre des hommes.

¹¹⁹ Submission from Equidad, Peru.

¹²⁰ Submission from GRID-Arendal.

¹²¹ Submission from International Service for Human Rights.

¹²² See A/HRC/12/26/Add.2.

D. Responsibility through business relationships

90. Businesses also have a responsibility to prevent and mitigate adverse child rights impacts that are linked to their operations, products or services by their business relationships, including upstream suppliers, and after products are sold.¹²³

91. First, businesses must seek to “prevent” rights impacts. Only if businesses are unable to prevent, should they mitigate. If a company only mitigates, it should be in a position to explain why it was not able to prevent, and should seek to ensure that it will be able to prevent in the future.

92. The best way for companies to prevent harm is through the prevention of exposure, which is best achieved by avoiding the manufacture, use and emission of hazardous substances wherever possible. Businesses should ensure that the products they sell are used, recycled, reused and disposed of in a safe and environmentally sound manner.

93. The importance of upstream prevention is illustrated by the case of children working in cobalt mines in the Democratic Republic of the Congo. Reports describe children in Indonesia¹²⁴ and Peru¹²⁵ poisoned by mercury and suffering from birth defects due to small-scale gold mining. Companies that purchase or invest in such commodities have a responsibility to ensure that child rights are not violated as a result of their demand.

94. The responsibility of businesses for products sold is highlighted by the persistent problem of children poisoned by highly hazardous pesticides, particularly in developing countries. Businesses continue to export to or manufacture in developing countries hazardous pesticides whose use is prohibited in various industrialized countries. Such industrialized countries often have more resources to ensure that hazardous pesticides are used in a safe and sound manner, but still have determined that the risks are unmanageable.¹²⁶

95. Children die with startling regularity from pesticide poisonings. A major contributor to this problem is that a large number of hazardous pesticides that present unmanageable risks are not banned or restricted at the global level. Another significant problem is the half a million tons of obsolete pesticides scattered across developing countries, and seeping into soil and water.¹²⁷

96. At the tail end of industrial activity, children are far too often found working at toxic waste dumps, burning plastics and cables to recover and recycle precious metals.¹²⁸ Electronic waste (e-waste) is of particular concern. Children, sometimes as young as five, are involved in manual dismantling and burning of electronic products at e-waste sites in Africa, Latin America and Asia. Some are described as being among the most polluted places on earth.¹²⁹ Infants living near waste disposal sites, due to their hand-to-mouth behaviour, are among the most vulnerable groups, as soils and dusts are generally

¹²³ Guiding principle No. 13 (b).

¹²⁴ <http://pulitzercenter.org/reporting/philippines-child-labor-gold-mines-indonesia>.

¹²⁵ See A/HRC/18/30/Add.2, para. 39.

¹²⁶ See CRC/C/MEX/CO/4-5 and A/HRC/33/41/Add.2.

¹²⁷ See www.fao.org/agriculture/crops/obsolete-pesticides/prevention-and-disposal-of-obsolete-pesticides/en. In its submission, Senegal highlighted many concerns regarding banned, restricted and obsolete pesticides.

¹²⁸ Kristen Grant and others, “Health consequences of exposure to e-waste: a systematic review”, *The Lancet Global Health*, vol. 1, issue 6.

¹²⁹ See www.worstpolluted.org/projects_reports/display/107.

contaminated with lead and other toxics.¹³⁰ In Latin America, many of these recycling and recovery operations take place in communities, not in clearly defined waste dumps.¹³¹

97. Children are found with record levels of toxic chemicals in their bodies at such waste sites.¹³² Young girls, still developing and approaching the age of reproduction, work as collectors or vendors in highly toxic environments.¹³³ At La Chureca in Managua, Nicaragua, approximately half of all waste pickers were less than 18 years old.¹³⁴ In Guiyu, China, about 80 per cent of children suffer from respiratory diseases, and there has been a surge in cases of leukaemia and concentrations of lead in blood are high.¹³⁵

E. Responsibility to ensure an effective remedy

98. Businesses have a shared responsibility with the State to realize the right of children to an effective remedy for violations resulting from childhood exposure to toxics. Businesses should help ensure, inter alia, non-recurrence, rehabilitation and compensation, as part of an effective remedy.

1. Non-recurrence

99. Preventing the recurrence of human rights violations is a critical element of an effective remedy, and is closely linked to the right to information. The toxic legacy of our past cannot be erased in its entirety, but collectively, we can avoid making the same mistakes in the future. States should ensure that businesses systematically transition from the manufacture, use and emission of hazardous substances to safer alternatives, including alternative materials and mitigation technologies to eliminate the intrinsic or unknown hazards wherever possible.

100. States must ensure that businesses prove that their chemicals are safe, not just for the average adult, but for children who may be exposed and where substances are being used. Otherwise, there is a risk of recurrence of human rights impacts, as has repeatedly been illustrated.

101. States should ensure businesses prevent emissions into the environment to the maximum extent possible as part of their human rights obligations, avoiding further introductions of toxic chemicals and additional contaminated sites requiring remediation to prevent impacts.

2. Rehabilitation

102. A core component of an effective remedy for toxic chemical contamination is rehabilitation, both of the environment and of the people affected. Around the world, contaminated sites continue to plague children in the nearby communities. While some States are making strides in remediating contaminated sites, hundreds of thousands of contaminated sites from businesses remain. States must ensure that businesses clean up contaminated sites to protect children in the future.

¹³⁰ ILO, *The Global Impact of E-Waste*, p. 22.

¹³¹ United Nations University and GSMA, "E-waste in Latin America" (2015).

¹³² ILO, *The Global Impact*.

¹³³ *Ibid.*, p. 20.

¹³⁴ *Ibid.*, p. 21.

¹³⁵ *Ibid.*, p. 22.

103. Relatedly, adults and children who are physically or mentally disabled due to childhood exposure to toxics should have access to health care.¹³⁶ Such care must enable those impaired to enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate their active participation in the community.¹³⁷

3. Compensation

104. Compensation for victims is a necessary component of an effective remedy. However, compensation alone is insufficient, given the persistence of toxics in the environment and the irreversible and lifelong consequences of many types of exposure. Prevention must also be a priority, according to human rights obligations.

105. While the risk to businesses of paying victims large compensation awards can help incentivize companies to phase out toxics in products or to reduce pollution, because of substantial differences in the strength of product liability laws across jurisdictions, the threat of compensation is not sufficient. Asbestos is a common example, with countries unable to ban an unquestionably hazardous substance that kills over 100,000 people per year, despite billions of dollars in compensation being paid to victims over decades.¹³⁸

106. Although large sums of compensation are paid following lawsuits involving hazardous substances and wastes, the vast majority of child victims of air pollution, food and water contamination, toxic chemicals and pesticides are not compensated. Even in cases where rights are clearly infringed and the relevant businesses or other actors identified, realizing an effective remedy and ensuring corporate accountability for harms due to toxic chemicals or pollution has proven extremely difficult around the world. The reasons for this difficulty include lack of awareness among victims that their diseases could have been caused by childhood exposure to toxic chemicals or pollution; the burden of proof placed on children, including the need to establish causation; fundamental information that has not been generated or is confidential about the hazards and uses of substances; the challenge of identifying perpetrators; weak or non-existent legislation; the costs of legal representation for plaintiffs; endless appeals processes; confidential out-of-court settlements; and the use of subsidiaries or contractual relationships to shield corporate liability.

V. Future work

107. The Special Rapporteur plans to continue working on the obligation of States to prevent childhood exposure. He plans to carry out further investigations into the nature and scope of the obligation of States and responsibilities of businesses to prevent exposures, and into permissible restrictions in that regard, and to provide a guide to good practices.

VI. Conclusions and recommendations

108. States have recognized their duty to protect and realize children's rights, from which derives an obligation to protect children from exposure to toxics. These rights include the right to life and childhood development, the right to health, the right to physical integrity, the right to be free from the worst forms of child labour, the rights to food, water and adequate housing, and others.

¹³⁶ Convention on the Rights of the Child, art. 23.

¹³⁷ Ibid.

¹³⁸ UNEP, *Global Chemicals Outlook*.

109. The Special Rapporteur offers the following recommendations to the various stakeholders to protect the rights of the child from toxic chemicals.

110. States should:

(a) Prevent childhood exposure to pollution and toxic chemicals as part of States' obligation to protect children, and guarantee an effective remedy for exposure and environmental contamination. States must ensure that this is reflected in laws and policies. States must also ensure the same protection to women and girls of reproductive age;

(b) Consider the best interests of the child as a priority when designing, implementing and monitoring public health, environmental, consumer and labour laws and policies. States must take into account the fact that specific groups of children are more likely to be exposed, and are thus at greater risk;

(c) Ensure the availability of and access to adequate and age-appropriate information on children's rights and toxics. States should promote education on toxic chemicals and pollution in primary schools' curricula;

(d) Strengthen childhood exposure-monitoring efforts in all countries, particularly for those in developing countries and high-risk situations, such as those living in extreme poverty or in low-income, minority, indigenous, stateless, migrant or refugee communities. States should also undertake longitudinal cohort studies that are harmonized, and other studies of pregnant women, infants, and children that capture exposures at critical windows and sensitive health endpoints along human development;

(e) Explicitly set out government expectations for business enterprises to not expose children to toxics in the context of their business activities and domestic and international business relationships, in line with the Guiding Principles on Business and Human Rights, within its guidance to the private sector on children's rights;

(f) Eliminate work by children where they are exposed to toxics and ensure safer alternative employment, and monitoring of children affected. States should ensure that children affected receive the necessary treatment and compensation. States should also ensure that women and girls of reproductive age are guaranteed protection from occupational exposure to toxics and the substitution of toxics with safer alternatives as the primary means of prevention;

(g) Conduct a national assessment of children's environmental health and identify priority concerns, including children in vulnerable situations, and develop and implement action plans to address those priority concerns;

(h) Ensure that children have access to justice and an effective remedy for violations due to toxics, including remediation of contaminated sites, preventative and precautionary measures, access to necessary medical and psychological care, and adequate compensation;

(i) Establish population-based surveillance systems for adverse health impacts linked to toxics and pollution;

(j) Strengthen regulatory agencies and ministries responsible for the oversight of standards relevant to children's rights implicated by toxics and pollution, such as health, consumer protection, education, environment, food, and labour. States should ensure that they have sufficient powers and resources to monitor and to investigate complaints and to provide and enforce remedies for abuses of children's rights. States should increase and strengthen intersectoral cooperation;

(k) Work with relevant national and international organizations on monitoring and identification systems for hazardous remnants of armed conflict. Governments must provide an effective remedy for hazardous remnants of conflict and other military activities, including funding for full remediation, comprehensive medical treatment and compensation for individuals experiencing the effects of exposure to these materials;

(l) Require businesses to undertake child rights due diligence to ensure businesses meet their obligation to adopt measures to respect children's rights;

(m) Include the issue of toxics and pollution within all national action plans on business and human rights, and within the national policy framework for implementation of the Convention on the Rights of the Child;

(n) Take up these recommendations in their review of their peers during the universal periodic review.

111. Businesses should:

(a) As part of their human rights due diligence, identify, prevent and mitigate exposure of children to toxics through their activities, products or business relationships, including global supply chains and other international relationships;

(b) Generate and disclose information related to the risks of exposure and on the intrinsic hazards of industrial substances, pesticides and food additives that they manufacture and sell;

(c) Communicate publicly and objectively measures taken to mitigate potential childhood exposures;

(d) Where safer alternatives exist, use those alternatives to mitigate human rights impacts. Where alternatives do not exist, businesses should actively invest in the development and adoption of safer alternatives and mitigation measures;

(e) Ensure that health and safety information about the potential hazards to children of industrial chemicals and pesticides is generated and is made available and accessible to regulators and businesses down the supply or value chain;

112. International organizations should:

(a) Integrate the problem of toxic chemicals, pollution and waste into the work of their organization, based on their respective competencies, and monitor and report on the issue;

(b) Increase efforts to reduce the exposure of children and women of reproductive age to toxic chemicals, particularly of child workers and those living in high-risk situations.

113. The Committee on the Rights of the Child should:

(a) Increase its attention to the children's rights impacts of pollution and toxics when reviewing States' obligations under the Convention;

(b) Consider undertaking a study on the impacts of toxics and pollution on the rights of the child, recognizing the State's obligation to prevent exposure to such hazardous substances and wastes, and building on its general comment No. 16.

114. **Civil society should:**

(a) **Increase collaboration to strengthen recognition of the children's rights dimension of toxic chemicals and pollution within the human rights, public health, consumer, environmental and labour communities;**

(b) **Submit information to the Committee on the Rights of the Child and other international human rights mechanisms regarding the human rights impacts of toxics and pollution on children's rights;**

(c) **Raise public awareness about the right not to be exposed to hazardous substances and for both adults and children to be free from contamination and pollution.**
