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**Promotion and protection of all human rights, civil,
political, economic, social and cultural rights,
including the right to development****Principles on human rights and the protection of workers
from exposure to toxic substances****Report of the Special Rapporteur on the implications for human rights
of the environmentally sound management and disposal of hazardous
substances and wastes****Summary*

In his report, the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Baskut Tuncak, presents a final set of principles to help States, businesses and other key actors respect and protect workers from toxic occupational exposures and to provide remedies for violations of their rights. The principles contained in the report are rooted in nearly 25 years of work under the mandate, including country visits, thematic research and communications with States and non-State actors, as well as intensive, targeted consultations undertaken since 2017. The report was prepared pursuant to Human Rights Council resolution 36/15.

* Agreement was reached to publish the present report after the standard publication date owing to circumstances beyond the submitter's control.



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I. Introduction

1. Since 1995, the Commission on Human Rights and, subsequently, the Human Rights Council have mandated a special rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes.¹
2. In resolution 36/15, the Human Rights Council requested the Special Rapporteur to continue to provide detailed information on the human rights impacts of hazardous substances and wastes,² encouraged cooperation with, inter alia, the International Labour Organization (ILO) and the World Health Organization (WHO), and requested the Special Rapporteur to present to the Council annual reports and specific recommendations and proposals concerning the steps that should be taken immediately to address the adverse human rights implications of hazardous substances and wastes.
3. Upon assuming the mandate in 2014, the current Special Rapporteur, Baskut Tuncak, made a commitment to give higher visibility to the situation of workers impacted by exposure to toxic substances (“toxic exposures”), reactivate the dialogue with States on particular cases of such exposures and continue raising the issue in international human rights forums. The present report is the result of this commitment and the efforts which have followed.
4. For nearly 25 years, various cases of the rights of workers have been brought to the attention of the mandate holders and have been addressed in reports and discussions at the global, national and regional levels.³ Through an in-depth examination of these cases, the Special Rapporteur has recognized the need to bridge relevant discussions on the rights of workers within the labour, human rights and environmental health forums as part of the efforts to inform States, United Nations agencies and other relevant stakeholders of the human rights impacts of exposure to toxics, including in the implementation of goal 8 of the 2030 Agenda for Sustainable Development on decent work.
5. According to ILO, over 2,780,000 workers globally die from unsafe or unhealthy conditions of work each year. Despite clear human rights obligations relating to the protection of their health, workers around the world find themselves in the midst of a crisis: it is estimated that one worker dies at least every 30 seconds from exposure to toxic chemicals, pesticides, radiation and other hazardous substances.⁴ However, because incidents of exposure are grossly underreported in some contexts and countries, this figure may be an underestimation.
6. Based on feedback from country visits and related thematic reports, the Special Rapporteur convened two workshops and several smaller consultations in 2017 on the topic of occupational exposures to toxic and otherwise hazardous substances. In 2018, a questionnaire on the same subject and a call for submissions was made available to States, civil society representatives, trade unions, workers’ unions and other stakeholders. A total of 31 responses were received and analysed by the Special Rapporteur and the team supporting the mandate. On 16 and 17 May 2018, an expert meeting was convened and on 8 June 2018 a briefing was held with States to share the conclusions reached through the

¹ The mandate on hazardous substances and wastes, initially entitled “Adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights”, was first established by the Commission on Human Rights in resolution 1995/81. The current mandate was established by the Human Rights Council in resolution 36/15.

² Consistent with the previous reports of the current mandate holder and those of his predecessors, hazardous substances and wastes are not defined strictly; they include, inter alia, toxic industrial chemicals and pesticides, pollutants, contaminants, explosive and radioactive substances, certain food additives and various forms of waste. For ease of reference the Special Rapporteur refers to hazardous substances and wastes as “toxics”, and thus the term “toxics” (or “toxic substances”) as used in the report includes non-toxic but hazardous substances and wastes as well.

³ A/HRC/39/48 and Corr.1, annex.

⁴ A/HRC/39/48 and Corr.1, para. 3.

consultation process, preliminary observations and potential “recommendations” that were taking shape based on the consultation process.

7. On these occasions the Special Rapporteur shared his vision and plans for better integrating human rights standards and practices in the protection of workers from toxic exposures. In the course of various consultations and information gathering and based on the experience accumulated under the mandate over the course of several years, it had become clear that there is an urgent need to articulate a set of principles for protecting workers from exposure to toxic substances based on existing human rights norms and standards. During the consultation process, the Special Rapporteur shared his intention to prepare and suggest principles on the protection of workers from toxic exposures in the framework of his mandated activities and was satisfied to note ample support and enthusiasm coming from a large number of States and other actors.

8. In September 2018, the Special Rapporteur presented a report to the thirty-ninth session of the Human Rights Council highlighting the global crisis confronting workers exposed to toxic substances based on the work of several successive mandate holders. He outlined key challenges and proposed 15 principles to help States, businesses and other key actors to protect workers from toxic exposures and to provide remedies for violations of workers’ rights.⁵ The principles were grounded in existing international human rights law and built upon the Guiding Principles on Business and Human Rights, several ILO instruments and relevant international agreements on toxic chemicals and wastes.⁶ Both in the report and his oral intervention, the Special Rapporteur shared his plan to present a final set of principles to the Council, gathering additional input from States and other stakeholders regarding how the draft principles were reflected in their laws, policies and procedures, as relevant, on occupational exposure.

9. The Special Rapporteur noted overwhelming support from States during his interactive dialogue at the thirty-ninth session of the Council for continued efforts under the mandate on worker’s rights and its plan of work for the coming year. Most interlocutors welcomed the report and shared examples of good practices where the principles were already being implemented in law and practice. Delegations expressed particular appreciation of the fact that the draft principles had been elaborated building on the Guiding Principles on Business and Human Rights, ILO instruments and multilateral environmental agreements on toxic chemicals and wastes, among others. The level of expressed interest and support gave the necessary impetus and affirmation to continue discussions on the subject with a view to presenting to the Council an updated and finalized set of principles on workers’ protection from toxic exposure.

10. In 2019, the Special Rapporteur circulated a questionnaire for all stakeholders to help him finalize the principles, which are contained in the present report. It was encouraging to note that nearly all respondents were supportive of the principles and agreed on their relevance.

11. The draft principles contained in the 2018 thematic report were modified on the basis of all the comments and suggestions received through the written consultation, as well as additional consultations and smaller discussions undertaken in the course of 2019 with ILO, WHO and other international organizations. ILO in particular noted that none of the proposed principles conflicted with, and most were “fully incorporated into and supported by, international labour standards, including the ILO Constitution”. The Special Rapporteur took all comments into account in his revision of the principles.

12. The principles contained in the present report are thus rooted in the nearly 25 years of work under the mandate, including country visits, thematic research and communications with States and non-State actors, as well as intensive, targeted consultations undertaken since 2017.

⁵ Ibid. The report included a detailed annex describing various cases addressed under the mandate since 2007.

⁶ A/HRC/39/48 and Corr.1, sect. IV.

13. The Special Rapporteur takes note of recent efforts by ILO to add occupational safety and health as one of the ILO fundamental principles and rights at work. The need for principles on human rights and the protection of workers from exposure to toxic substances became clear during the centenary session of the International Labour Conference in 2019, when a representative of certain employers explicitly insisted that occupational safety and health was not a human right. The Special Rapporteur encourages ILO and WHO to continue their efforts directed at reinforcing occupational health and safety standards and for the ILO Governing Body to recognize occupational safety and health as a fundamental principle and right at work.

14. The Special Rapporteur once again wishes to thank all States and other stakeholders for lending their support with the aim of promoting the rights of all workers in accordance with the mandate.

II. Principles on human rights and the protection of workers from exposure to toxic substances

15. Workers' rights are human rights, and human rights are workers' rights. These rights are interrelated, indivisible and universal. They include civil, political, economic, social and cultural rights. Every worker has a right to dignity and to be treated ethically, with respect, and without being subjected to conditions of work that are dehumanizing or degrading. No one can be deprived of their human rights because of the work they perform.

16. Safe and healthy working conditions have been explicitly recognized as a human right since 1966, with the adoption of the International Covenant on Economic, Social and Cultural Rights. They are a fundamental aspect of the human right to just and favourable conditions of work. The right to safe and healthy work encompasses many other interrelated and interdependent human rights, including the rights to life, health, bodily (physical) integrity and security of the person. These are indivisible from the rights to information, meaningful participation and the freedoms of expression, assembly and association, as well as the right to an effective remedy.

17. Although globally recognized for over 50 years, and despite specific efforts in certain countries and contexts, the right of all workers to safe and healthy working conditions, as well as other interrelated and interdependent human rights of workers, continues to remain insufficiently implemented and realized, particularly with respect to occupational exposures to hazardous substances. The principles contained in the present report are offered to help States and other actors better ensure that human rights are workers' rights. In the view of the Special Rapporteur, if implemented, the principles will help strengthen the coherence between human rights and occupational health and safety standards with respect to the exposure of workers to toxic substances.

18. For the purpose of the principles, the term "workers" includes not only directly employed workers but also informal workers, as well as contract workers, subcontractors, agency and other sorts of temporary workers and all other persons performing work or work-related activities.

19. The Special Rapporteur calls on States, business enterprises and other actors to implement the principles through their respective legal and policy frameworks, as well as through initiatives and programmes.

A. Principles on duties and responsibilities to prevent exposure

20. The human right to safe and healthy working conditions is explicitly recognized in the International Covenant on Economic, Social and Cultural Rights (art. 7) as a

fundamental aspect of the right to just and favourable conditions of work;⁷ however, it also encompasses many other interrelated and interdependent human rights of workers.

21. Everyone, including workers in both formal and informal settings, has the inherent right to life,⁸ the right to enjoy the highest attainable standard of physical and mental health⁹ and the right to the physical integrity¹⁰ of their body.¹¹ Acute poisonings and other cases of extreme exposure to toxic substances are unquestionable violations of these rights of workers, subjecting them to violent, cruel, inhuman and degrading forms of treatment. However, these rights also extend to longer-term, chronic exposure to toxic substances, which can also give rise to violent, cruel, inhuman and degrading outcomes.¹²

22. These human rights of workers depend upon preventing exposure. The harms of chronic exposure to toxics are often invisible, and it may be years or even decades until adverse health impacts become manifest in workers or their children. Prevention of exposure to toxic substances is essential to protect human rights, including the rights of workers, and the following principles reflect this reality.

Principle 1 – Everyone must be protected from exposure to toxic substances at work.

Commentary

23. Workers are especially vulnerable to the violation and abuse of their human rights, not the least of which is being subjected to exposure to toxic substances in the course of their work. “Workers” are not only directly employed workers but also informal workers, as well as contract workers, subcontractors, agency and other sorts of temporary workers and all other persons performing work or work-related activities.

24. Workers themselves have been “canaries in the coal mine”, typically exposed first and the most, revealing the deadly price of toxic chemical use. Yet this is not simply a problem of unknown risks. Workers continue to be exposed to known toxic substances, including industrial chemicals and hazardous pesticides, when demonstrably less dangerous alternatives exist, for a variety of reasons.¹³ For example, laws and policies on occupational health are often not health-protective. They continue to permit workers to be exposed to toxic substances at levels that are hundreds, if not thousands of times higher than for non-workers in the same jurisdiction.¹⁴ Risk assessments of exposure, when conducted, are often based on incomplete knowledge or false assumptions,¹⁵ resulting in misleading assurances of safety and widespread impacts on workers’ health. Processes for improving standards of protection from exposure continue to be deliberately delayed for years, if not decades, resulting in countless premature deaths¹⁶ (see principle 6).

⁷ Universal Declaration of Human Rights, art. 23.

⁸ International Covenant on Civil and Political Rights, art. 6.

⁹ International Covenant on Economic, Social and Cultural Rights, art. 12.

¹⁰ This right encompasses the right of each human being to autonomy and self-determination over their own body, including over the entry of unwanted, toxic substances into their body, whether from occupational or other sources. See Committee on Economic, Social and Cultural Rights, general comment No. 18 (2005) on the right to work, para. 7 (“These fundamental rights also include respect for the physical and mental integrity of the worker in the exercise of his/her employment.”).

¹¹ Every State has recognized one or more, if not all, of these human rights of workers through ratification of international human rights instruments.

¹² A/HRC/22/53 and A/HRC/33/41.

¹³ A/HRC/39/48 and Corr.1, para. 40.

¹⁴ Ted Smith and Chad Raphael, “Health and safety policies for electronics workers”, in *The Routledge Companion to Labor and Media*, Richard Maxwell, ed. (Routledge, 2015), pp. 78–89 (citing Amanda Hawes). For a detailed scientific presentation of these disparities see, e.g., *Occupational Health Hazard Risk Assessment Project for California: Identification of Chemicals of Concern, Possible Risk Assessment Methods, and Examples of Health Protective Occupational Air Concentration*, (Oakland, California, California Environmental Protection Agency, 2007).

¹⁵ A/HRC/39/48 and Corr.1, para. 64.

¹⁶ *Ibid.*, para. 38.

25. Workers are vulnerable as a group, thus requiring special attention by States; however, some groups of workers are particularly vulnerable, facing a double jeopardy of abuse. Those most at risk of exposure are also those who are often the most vulnerable to exploitation: the poor, children and women, migrant workers, people with disabilities and older persons. They are often prone to abuse of a myriad of human rights and forced to make the abhorrent choice between their health and their income. It is particularly saddening and unacceptable that their plight in most cases remains invisible to most consumers and policymakers with the power to enable a just transition. In lower-income countries in particular, the number of those formally employed is small compared with those who work in the informal sector, with the obvious consequence of putting a great number of persons outside any applicable standards and monitoring and thus at a significantly heightened risk of exposures.

26. In realizing everyone's right to safe and healthy work, all workers must be protected from exposure to toxic substances regardless of income, age, gender, ethnicity, race, religion or other class or status, whether in formal or informal settings. The right to safe and healthy working conditions is not a privilege; it is a human right of everyone. The ILO Chemicals Convention, 1990 (No. 170) recognizes that workers have the "right to remove themselves from danger ... when they have reasonable justification to believe there is an imminent and serious risk to their safety or health" (art. 18).

27. The economic insecurity of low-income workers is never a justification for insufficient levels of protection from exposure to toxic substances.¹⁷ Persons of any gender have the same right to safe and healthy work. Given the differentiated risks between different genders based on differences in biology and social roles,¹⁸ it is essential that States and business enterprises integrate a gender perspective in fulfilling their duties and responsibilities (see, e.g., principles 2, 3 and 12). Exposing children to toxic substances at work is indefensible.¹⁹ Work where children use or are otherwise exposed to pesticides, toxic industrial chemicals, metals or other hazardous substances constitutes one of the worst forms of child labour.²⁰

28. The prohibition against racial discrimination in all its forms applies. Migrant and temporary workers have a right to equality and to enjoy equal treatment to nationals in respect of safety and health and other conditions of work.²¹ Race or ethnicity should never be a prohibiting factor in the realization of workers' right to safe and healthy working conditions. Persons with disabilities have the right, on an equal basis with others, to safe and healthy working conditions and related human rights.

Principle 2 – States have a duty to protect the human rights of workers through the prevention of exposure to toxic substances.

Commentary

29. Every State has an obligation to adopt measures to prevent occupational exposure to toxic substances. States are required to adopt positive measures to protect the right to life, including adopting any appropriate laws or other measures in order to protect individuals from acts or omissions that may cause their unnatural or premature death or prevent them

¹⁷ Ibid., paras. 45–47.

¹⁸ Ibid., para. 6. See also A/HRC/33/41 and A/HRC/36/41; United Nations Development Programme (UNDP), *Chemicals and Gender* (2011); Concetta Fenga, "Occupational exposure and risk of breast cancer", *Biomedical Reports*, 21 January 2016; and WHO, *Summary of Principles for Evaluating Health Risks in Children Associated with Exposure to Chemicals* (Geneva, 2011).

¹⁹ A/HRC/39/48 and Corr.1, paras. 31 and 49–50.

²⁰ A/HRC/33/41. The Convention on the Rights of the Child recognizes the right of the child to be protected from performing any work that is likely to be hazardous or harmful to the child's health or physical development (art. 32). The Worst Forms of Child Labour Convention, 1999 (No. 182) identifies as the worst forms of child labour "work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children" (art. 3).

²¹ International Convention on the Rights of All Migrant Workers and Members of Their Families, art. 25 (1) (a). For the risks to migrant workers, see A/HRC/39/48 and Corr.1 paras. 51–52.

from enjoying a life with dignity, including threats emanating from private persons and entities. Pursuant to their duty to protect the right to life, States are also required to take special measures of protection towards persons in vulnerable situations whose lives have been placed at particular risk because of specific threats, such as workers.²² Furthermore, States are obliged to adopt preventive measures to protect the right to health, including provisions for healthy working conditions.²³ States also have a duty to improve all aspects of industrial hygiene under the right to health.²⁴ This includes taking preventive measures in respect of occupational accidents and diseases and the prevention and reduction of the population's exposure to harmful substances such as radiation and harmful chemicals that directly or indirectly impact upon human health.²⁵

30. States parties to the International Covenant on Economic, Social and Cultural Rights have a duty to protect the right to safe and healthy working conditions. Work, as specified in article 6 of the Covenant, must be decent work. Decent work requires States to respect and protect the right of workers to physical integrity, which is infringed by toxic exposures.²⁶

31. Prevention of exposure requires deliberate action by States. States must do everything in their power to protect all workers in their territory and/or jurisdiction from occupational exposures to toxic substances.²⁷ States must take appropriate steps to prevent, investigate, punish and provide redress for cases of occupational exposures to toxic and otherwise hazardous substances through effective policies, legislation, regulation and enforcement, as well as adjudication.²⁸

32. States must ensure that their laws and policies on occupational health are health-protective and rights-based. Laws and policies that permit exposure are not necessarily health-protective of workers.²⁹ States must not allow workers to be subjected to greater risk of adverse health impacts from exposure relative to the general population unless there is a strong public interest justification beyond the need for employment.³⁰ States should take action to protect workers in the face of scientific uncertainty (see also principle 6). To ensure that they are not turning a blind eye to the exploitation of workers, States must monitor working conditions, including routine monitoring of exposures (see also principle 8), and enforce laws for the protection of workers' rights.

33. States have heightened duties regarding the protection of workers at elevated social or physiological risks, including informal workers. States should apply higher protection standards for groups of workers that are especially vulnerable to exploitation by exposure. Multiple factors (see principle 1) further exacerbate the general vulnerability of workers regarding exposure to toxics. Prevention and responses to situations of exposure must take into account social status, education level, age, gender, national origin, ethnicity, disability and other compounding vulnerabilities of workers to be effective. Special measures must be taken for the protection of workers in high-risk sectors such as mining, agriculture, construction, energy, the military, manufacturing and waste disposal, among others, from exposure to toxic substances. National policies and programmes to promote safe and healthy working conditions should aim not only at the formal sector but also at the informal

²² Human Rights Committee, general comment No. 36 (2018) on the right to life.

²³ Committee on Economic, Social and Cultural Rights, general comment No. 14 (2000) on the right to the highest attainable standard of health.

²⁴ International Covenant on Economic, Social and Cultural Rights, art. 12.

²⁵ Committee on Economic, Social and Cultural Rights, general comment No. 14.

²⁶ Committee on Economic, Social and Cultural Rights, general comment No. 18, para. 7.

²⁷ Not limited to directly employed workers. See para. 23

²⁸ Guiding Principles on Business and Human Rights, principles 1, 4 and 15.

²⁹ See para. 24. See also Smith and Raphael, "Health and safety policies for electronics workers"; and *Occupational Health Hazard Risk Assessment Project for California*.

³⁰ For example, the State of California has moved away from problematic "permissible exposure limits" toward health-protective standards, as recommended in *Occupational Health Hazard Risk Assessment Project for California*. See also International Commission on Radiological Protection, *The 2007 Recommendations of the International Commission on Radiological Protection*. Annals of the ICRP: ICRP publication 103, vol. 37, Nos. 2–4 (2007).

economy, bearing in mind that those working in the informal sector are usually not captured in statistics on the impacts of hazardous substances on workers.

34. States must eliminate the worst forms of child labour, which include circumstances where children use or are otherwise exposed to toxic substances at work. States must also integrate gender-specific approaches to prevention of workers' exposure to toxic substances. Safeguarding reproductive health from hazardous working conditions is a core obligation of States in the elimination of discrimination against women in employment. Women workers have a right to special protection during all periods that pose reproductive risks to them³¹ as well as to their offspring, which requires protection from work that exposes them or their fetus to toxic chemicals. At the same time, women should not be deprived of equal opportunities for employment or income. Women workers may also be exposed to toxic substances at work before and during the earliest stages of pregnancy, or even before they may know they are pregnant. This reality requires special care on the part of States and businesses to protect women's reproductive health by preventing their exposure to toxic substances without limiting employment in a discriminatory fashion. The best means of doing so is by eliminating toxic substances at work and applying appropriate standards of protections to all workers.³²

Principle 3 – Business enterprises have a responsibility to prevent occupational exposures to toxic substances.

Commentary

35. In today's world virtually every sector of the economy is implicated in the ongoing abuse of the right to safe and healthy work, including the world's most economically powerful and technologically advanced industries. Many of these industries and sectors have – by their own design – vast and opaque supply chains, including links to the informal economy. Some of these business enterprises are not obviously implicated, for example, financial institutions that trade gold extracted by informal workers using mercury, resulting in severe health impacts, particularly for women workers and their children.

36. These enterprises include employers, purchasers of products and suppliers of toxic substances, among others. In the case of occupational exposures, the impacts that business enterprises are responsible for include exposure to toxic substances and adverse health outcomes. The responsibilities of businesses regarding safe and healthy working conditions require the continuous improvement of working conditions and extend to their business relationships, both at home and abroad, and their products' life cycles.³³

37. Business enterprises can develop and adopt alternatives that reduce harm to human health and the environmental impact of their operations and business relationships. Some have already done so. However, many enterprises have not, including many that have outsourced and/or buried the problem of toxic exposure further down their global supply chains. This has enabled them to continue “business as usual” instead of adopting measures to respect workers' rights affected by toxic work, despite increasing expectations that business enterprises should prevent exposure to toxics as part of their human rights due diligence.

38. Business enterprises have a responsibility to prevent occupational exposures to toxic substances as part of the due diligence expected of them, to “prevent [and] mitigate” impacts on human rights.³⁴ Prevention of human rights abuse is principal and a prelude to mitigation in due diligence procedures.³⁵ To prevent adverse impacts on workers' rights,

³¹ Convention on the Elimination of All Forms of Discrimination against Women, art. 11 (2) (d).

³² A/33/41, paras. 32–33.

³³ See, for example, Global Sustainability Standards Board, Global Reporting Initiative, *GRI 403: Occupational Health and Safety 2018*. For definitions of business relationships and the value chain, see Office of the United Nations High Commissioner for Human Rights, *The Corporate Responsibility to Respect Human Rights: An Interpretive Guide* (2012).

³⁴ Guiding Principles on Business and Human Rights, principle 15.

³⁵ *Ibid.*

business enterprises have a responsibility, first and foremost, to prevent harmful exposure through the elimination of toxic substances from their products and production processes to the maximum extent possible. If hazards cannot be eliminated, business enterprises should rigorously and systematically apply the hierarchy of hazard controls to prevent exposure (principle 4) and mitigate adverse impacts on health, with the provision of personal protective equipment the protection measure of last resort. Businesses should proactively investigate working conditions throughout their supply and value chains (see also principles 5 and 8).

39. Businesses should always ensure that their policies and practices protect the workers most at risk of exposure to toxic substances. Business enterprises have a responsibility to ensure that children, young workers and women who are pregnant, who have recently given birth or who are breastfeeding should never use or otherwise be exposed to toxic substances at work. Measures may include the adjustment of their working conditions and working hours, the opportunity to perform other appropriate work or offer of work at a different workplace if adjustments are not technically feasible or justifiable at the workplace in question. Special measures must be taken for the protection of workers in high-risk sectors such as mining, agriculture, construction, energy, the military, manufacturing and waste disposal, among others, from exposure to toxic substances.

Principle 4 – Hazard elimination is paramount in preventing occupational exposures.

Commentary

40. The most effective means to prevent exposure of workers to toxic substances is to eliminate them from the workplace. This is reflected in the good practice known as the hierarchy of hazard controls encouraged by ILO and national bodies concerned with occupational safety and health.³⁶ In descending order of effectiveness in terms of preventing exposure, elimination is followed by risk mitigation options such as substitution with less hazardous substances and materials; engineering controls; administrative controls; and the use of personal protective equipment.³⁷ Efforts by ILO and others to improve occupational safety and health have evolved towards greater emphasis on the prevention of occupational accidents and diseases by eliminating the use of carcinogens and other chemicals of concern, complementing the more traditional prescription of protective measures to deal with specific hazards.³⁸

41. As part of their occupational safety and health legislation, States should compel business enterprises to eliminate hazards wherever possible and apply the hierarchy where the hazard cannot be eliminated. States should ensure that these laws and policies are precautionary in practice because of the high level of scientific uncertainty that often prevails. Businesses should apply the hierarchy of hazard controls irrespective of whether it is required by law.

Principle 5 – Duties and responsibilities to prevent the exposure of workers to toxic substances extend beyond borders.

42. The international transfer of dangerous and dirty work, whether extraction of natural resources, use of toxic chemicals and pesticides or disposal of hazardous wastes, without appropriate measures to protect workers against exposures to toxic substances has left workers, their families and their communities at considerable risk of grave impacts on their human rights. For example, as a result of globalization and other factors, chemical-intensive manufacturing and processing activities, once largely located in the highly industrialized

³⁶ National Institute for Occupational Safety and Health, “Hierarchy of controls”, Centers for Disease Control and Prevention, 11 May 2018. Other good practices include the concept of “inherently safer design” where hazards are eliminated, rather than controlled. See Center for Chemical Process Safety, *Inherently Safer Chemical Processes: A Life Cycle Approach*, 2nd ed. (2009).

³⁷ A/33/41, para. 39.

³⁸ ILO Occupational Safety and Health Convention, 1981 (No. 155) and other occupational safety and health standards developed thereafter, including the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187).

countries, have steadily expanded into developing countries and countries with economies in transition through the globalization of supply chains.³⁹ Limited transparency and traceability throughout global supply and value chains enhances the problem of exposure to toxics and obstructs efforts by various stakeholders to improve occupational health.

43. While recognizing the societal benefits that can accompany the international transfer of certain technologies, the transfer of substances and production methods with occupational exposure risks for workers from countries with more advanced systems to countries with lower standards of worker protection continues to be a major problem.⁴⁰ The transboundary transfer of hazardous production processes, materials and substances to countries with lower levels of protection should be considered a form of exploitation if appropriate measures are not taken to protect workers from toxic exposures.

44. States are obliged to take reasonable measures to prevent workers' exposure to toxic substances that occur outside their territories and that give rise to infringements of applicable rights due to the activities of business entities over which they can exercise control and that are reasonably foreseeable.⁴¹ States should require such business entities to act with due diligence to identify and prevent abuses by foreign subsidiaries, suppliers and other business partners.

45. Business enterprises, especially those with transnational operations, are responsible for the consequences of exposures of workers to toxic substances that they cause, contribute to, or to which they are linked.⁴² This entails varying degrees of responsibility for the conditions under which their products are produced, used and disposed of. The responsibilities of business enterprises regarding the right to safe and healthy work and other applicable human rights apply across borders.⁴³ Regarding the consequences to which they are linked, business enterprises have a responsibility to proactively investigate impacts on the rights of workers in their supply and value chains and during the life cycle of their products. Businesses have a responsibility to ensure that they and their suppliers, both at home and abroad, adopt good practices such as the hierarchy of hazard controls to prevent exposure to toxic substances throughout their products' life cycles, their operations and their services.

Principle 6 – States must prevent third parties from distorting scientific evidence or manipulating processes to perpetuate exposure.

Commentary

46. The ability to protect the human rights of workers, including to safe and healthy work, hinges upon the ability to translate evidence into protective laws and policies and the application of the human right to access to the benefits of scientific progress.⁴⁴ Despite clear evidence of both health hazards and exposure, there have been repeated instances where data have been tampered with, evidence obfuscated and processes manipulated to delay action to reduce risks.⁴⁵ This has led to extreme delays, sometimes lasting decades, in

³⁹ United Nations Environment Programme, *Global Chemicals Outlook II: From Legacies to Innovative Solutions* (2019).

⁴⁰ A/33/41, para. 60.

⁴¹ Committee on Economic, Social and Cultural Rights, general comment No. 24 (2017) on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities, paras. 30–32.

⁴² Guiding Principles on Business and Human Rights, principle 13.

⁴³ *Ibid.*, principles 13 and 17; and Committee on Economic, Social and Cultural Rights, general comment No. 24, paras. 16, 25 and 33.

⁴⁴ International Covenant on Economic, Social and Cultural Rights, art. 15 (b). See also A/HRC/36/41.

⁴⁵ For the case of just one class of toxic chemical consisting of thousands of individual substances, per- and polyfluoroalkyl substances (PFAS), see, e.g., the documentary film *The Devil We Know: The Chemistry of a Cover-Up*, available at <https://thediavilweknow.com> (2018); Nathaniel Rich, "The lawyer who became Dupont's worst nightmare", *New York Times Magazine*, 6 January 2016; and Abraham Lustgarten, "How the EPA and the Pentagon downplayed a growing toxic threat", *ProPublica*, 9 July 9 2018. See also ILO Chemicals Convention, art. 18; and A/HRC/36/41.

translating evidence into concrete measures necessary to protect workers. The various methods by which certain business enterprises have sought to delay the adoption of protective laws and regulations, for example, through targeted campaigns to distort science, are well documented.⁴⁶

47. Efforts by any actor to hinder the adoption of health-protective laws, exposure standards and improved practices illustrate the contempt for the duties and responsibilities to prevent workers' exposure to toxics. They go beyond disrespect for human rights, seeking to perpetuate the exploitation of inequalities within and between societies.

48. States must prevent, through legislation or other measures, the deliberate tampering with, obfuscation or distortion of scientific evidence or the manipulation of processes by business enterprises and other third parties to the detriment of workers' health and safety, while ensuring that such efforts respect the right to freedom of expression. Notably, the protection of public health is a legitimate exception to freedom of expression.⁴⁷ Perpetrators of such misconduct should be held accountable, including through criminal sanctions where appropriate.

Principle 7 – Protecting workers from exposure to toxic substances protects their families, their communities and the environment.

Commentary

49. When a worker is exposed to a toxic workplace, the consequences of such exposure stretch far beyond their well-being and violations of their rights. The physical and mental consequences of such exposure are also borne by their families and generally lead to a toxic environment for their communities. For example, air pollutants can not only affect the health of workers directly exposed but also the health of their children and broader communities. Workers engaged in highly toxic livelihoods such as artisanal mining, waste disposal and a range of manufacturing (such as textiles) and agricultural activities often work very close to their homes and communities, sometimes accompanied or helped by their children.

50. Protecting workers from toxic exposures has broader benefits for society. Potential synergies can be realized through stronger cooperation between labour and environmental health efforts at all levels of governance. States should recognize the mutually reinforcing nature of protecting workers from occupational exposures to toxic substances and the protection of the environment. Laws and policies to protect human health from toxic substances should take into account both occupational and environmental exposures, among other factors. States should ensure effective cooperation between authorities with responsibility for labour, public health and the environment.

B. Principles regarding information, participation and assembly

51. Everyone, including workers, has the inalienable rights to freedom of expression, assembly and association, including the freedom to join and form trade unions, and the right to information.

52. The rights to information, participation and freedom of expression and association, as well as the rights to unionize and collective bargaining, enable the prevention of violations and abuses of human rights arising from toxic exposures of workers. Furthermore, the full realization of the right to information is necessary to realize the right of workers to an effective remedy for the adverse impacts of such exposures.

⁴⁶ David Michaels, ed., *Doubt Is Their Product: How Industry's Assault on Science Threatens Your Health* (Oxford, Oxford University Press, 2008).

⁴⁷ International Covenant on Civil and Political Rights, art. 19 (3) (b).

Principle 8 – Every worker has the right to know, including to know their rights.

Commentary

53. The right to information is the foundation for the realization of all workers' rights regarding toxic exposures. Workers have the right to know, inter alia, the implications of exposure, the action being taken to prevent exposure and their rights in relation to such exposure. Every worker has the right to know current information about their actual and potential exposures to toxic and otherwise hazardous substances.

54. Public frameworks for collecting, measuring, monitoring, reporting and verifying information on hazards and exposure levels are necessary for evaluating and analysing health implications and accountability. Maintaining disaggregated, accurate and complete information is necessary to understand specific events and for accurate knowledge of the impact of particular actions on various workers as well as on other exposed groups including children, women of reproductive age, migrant workers and their families, older persons and persons with disabilities.⁴⁸

55. ILO conventions recognize several aspects of the worker's (and their representative's) right to know, as well as of the duties of States and the responsibilities of employers and businesses, including chemical suppliers.⁴⁹ For example, concerned workers and their representatives have the right to "information on the identity of chemicals used at work, the hazardous properties of such chemicals, precautionary measures, education and training".⁵⁰

56. Occupational health and safety information must be available and accessible to workers in a form that effectively serves their needs, bearing in mind their skills, language proficiency and circumstances, and communicated through training and other means.⁵¹

57. States are duty-bound to generate, collect, assess and update information on hazards and risks encountered by workers, as well as epidemiological and other evidence of occupational diseases and disabilities.⁵² States, employers and business enterprises must efficiently communicate health and safety information, including the results of medical examinations, to workers, trade unions and other workers' representatives.

58. Business enterprises are responsible for identifying and assessing the actual and potential exposure by workers to toxic substances in their supply chains and resulting from their own activities.⁵³ This includes information on the types of toxic substances in occupational settings, the intrinsic hazards of such substances and exposure-related data. Chemical suppliers have heightened responsibilities to identify and assess and to communicate information for the protection of workers to workers, employers, other business enterprises and States.⁵⁴

59. As well as the right to information about occupational health risks, workers also have the right to be informed of all their rights and the relevant duties and responsibilities of States and business enterprises regarding these rights, and how they can exercise and defend their rights when they are abused or violated.

Principle 9 – Health and safety information about toxic substances must never be confidential.

60. A persistent challenge to realizing the right to information in the context of toxic chemicals is claims of confidentiality or secrecy. Illegitimate claims of confidential

⁴⁸ A/33/41, para. 26.

⁴⁹ ILO Chemicals Convention, art. 18.; Prevention of Major Industrial Accidents Convention, 1993 (No. 174), art. 20; Safety and Health in Mines Convention, 1995 (No. 176), art. 13 (1) (c); and Safety and Health in Agriculture Convention, 2001 (No. 184), art. 8 (1) (a).

⁵⁰ ILO Chemicals Convention, art. 18 (3) (a).

⁵¹ A/HRC/30/40.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ ILO Chemicals Convention, art. 18.

business information or trade secrecy regarding toxic substances and possible exposures can deprive workers of their human rights, including to safe and healthy working conditions and access to remedies. Illegitimate claims of confidentiality and secrecy involving health and safety information can mask problems and thereby stifle innovative research on products and processes to improve occupational health, while promoting a sense of impunity that can become contagious among business enterprises that continue to exploit and abuse workers by exposing them to toxic substances, and justify deriving benefits from doing so.⁵⁵

61. The question of the treatment of confidential information is pertinent in the domain of occupational safety and health because of the importance of information in preventive and protective measures, as well as providing access to remedies (see principle 12). States have a duty to ensure that claims that information on toxic substances is confidential business information or a trade secret are legitimate.⁵⁶ While confidentiality of personal medical histories must be ensured, they must not be used to obscure health problems arising in the workplace.

62. All health and safety information held by public bodies and business enterprises should be subject to disclosure, unless it falls within a narrow set of public-interest limitations such as the protection of privacy or public health.⁵⁷ It is never legitimate for States or businesses to refuse to disclose health and safety information on the grounds that it is confidential, particularly on the grounds that it would adversely affect profits or competitiveness.⁵⁸ To this end, international agreements on toxic chemicals have repeatedly stipulated that health and safety information about toxic substances shall not be regarded as confidential.⁵⁹ States should ensure that criminal sanctions are applicable to businesses and other actors that fail to disclose health and safety information.⁶⁰

63. Employers and suppliers of chemical substances should clearly state in their policies that they will not keep health and safety information secret from, for example, the State, workers and their families, workers' representatives, employers whose workers may be exposed and affected communities. They should rigorously implement such policies.

Principle 10 – The right to safe and healthy work is inseparable from freedom of association, the right to organize and the right to collective bargaining.

Commentary

64. Workers defending their right to safe and healthy work, among other rights, find strength in numbers. Strong protections for the right to organize, including the formation of unions, the right to freedom of association and the right to collective bargaining, have proven effective in strengthening protections for workers from exposure to toxic substances as well as other risks.

65. Freedom of association and the effective recognition of the right to collective bargaining are recognized by ILO as two fundamental principles and rights of work, applying to all people in all States regardless of the level of economic development.⁶¹ Without freedom of association, including the freedom to form unions, and the right to collective bargaining workers stand little chance of defending their right to safe and healthy work and other human rights. For human rights obligations to be met and the objective of

⁵⁵ A/HRC/39/48 and Corr.1, para. 65.

⁵⁶ A/HRC/30/40.

⁵⁷ *Ibid.*, paras. 38 and 101 (b).

⁵⁸ *Ibid.*, para. 42.

⁵⁹ Stockholm Convention on Persistent Organic Pollutants, art. 9; and Minamata Convention on Mercury, art. 17. See also Dubai Declaration on International Chemicals Management.

⁶⁰ A/HRC/39/48 and Corr.1, para. 28.

⁶¹ ILO Declaration on Fundamental Principles and Rights at Work (1998). See Freedom of Association and Protection of the Right to Organize Convention, 1948 (No. 87) and Right to Organize and Collective Bargaining Convention, 1949 (No. 98).

sustainable development achieved, rights holders must be involved and participation by workers throughout the system should be upheld.⁶²

66. States are obliged to protect, promote, respect and fulfil the rights to freedom of association, to organize and to collective bargaining through effective legislation, regulation and policies. They must ensure that everyone can exercise the right to freedom of association in the workplace without discrimination.⁶³ It is worth noting that according to the interpretation of the Inter-American Court of Human Rights, the right of assembly, relevant to the right to organize, does not necessarily involve the creation of or participation in an entity or organization, but can be expressed in a sporadic meeting or assembly for very diverse purposes, as long as it is peaceful and in keeping with the Convention.⁶⁴

67. Businesses should equally meet their obligations to respect the rights of workers to freedom of association, to organize and to collective bargaining. In addition, States should fulfil their role in preventing or halting violations of these rights by businesses and other parties. Businesses should make arrangements at the level of the enterprise for workers or their representatives and, as the case may be, their representative organizations to inquire into, and be consulted by the employer on, all aspects of occupational safety and health associated with their work; for this purpose technical advisers may, by mutual agreement, be brought in from outside the undertaking.⁶⁵

68. Special attention should be paid by States to address the limited ability of female workers and other classes of workers at heightened risk to take action to defend their rights. For example, in certain contexts unions may not adequately address women's specific concerns. Unions may face difficulties in recruiting women or women may feel disinclined to engage in debates about working condition due to cultural stigmatization of outspoken women.

Principle 11 – Workers, representatives of workers, whistle-blowers and rights defenders must all be protected from intimidation, threats and other forms of reprisals.

Commentary

69. Empowering rights holders, particularly those most at risk, to defend their rights helps States meet their obligations under human rights law and upholds the principle of accountability and the rights to information and an effective remedy, among others. Workers should be encouraged to raise concerns in order to ensure that they themselves and their co-workers are protected.

70. For workers to enjoy their right to safe and healthy work, workers or their representatives must be able to raise their concerns with employers, their co-workers, the press, the public and government agencies without fear of retaliation. Workers, whistle-blowers and human rights defenders must be free from intimidation, threats and other reprisals for exercising their rights and defending the rights of those who are, or may be, victims of occupational exposures to toxic and otherwise hazardous substances. However, numerous campaigns have sought to exploit the financial insecurity of workers by threatening that job losses would result from the competitive disadvantage of providing greater protection from exposure.

71. The threat of loss of employment or income should never be used to gain an advantage when trying to reach an agreement on protecting the rights of workers to safe and healthy work. This includes threats by employers to move jobs abroad.

⁶² Promotional Framework for Occupational Safety and Health Convention.

⁶³ For example, on the grounds of type of work or employment, nature of the workplace, enterprise or sector, or immigration or other status.

⁶⁴ American Convention on Human Rights, arts. 15 and 16; and Inter-American Court of Human Rights, *Escher et al. v. Brazil*, Judgment of 6 July 2009.

⁶⁵ Convention concerning Occupational Safety and Health and the Working Environment, arts. 19 (e) and 20.

72. States that have not already done so should put in place national protection programmes for defenders of labour rights and initiate appropriate disciplinary, civil and criminal proceedings against perpetrators of intimidation, threats and other forms of reprisals against defenders. States should commission independent periodic reviews of national protection programmes to enhance effectiveness in protecting defenders of labour rights, in consultation with workers, whistle-blowers and defenders, as well as trade unions and civil society organizations that represent them.

C. Principles regarding effective remedies

73. Ensuring timely access to justice and effective remedies is not just a human right of workers, but also a potentially powerful incentive for improved working conditions. It can motivate business enterprises to develop and adopt safer practices that engage their responsibility, ranging from substituting less hazardous alternatives to adopting engineering controls to reduce exposures. On the other hand, the impunity of certain business enterprises and other beneficiaries whose acts or omissions lead to the exposure of workers to toxic substances is an impediment to improving the situation of countless workers around the world.

74. Studies suggest that only the smallest fraction of workers harmed by exposure to toxic substances are able to access remedies.⁶⁶ Major obstacles to accountability and remedy include the unreasonably high burden of proof, the long latency periods for consequences to manifest in some cases and the difficulty in establishing causation; substantial information gaps with respect to the identification of hazards, measurement of exposure and specification of the epidemiological impacts; possible exposure to a multitude of different substances in various occupational settings and over a working lifetime; and the provisions of contractual relationships between suppliers and purchasers which can shift responsibility up or down a supply chain.⁶⁷

75. The pervasive inaccessibility of effective remedies to workers who are victims of toxic exposures serves as a barrier to the transition to safer, healthier work for millions of workers around the world. Ensuring the effective implementation of the following principles would both help to bring justice to victims and drive efforts to prevent exposure, avoiding recurrence of violations and future victims.

Principle 12 – Workers, their families and their communities must have immediate access to an appropriate and effective remedy, which should be available from the time of exposure.

Commentary

76. All workers who are victims of infringement or violations of their rights due to toxic exposures must have the right of access to an effective remedy.⁶⁸ An appropriate and effective remedy includes prompt reparation for harms suffered, including health care, compensation, guarantees of non-repetition and adequate training for rehabilitation, reinsertion and reasonable accommodation.⁶⁹ An effective remedy also includes bringing to

⁶⁶ Andrew Watterson and Rory O’Neill, “Double trouble on relative risk for occupational diseases”, *Hazards Magazine*, special online report, March 2015.

⁶⁷ A/HRC/39/48 and Corr.1, para. 70.

⁶⁸ International Covenant on Civil and Political Rights, art. 2 (3) (a); Committee on Economic, Social and Cultural Rights, general comment No. 3 (1990) on the nature of States parties’ obligations; and Guiding Principles on Business and Human Rights.

⁶⁹ Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law (General Assembly resolution 60/147, annex), paras. 11 and 15–23; Human Rights Committee, general comment No. 31 (2004) on the nature of the general legal obligation imposed on States parties to the Covenant, para. 16; and Convention on the Rights of the Child, art. 39. See also ILO, *Promoting Diversity and Inclusion Through Workplace Adjustments: A Practical Guide* (Geneva, 2016).

justice those responsible for exposure to toxic substances. An effective remedy delayed can be an effective remedy denied.

77. Every rights holder is entitled to initiate proceedings for appropriate redress before a competent court or other adjudicator in accordance with the rules and procedures provided by law. States must ensure timely access to effective remedies to victims of human rights violations occurring from exposure to toxic substances.⁷⁰

78. Workers exposed to toxics are harmed when they are exposed, not only when a disease or disability manifests itself in a worker or in a worker's child. The latency of diseases and disabilities after exposure, which can be years or even decades, can make access to an effective remedy impossible for many workers and their families. The prevention of further exposure by workers is an essential element of a guarantee of non-repetition.

79. States have the primary duty to realize the worker's right to an appropriate and effective remedy, including under domestic legislation. States have an obligation to automatically investigate the possible existence of widespread violations after a minimum threshold is reached and to engage in international cooperation in doing so. This should be separate from any investigations or actions undertaken by the victim to pursue an effective remedy. States should ensure the timely cessation of conditions that give rise to occupational exposures, including changes in relevant laws and practices, prohibitions on the production and use of certain classes of substances and the dissemination of information to prevent recurrence.⁷¹ Penalties imposed should be significant enough to induce and motivate business enterprises and other actors to take precautionary measures to prevent workers' exposure to toxic substances and to act as a deterrent to ensure non-recurrence.

80. Workers most vulnerable to the adverse impacts of exposure often face the greatest difficulties in accessing effective remedies. Female workers, for example, are less likely to access effective remedies from toxic exposures due to economic insecurity, power imbalances, unequal access to education and information, caretaking responsibilities and other gendered roles, which further compound the challenge of accessing remedies for exposure to toxic substances.⁷² Therefore, mechanisms for remedy should pay special attention to gender, age, status and other factors that may impede access. States should take enhanced action to provide access to effective remedies to affected groups, specifically women, as they and their offspring experience the impacts of toxic exposures differently and face additional barriers for a multitude of social, economic, legal, technical and cultural reasons.

81. Business enterprises that cause, contribute to or are linked to occupational exposures to toxic substances also have a responsibility to establish robust processes to enable workers to have timely access to an appropriate and effective remedy. States and businesses should consider all possible remedies, for example, by promoting the use of the best available technologies and best environmental practices to prevent exposure.

82. A major challenge, particularly for workers in supply chains, is that the business enterprise may not have sufficient resources to provide an adequate and effective remedy to affected workers. States must ensure that beneficiaries of services are also responsible for the provision of remedies. Indeed, some States have developed legislation to address circumstances where an enterprise provides or enables another to acquire benefits of any kind from worker exploitation, which can include exposure to toxic substances.

83. Information regarding settlements with workers is important to understand the extent of violations of safe and healthy work. The information about remedies provided should be confidential only to the extent necessary to respect the victims' right to privacy. Confidentiality provisions of settlement agreements (commonly known as gag or

⁷⁰ E/CN.4/2006/42, para. 45.

⁷¹ A/HRC/33/41, para. 40.

⁷² See, e.g., Committee on the Elimination of Discrimination against Women, general recommendation No. 33 (2015) on women's access to justice, paras. 3, 8–10 and 13. See also The Danish Institute for Human Rights, *Women in Business and Human Rights* (Copenhagen, 2018), pp. 50–51.

suppression orders) should be unenforceable when used to suppress knowledge about toxic substances and the tactics used to promote their use, given the strong public interest in disclosure (see also principle 9).

Principle 13 – Workers or their families should not bear the burden of proving the cause of their illness or disability to access an effective remedy.

Commentary

84. Placing the burden of proof on those harmed by toxic substances at work can be an enormous and often insurmountable challenge in securing accountability and access to an effective remedy for violations arising from exposure to toxic substances.⁷³ If unaddressed, this can render the rights held by workers regarding their life, health and physical integrity unenforceable with regard to toxic exposures and foster catastrophic impunity for the exploitation of workers by such exposures.

85. The types of information required and the responsibility for proving the cause of harms suffered are often common denominators in cases where workers struggle to access effective remedies. Workers often lack the necessary knowledge and resources to enable them to establish the necessary elements for accessing remedies. First, it is not uncommon for them not to know which substances they were exposed to. Second, substances to which they were exposed may not have been studied for their potential to cause disease or disability in humans; adequate information, and even a minimal amount of health and safety data, is lacking for tens of thousands of potentially toxic industrial chemicals. Third, when allegations of exposure to toxic substances are made, “objective evidence of the extent of, or even the existence of, exposure is almost never available”;⁷⁴ although it should be the responsibility of the employer to track and maintain such data, the failure to do so is used to justify the unacceptable denial of remedies to sick and impaired workers. Finally, workers often move between employers and industries, which can subject them to a diversity of toxic exposures. The personal behaviour of workers, such as tobacco or alcohol use, may be invoked to further complicate the determination of causation.

86. In various circumstances, States have shifted the burden of proof to the employer or other beneficiary of services.⁷⁵ In other cases, judicial and non-judicial mechanisms have lessened the burden of proof on workers to help ensure access to remedies.⁷⁶

87. States should ensure that when there is information that a worker may have been exposed to toxic substances at work and where such exposure has been demonstrated to cause harm in similar situations, the burden should shift to the employer to disprove concerns with reasonable certainty.⁷⁷ This may be particularly appropriate where the facts and events relevant to resolving a claim lie wholly or in part within the exclusive control of the employer or another party.

88. Information that a worker may have been exposed to toxic substances need not be in the form of exposure levels or identification of the precise chemical; it can also include information that occupational diseases are known to have occurred in a particular type of work or industry. The employer or other beneficiaries of services should be allowed to rebut the presumption of responsibility, but the burden should be on the employer.

⁷³ A/HRC/39/48 and Corr.1, paras. 70–71.

⁷⁴ Junius C. McElveen Jr., “Establishing proof of exposure”, Lexology, 2012.

⁷⁵ See First Responder Center for Excellence, “Occupational cancer legislation: presumptive legislation for firefighter cancer by State”, available at www.firstrespondercenter.org. See also United States Court of Appeals for the Fifth Circuit, *Borel v. Fibreboard Paper Products Corp.*, 1973. See further, e.g., United Kingdom House of Lords, *Fairchild v. Glenhaven Funeral Services Ltd.*, 2002.

⁷⁶ McElveen, “Establishing proof of exposure”.

⁷⁷ If the employer no longer exists or cannot otherwise provide an effective remedy to the worker, alternative recourse should be available.

Principle 14 – Depriving workers of their right to safe and healthy work should be a crime.

Commentary

89. Acts or omissions that result in the exposure of workers to toxic substances can be a crime in certain circumstances. While there is a diversity of approaches to the application of criminal sanctions, numerous States have for decades allowed and imposed criminal liability on corporations and/or individuals regarding the exposure of workers to toxic substances.⁷⁸ However, criminal liability should not be the primary or only means of enforcement or access to an effective remedy for the abuse of worker's rights by business entities and/or individuals.

90. Criminal sanctions can be appropriate where business activities result in abuses of the human rights of workers or where a failure to act with due diligence to mitigate risks allows such infringements to occur.⁷⁹ Criminal liability can serve an important function in public protection via deterrence and enforcement, in addition to helping to advance accountability, access to an effective remedy and the fight against impunity.⁸⁰

91. States should ensure that criminal sanctions are available for business entities and/or individuals regarding abuses of workers' rights arising from toxic exposures.⁸¹ States should investigate and prosecute such cases, ensuring that heads of business enterprises bear responsibility along with other actors, as appropriate.

Principle 15 – States should ensure accountability for cross-border cases of workers harmed by occupational exposure.

Commentary

92. Accountability and redress mechanisms must be designed to fit the realities of the modern global economy and its cross-border consumption, production, trade, disposal and investment patterns and the resultant transboundary risks of toxic exposure by workers. International supply chains, transnational business enterprises and various partnerships involving States and foreign investors have expanded and increased. Often, this takes place in countries before adequate governance structures and capacity to sufficiently protect workers from abuses arising from toxic exposures is developed.

93. Just as duties and responsibilities to protect and respect extend across borders (principle 5), so too should accountability. Victims of abuse of their rights in transnational activities and business relationships face specific obstacles in accessing effective remedies for occupational exposure to toxic substances. For various reasons, remedies available to victims before the domestic courts of the State where the harm occurs may be unavailable or ineffective. Challenges include proving damages and establishing causal links, as well as the financial costs of access to remedy in most jurisdictions, limited technical capacity and the lack of independence of some judicial systems.

94. States have an obligation to take steps to redress infringements of workers' rights due to toxic exposures that occur outside their territories or jurisdiction resulting from the activities of actors over which they can exercise control.⁸² These actors include various

⁷⁸ Felice Morgenstern, "Civil and criminal liability in relation to occupational safety and health", in ILO, *Encyclopaedia of Occupational Health and Safety*. Available at www.iloencyclopaedia.org/part-iii/resources-institutional-structural-and-legal/item/215-civil-and-criminal-liability-in-relation-to-occupational-safety-and-health. For example, in Italy, in the 1977 case concerning the use of benzene in a dye factory, the general manager, the technical manager and the works physician, as well as the owners and the managing director, were found guilty of involuntary homicide.

⁷⁹ Committee on Economic, Social and Cultural Rights, general comment No. 24, para. 15.

⁸⁰ A/72/162, para. 52 (citing A/HRC/35/33 and www.commercecrimehumanrights.org/wp-content/uploads/2016/10/CCHR-0929-Final.pdf).

⁸¹ Committee on Economic, Social and Cultural Rights, general comment No. 24, para. 49.

⁸² *Ibid.*, para. 30.

enterprises such as corporations, employers, manufacturers, importers and exporters, among others.

95. Effective accountability and access to remedy in transboundary cases require international cooperation, including measures for prevention and the disclosure of information. States should take steps to improve the effectiveness of cross-border cooperation between State agencies and judicial bodies, with respect to both public and private law enforcement of domestic legal regimes.⁸³

96. In situations where businesses in their jurisdiction cause, contribute to or are linked to the abuse of workers' rights from exposure to toxic substances abroad, home States of such businesses should ensure that their domestic legal systems permit foreign workers to adjudicate claims against such business enterprises and/or individuals in the event that domestic judicial systems are unlikely to ensure that workers harmed by such toxic exposures will have access to justice or effective remedies.⁸⁴

⁸³ See general comment No. 34. For relevant guidance, see A/HRC/32/19 and Corr.1, paras. 24–28 and annex, “Guidance to improve corporate accountability and access to judicial remedy for business-related human rights abuse”, paras. 9.1–9.7, 10.1, 17.1–17.5 and 18.1–18.2.

⁸⁴ See, e.g., Supreme Court of the United Kingdom, *Vedanta Resources PLC and another (Appellants) v. Lungowe and others (Respondents)*, Judgment of 10 April 2019.