



Exploitation by deception in the electronics industry

November 2018



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| Authors | Baskut Tuncak (Common Rights), Alejandro González (GoodElectronics Network) and Jonathan Örnberg (Common Rights) |
| Reviewers | Esther de Haan, Gabriela Quijano, Martin Witteveen, Isabel Ebert, Samentha Goethals, Ted Smith, Amanda Hawes and Irene Schipper |
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The GoodElectronics Network brings together trade unions, grass roots organisations, campaigning and research organisations, academia, and activists who are concerned about human rights, labour rights, and sustainability issues in the global electronics supply chain. GoodElectronics sees it as its mission to contribute to improving corporate and public policies and practices with regard to protecting and respecting human rights and the environment in the global electronics supply chain, with a specific focus on big brand companies.

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Introduction

Tens of millions of workers are exposed to hazardous substances in the workplace every day. According to the International Labour Organization (ILO), approximately four workers die every minute as the result of working in an unsafe or unhealthy workplace.¹

The electronics industry is no exception as it uses toxic substances throughout its lifecycle.² Cases from around the world have brought to light the extent to which electronics workers are exposed to toxic chemicals at work. These cases have implicated governments and companies in the world's richest and poorest countries along the lifecycle of electronic goods – from the extraction of raw materials to the manufacture of electronic components and products, to recycling and recovery operations.

A common denominator across many of these cases of workers' exposure to hazardous substances is the lack or inadequacy of information. In the context of the large volumes of hazardous substances used by workers in various industries, providing adequate information is essential to help prevent risks, mitigate harms, conduct research on safer alternatives, and to provide an effective remedy. In these circumstances, information is fundamental to the enjoyment of human rights – in essence a right unto itself and an enabler of other human rights.

This paper argues that, when workers are not provided with relevant information about the toxic and otherwise hazardous substances in the workplace they are actually or potentially being exposed to, this could constitute exploitation by deception. By 'exposure', we mean exposure of workers to hazardous substances at levels that are known or should be known to be hazardous to their health or that of their prospective offspring, according to scientifically proven health-protective standards.

We have chosen to focus on this insidious form of exploitation due to the essential role that information can play in assessing, preventing, mitigating and remedying workers' exposure to toxic substances. This is, however, only one of the many ways in which workers can be exploited.

Where workers – either employees or contractors – are not provided with relevant information regarding potentially toxic and otherwise hazardous substances in the workplace, this could constitute exploitation by deception. The authors further argue that exploitation by deception regarding toxic exposures could and should be an actionable offence under various laws, such as the UK 2015 Modern Slavery Act and international human rights and labour laws.

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- 1 Päivi Hämmäläinen, Jukka Takala and Tan Boon Kiat, "Global Estimates of Occupational Injuries and Work-related Illnesses," 2017 (Singapore, Workplace Safety and Health Institute).
 - 2 UN Human Rights Council, "Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes," Baskut Tuncak, to the Human Rights Council, August 2017, A/HRC/39/48.

The report begins by describing the problem of deception in the electronics industry, followed by an analysis of the normative framework for workers' rights that are relevant to the problem at hand. The normative analysis focuses on modern slavery, the right to information and the right to safe and healthy work. The report concludes by outlining States' obligations and businesses' responsibilities and makes recommendations to States, businesses and workers' representatives.

What is exploitation in this context?

Exploitation is defined in common parlance as the "action or act of treating someone unfairly in order to benefit from their work."³ Several legal instruments define exploitation from different perspectives. For instance, the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, Supplementing the United Nations Convention against Transnational Organized Crime (the Palermo Protocol) states that exploitation "include[s], at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs".⁴

The Convention on the Right of the Child obliges States to protect children against all forms of exploitation, including economic exploitation, sexual exploitation and maltreatment.⁵ The UK 2015 Modern Slavery Act includes in the definition of exploitation: slavery, servitude and forced or compulsory labour; sexual exploitation; removal of organs; securing services by force, threats or deception and securing services from children and vulnerable persons.⁶ Basically, exploitation refers to taking unfair advantage of someone.⁷

Acute poisonings and other cases of extreme exposure to toxic substances present unquestionable instances of exploitation in the workplace. They represent a violation of workers' right to life, health and physical integrity, subjecting them to violent, torturous and cruel, inhuman and degrading forms of treatment.⁸ However, these internationally recognised human rights also apply to chronic, supposedly "low levels" of exposure to toxic substances.

Such so-called "low-level" exposures to toxic substances can also have violent, torturous, cruel, inhuman and degrading impacts in their own right, whether or not one can prove that a particular workplace environment or substance was a substantial contributing cause of a worker's disease or disability.⁹ Chronic exposure to toxic substances at work can be harmful even when the

3 See Oxford Dictionary website, <https://en.oxforddictionaries.com/definition/exploitation>, accessed 5 May 2018.

4 UN General Assembly, "Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, Supplementing the United Nations Convention against Transnational Organized Crime," 15 November 2000, available at: <http://www.refworld.org/docid/4720706c0.html> (accessed 15 November 2018).

5 UN General Assembly, "Convention on the Rights of the Child," 20 November 1989, United Nations, Treaty Series, vol. 1577, p. 3, available at: <http://www.refworld.org/docid/3ae6b38f0.html> (accessed 15 November 2018).

6 UK Parliament, Modern Slavery Act (c. 30) (MSA), Section 3(5).

7 See e.g. Stanford Encyclopedia of Philosophy (web page, last accessed 15 November 2018), available at: <https://plato.stanford.edu/entries/exploitation/> and US Legal Exploitation Law and Legal Definition (web page, last accessed 15 November 2018), available at: <https://definitions.uslegal.com/e/exploitation/>

8 UN Human Rights Council, "Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes," Baskut Tuncak, to the Human Rights Council, August 2017, A/HRC/39/48.

9 UN Human Rights Council, "Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes," Baskut Tuncak, to the Human Rights Council, August 2017, A/HRC/39/48.

concentrations do not exceed “Permissible Exposure Limits”. Electronics industry executives and experts have known for decades that the official Permissible Exposure Limits are clearly inadequate to protect the health of workers (and their offspring) who are routinely exposed to multiple chemicals, particularly women of child-bearing age.

The dangers are especially great when this kind of exposure is to one or more toxic substances that can cause irreversible health impacts, such as cancer, endocrine disruption, damage to the central nervous, cardiovascular and respiratory systems, as well as reproductive systems and/or systems under development in a fetus. Most chemicals do not even have a “Permissible Exposure Limit” for workers.

In various cases of workers harmed by toxic substances, the information provided to workers has been grossly insufficient regarding the hazards and risks they face. This has been further compounded by efforts made to manipulate, obscure and conceal the evidence of actual or potential health impacts. This lack of transparency is especially ironic when practised by the “Information Technology Industry”, which claims to facilitate information sharing.

1 Electronics workers being deceived about toxic exposures

There are grave concerns that electronics workers continue to be exploited by deception regarding the quality of their occupational environment. Not only does this failure to properly inform workers constitute exploitation by deception, but it also hinders efforts to develop prevention strategies and the adoption of safer substitutes and other measures for protection. It also hampers the ability of workers to access effective remedies.

The following sections illustrate the circumstances when workers in the electronics sector may not have adequate information regarding their exposures to toxic chemicals, with the potential for them to become victims of deception regarding the health and safety of their workplace.

1.2 The hazards of chemical exposure

There are serious concerns that workers are receiving insufficient information about hazardous properties and associated health risks of industrial chemicals used in the electronics industry. Over the past several decades, tens of thousands of different hazardous substances have been used by businesses with inadequate information about their properties. Hundreds if not thousands of these substances are used in the production of electronics.

In addition to information gaps regarding hazardous properties, Permissible Exposure Limits (PEL) for toxic substances are usually non-existent. Even when these levels are established, they continue to be set without independent, health-based assessments of risks. Evidence continues to grow regarding the adverse health risks of exposure, even at levels that are substantially below PEL for workers.¹⁰

Studies have shown the adverse effects of exposure to a combination of chemicals that are not always adequately predicted by risk assessments for individual substances. Workers can be exposed to multiple substances, so these assessments of the effects of combined exposures are crucial. However, at the moment they are insufficient.¹¹ Of particular concern for low-dose and combination effects are industrial chemicals that interfere with the normal functioning of the hormone system,¹² which may lead to adverse health outcomes for the children of female workers of reproductive age.¹³

10 California Department of Public Health, "Occupational Health Hazard Risk Assessment Project for California: Identification of Chemicals of Concern, Possible Risk Assessment Methods, and Examples of Health Protective Occupational Air Concentrations," December 2007. Reproductive and Cancer Hazard Assessment Branch Office of Environmental Health Hazard Assessment California Environmental Protection Agency, available at <https://www.cdph.ca.gov/Programs/CCDCPHP/DEODC/OHB/HESIS/CDPH%20Document%20Library/riskreport.pdf> (accessed 20 November 2018).

11 European Commission, "Combination Effects of Chemicals," (web page, last accessed 7 July 2018), available at: http://ec.europa.eu/environment/chemicals/effects/effects_en.htm

12 Endocrine Society, "What makes endocrine-disrupting chemicals (EDCs) different from other chemicals that might put you at risk?" (web page, last accessed 7 July 2018), available at: <https://www.endocrine.org/topics/edc/what-edcs-are/faq>

13 IPEC and ILO, "Children in hazardous work - What we know - What we need to do," International Programme on the Elimination of Child Labour (IPEC), International Labour Organization (2011), p. 23.

1.3 Levels of exposure and health impacts

Workers can also be deceived regarding the actual degree to which they are being exposed and the adequacy of monitoring of health and safety conditions. There are concerns at virtually every stage of the lifecycle of electronics production and disposal that workers are not being properly informed about their actual level of exposure to the full spectrum of hazardous substances to which they are potentially being exposed.¹⁴

Electronics companies should ensure they have monitoring information that documents the levels and duration of exposure for their own workers and for those of their suppliers. However, this degree of surveillance is usually not implemented throughout the supply chains. Furthermore, there are reports of workers who are unable to access their own medical records. Thus, even in situations where there is some degree of health or air monitoring, workers may not necessarily have access to the results.

1.4 Measures for prevention and precautions

There are concerns that workers are being deceived regarding the adequacy of standards of protection in their workplace. Workers who develop diseases or disabilities linked to working conditions within the lifecycle of electronics often state that they were not informed of the health hazards, risks and considerable uncertainties and unknowns surrounding their exposure to toxic chemicals and other hazardous substances. Additionally, standards for occupational toxic exposure are vastly less robust in terms of protecting workers than the science-based community standards for the same toxic substances. However, these enormous disparities are rarely disclosed to workers let alone acted upon by their employers. This type of deception is of particular concern for female workers of child-bearing age, who make up the majority of the workforce in many segments of the electronics production chain.

Workers typically report they are not provided with information about the restrictions placed on the use of these substances in other countries, including in California – the home state of major electronics brands and retailers. Workers are also not made aware of the fact that hazardous substances used in the electronics industry can routinely produce levels of exposure considered unsafe under much more rigorous, health protective environmental standards.

The dramatic disparities in national legislation, regulation and enforcement regarding the handling of toxic chemicals in the workplace compared to legislation, regulation and enforcement on control and handling of toxics in the general environment are long overdue. Closing the gap would represent a crucial step in ensuring safe jobs and healthy families for all electronics workers.

Governments around the world continue to import electronic goods produced via the use of unquestionably hazardous substances or processes that they have banned or severely restricted within their own jurisdictions. Essentially, they are exporting toxic production to foreign countries with weaker standards of protection for workers. The exploitation of these double standards, typically to lower production costs and increase profit margins, is in and of itself an exploitation

14 A/HRC/30/40 (n 4), paras. 4 and 31.2

of the rights of workers in developing countries as implicated by the lifecycle of electronics – whether from the extraction of resources, manufacturing or disposal.¹⁵

Certain businesses in the electronics industry have been accused of not providing workers with adequate training on handling hazardous substances and using personal protective equipment.¹⁶ Furthermore, there are generally great concerns regarding the over-reliance and inadequacy of personal protective equipment in reducing occupational exposures to toxic substances. There is also evidence that the training received by workers is not adequate to ensure that they use protective equipment and measures properly. Workers are also generally unaware of safer alternatives (substances or processes) that may be used to eliminate or reduce the risk of exposure to toxic substances.¹⁷

1.5 Inaccessibility of information

Affected workers routinely report that they do not know which chemicals they have been using or to which chemicals they are being exposed. This includes insufficient labelling. Companies often rely on material safety data sheets (MSDSs) or safety data sheets (SDSs) and other information retrieval mechanisms to inform workers of chemical risks. While information must be available to workers, the mere presence of MSDS sheets or computer terminals for workers to learn about the hazards present in their workplace is insufficient to provide a reasonable assurance that workers understand the risks of their potential and actual toxic chemical exposures.¹⁸ There are longstanding concerns and reports that workers are not being properly informed in appropriate language geared to their educational levels through MSDSs and SDSs. These concerns include the inaccessible form in which the information is presented and the absence of certain hazard assessments.

Another longstanding problem in the electronics industry has been the refusal of employers to disclose health and safety information, citing confidentiality or trade secrets. As discussed below, health and safety information should never be confidential (see Box 1). The type of information kept secret or confidential includes a chemical's name and identity, as well as components of special formulations. Even where companies are required to monitor the occupational environment and workers' exposure, they are actively seeking to withhold disclosure of this information to workers and their representatives. Furthermore, among various industries, health and safety studies or information about health risks to workers have not been adequately or accurately disclosed.

15 Compare, A/HRC/30/40 (n 4), paras. 75-77 and 95. See earlier discussion surrounding deception as exploitation.

16 See Good Electronics website, https://goodelectronics.org/topic/chemical-exposure/?fwp_post_format=publication&fwp_per_page=10, accessed 22 April 2018.

17 See, e.g. A/HRC/30/40 (n 4), paras. 24, 25 and 31.

18 See, A/HRC/30/40 (n 4), paras. 81 and 82. See also, ILO c.170 (n 15), art. 10, and UN Guiding Principles on BHR (n 38), principles 17, 18 and 21.

1.6 Potential for discrimination

The issue of workers' exposure in the electronics industry is one that encompasses the complete lifecycle of electronic products and crosses international borders. Due to globalisation, most of the hazardous exposures relating to the manufacture and disposal of electronic products today are typically in countries with higher poverty levels and weaker regulatory systems. Among all workers, those who are employed by labour or dispatch agencies, or those who provide services on short-term contracts, are among the most likely to be deceived.¹⁹ Migrant workers are extremely vulnerable to deception, exacerbated by factors such as language barriers, discrimination and restrictions on mobility between employers. Low-income and unskilled workers are also far less likely to demand information regarding health and safety due to their economic vulnerability or other factors.

Age and gender are also important considerations for whether there is deception. Manufacturing facilities for electronics products are reportedly highly gendered. The vast majority of workers in certain facilities are young women of reproductive age. Female workers have alleged that they are not adequately informed regarding the considerable known hazards as well as the unknowns regarding the potential health impacts of toxic exposures during pregnancy. In addition, the exploitation of child workers remains a major concern for the industry. No level of information dissemination can justify children working in hazardous conditions, which is one of the worst forms of child labour exploitation. Reports of these forms of child labour continue to emerge for the extraction of metals used in electronics, such as cobalt, and the disposal, recycling and recovery operations of electronic waste.

¹⁹ Jason Chan, Labour Action China (LAC), Pikki Fung, Labour Education and Service Network (LESN), Pauline Overeem, Centre for Research on Multinational Corporations (SOMO), *The Poisonous Pearl: Occupational chemical poisoning in the electronics industry in the Pearl River Delta, People's Republic of China*, 2016, p. 7.

2 Normative analysis of exploitation by deception and toxic exposures

The right to just and favourable working conditions is a right for everyone, without any distinction, and is applicable to all workers in all settings.²⁰ One of the fundamental elements to guarantee the right to just and favourable conditions of work is safe and healthy working conditions.²¹

The prevention of occupational accidents and disease is an essential part of ensuring safe and healthy working conditions for workers, a prerequisite for the enjoyment of the right to the highest attainable standard of health.²² The UN Committee on Economic Social and Cultural Rights (CESCR) clarifies that the duty on States, and corresponding responsibility on businesses, to improve all aspects of industrial hygiene flows from this right. This includes “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”.²³

In fact, the CESCR has further clarified this obligation and responsibility on States and businesses in the context of workers. They state that the rights to safe and healthy working conditions also include respect for the rights of the physical and mental integrity of the worker in the exercise of their employment.²⁴ The right to physical (or bodily) integrity encompasses the right of each human being to autonomy and self-determination over their own body. This includes their right to control the entry of unwanted, toxic substances into their body, whether from occupational or other sources, including both acute and chronic, lower-level exposures at concentrations below permissible levels for workers but above health-protective community standards and reference doses.²⁵

While a worker’s right to just, favourable, safe and healthy working conditions is a standalone human right, it is also inseparable from other interrelated human rights, which in turn inform what should be considered exploitation by deception. These include the rights to freedom from slavery, servitude and forced labour or compulsory labour and the right to information, among other internationally recognised human rights. The following sections look at key aspects of exploitation by deception.

2.1 Freedom from slavery, servitude and forced or compulsory labour

Under Article 8 of the International Covenant on Civil and Political Rights (ICCPR), no one shall be held in slavery or servitude, and no one shall be required to perform forced or compulsory labour. States have a duty to prohibit slavery and prevent servitude and compulsory or forced

20 ICESCR, Art. 7 and GC 23 (n 2), Para. 5.

21 ICESCR, Art. 7(b), and GC 23 (n 2), Para. 6.

22 GC 23 (n 2), Para. 25.

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

24 Committee on Economic, Social and Cultural Rights, general comment No. 18.

25 A/HRC/22/53 and A/HRC/33/41

labour. This clear obligation on States has been elaborated to include various forms of exploitation, including where consent is not given freely or with full appraisal of all relevant information.

For example, the UK 2015 Modern Slavery Act (MSA) states that a worker is exploited if the person is subject to deception designed to induce him or her: (a) to provide services of any kind; (b) to provide another person with benefits of any kind; or (c) to enable another person to acquire benefits of any kind.²⁶ The MSA criminalises slavery, servitude and forced or compulsory labour, as well as human trafficking.²⁷ Exploitation by deception can be considered a form of slavery, servitude, forced or compulsory labour, and human trafficking, and thus can be a criminal act.²⁸

Provisions of the UK 2015 MSA for slavery, servitude and forced or compulsory labour are to be construed and interpreted in accordance with Article 4 of the European Convention on Human Rights (ECHR). Under this Article, deception of workers is also an important factual circumstance to consider for the determination of work as forced or compulsory labour. A disproportionate burden test is applied under Article 4 to assess the validity of the victim's prior consent.²⁹ Under the disproportionate burden test, the prior consent of victims must be addressed in light of the circumstances of the case.³⁰ Exploitative working conditions and the deception of workers forms an important part of the factual circumstances to take into account under the disproportionate burden test.³¹

The ILO Forced Labour Convention (c. 29) defines forced labour as “all work or service which is extracted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily”.³² Under the 2014 Protocol to the Forced Labour Convention (p. 29) the education and informing of people and employers constitute an integral aspect of the prevention of forced labour.³³ Implicit in this is the recognition that exploitation by deception is a risk that requires active, preventative measures to be taken by States and businesses.

2.2 Right to information

Every worker has a human right to information, including information about the health and safety of their working conditions. The worker's right to information, also called the worker's “right to know”, informs the interpretation of exploitation by deception when workers are exposed to toxic substances. States are required to realise the worker's right to know as part of their human rights obligations.³⁴

26 UK Parliament, Modern Slavery Act (c. 30) (MSA), Section 3(5). See further the UK case; Regina v. David Zielinski (2017/01410/A4, Court of Appeal Criminal Division, 2017) EWCA Crim 758, 2017 WL 03129080.

27 UK 2015 MSA, Section 5.

28 UK 2015 MSA, Sections 1(4), 2(1) and 3(1).

29 Van Der Musselle v. Belgium, Application no. 8919/80, Council of Europe: European Court of Human Rights, 23 November 1983, Para. 37.

30 Chowdury and Others v. Greece, Application no. 21884/15, Council of Europe: European Court of Human Rights, 30 March 2017, Para. 96-98.

31 Chowdury and Others v. Greece (n 14), Para. 98-101.

32 International Labour Organization (ILO), “Forced Labour Convention,” C29 (1930) (c.29), Article 2(1).

33 C.29 (n 10), Articles 1 and 2(1), and ILO, “Protocol of 2014 to the Forced Labour Convention,” (2014) (p.029), Article 2.

34 E.g. ICCPR (n 24), Art. 19(2), CRC (n 24), Art. 13(1), and UN General Assembly, “International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families” (1990) A/RES/45/158, art. 33, and GC 23 (n 2), para. 63.

The right to information is widely recognised at national, regional and global levels.³⁵ For example, both the International Covenant on Civil and Political Rights (ICCPR) and the Convention on the Rights of the Child (CRC) stipulates the right of “freedom to seek, receive and impart information and ideas of all kinds”.³⁶ This includes the right to access information held by public bodies regardless of their forms, storage, source and date.³⁷ Principle 10 of the 1992 Rio Declaration on the Environment and Development also recognises the right of access to information about hazardous substances, which has been codified in regional treaties and national laws.³⁸

Under the ILO Chemicals Convention (c. 170) Article 18, the minimum type of information that workers and their representatives should have a right to access includes: (1) the identity and hazardous properties of chemicals used at work; (2) precautionary measures; (3) education and training; (4) labels and markings; (5) chemical safety data sheets; and (6) other information required by the Convention, such as information required of states and businesses.³⁹

However, the right to information about toxic chemicals is more than simply a right of “access” to information. From the duty of States to protect the various human rights of workers implicated by toxic substances flows a positive obligation to take active measures to ensure that information is not only accessible, but also available regarding the hazardous properties of substances placed on the market and emitted into the environment.⁴⁰ The right of victims to an effective remedy, the right to meaningful participation, the right not to be subject to experimentation without consent, the right to the highest attainable standard of health, the rights to just, favourable, safe and healthy work, the right to life and other human rights all depend on the availability of information to workers and their representatives.

Furthermore, health and safety information about hazardous substances must not only be available and accessible, but must also be in a form that actually protects the rights of all workers.⁴¹ Simply making information available or accessible does not necessarily make this information functional. In order to fulfil the criteria of availability and accessibility, information provided to workers should be functional so workers can readily use it.⁴²

35 UN General Assembly, “International Covenant on Civil and Political Rights” (ICCPR) (16 December 1966, UNTS, Vol. 999, p. 171), art. 19(3), UN General Assembly, “Convention on the Rights of the Child” (CRC) (20 November 1989, UNTS, vol. 1577, p. 3), Art. 13.

36 ICCPR (n 24), art. 19(2), and CRC (n 24), Art. 13.

37 See GC no. 34 (n 4), Para. 18.

38 For example, the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) (1999) 2161 UNTS 447; 38 ILM 517, codifies the right of access to information. Rio Declaration on Environment and Development (Rio Declaration) (1992) UN Doc. A/CONF.151/26 (vol. I); 31 ILM 874, Principle 10 states that “At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available.”

39 ILO c. 170 (n 15), art. 18(3)(a)-(d).

40 A/HRC/30/40 (n 4), paras. 50, 61, 101(a).

41 A/HRC/30/40 (n 4), paras. 35 and 48.

42 See, A/HRC/30/40 (n 4), Para. 35.

In order to be functional, information for workers should be accessible, imparting knowledge with a reasonable amount of effort on the part of the intended user, and up to date.⁴³ Information about hazardous substances is not functional for workers unless it prevents harm, enables participation and the right of workers to remove themselves from unhealthy working conditions, empowers consumers to make decisions aligned with their ethics and values, and ensures accountability, access to justice and an effective remedy.⁴⁴

In addition, everyone has a right not to be subjected to scientific experimentation without their consent, including workers.⁴⁵ The corresponding duty on States and businesses requires that adequate measures should be taken to generate information about the hazards and risks of toxic chemicals to which workers may be exposed, and to protect workers from exposure to industrial substances before fully informed consent is freely given regarding both known and unknown risks that may accompany exposure.⁴⁶

Deception of workers must be defined to include, at a minimum, instances where there is a failure to respect and protect their right to know.⁴⁷ To respect, protect and fulfill the right to safe and healthy working conditions, among other internationally recognised rights implicated by exposure to toxic substances at work, States must generate, collect, assess and update information about these substances and their impacts.⁴⁸ States must also ensure that workers have access to this information in a form that meets the needs and training of workers, while taking additional measures to inform those who are disproportionately at risk of adverse impacts as a result of specific work assignments, age, a pre-existing condition, pregnancy or other factors contributing to increased risk from exposure.⁴⁹

Under ILO c. 170, States are required to establish classification systems of all chemicals that may be used by workers, in accordance with national or international standards.⁵⁰ States must also ensure that all chemicals are labelled and marked, and stipulate requirements for such marking and labelling.⁵¹ States also have an obligation to produce chemical safety data sheets to enable the identification of the chemical and its surrounding information and safety procedures.

States have a duty to compel businesses to perform their responsibilities to respect the rights of workers to receive adequate information.⁵² States have a duty to monitor businesses.⁵³ Along

43 Professionals require a higher degree of technical information about hazardous substances and waste than potentially affected consumers and community members. From this follows that technical information about hazardous substances appropriate for regulators and researchers is not appropriate and user-friendly for consumers at the point of purchase. Technicalities must be transformed into a format that is functional, to enable individuals and groups of individuals to make informed choices. See, A/HRC/30/40 (n 4), Para. 36.

44 See, A/HRC/30/40 (n 4), Para. 35.

45 International Covenant on Civil and Political Rights, Art. 7.

46 UN Human Rights Council, "Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes," Baskut Tuncak, to the Human Rights Council, August 2017, A/HRC/39/48.

47 ICESCR (n 2), art. 7, GC 23 (n 2), Para 68.

48 A/HRC/30/40 (n 4), Para. 50.

49 A/HRC/30/40 (n 4), Paras. 61 and 67.

50 See, ILO c.170 (n 15), Art. 6.

51 See, ILO c.170 (n 15), Art. 7.

52 See, UN Guiding Principles on BHR (n 38), Principles 4 and 5.

53 See, e.g. ILO c.170 (n 15), Art. 4, see also, UN Guiding Principles on BHR (n 38), Principles 3-6, and GC 23 (n 2).

these lines, States must ensure confidentiality claims are legitimate.⁵⁴ As discussed in Box 1, there is an international agreement that health and safety information should never be confidential.

According to both the United Nations Guiding Principles on Business and Human Rights (UNGPs on BHR) and the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises (Guidelines), business enterprises must identify, prevent, mitigate and account for how they address their adverse human rights impacts in order to fulfil their responsibility to respect human rights. This includes: assessing actual and potential human rights impacts, integrating and acting upon the findings, tracking responses, and communicating how impacts are addressed.⁵⁵ The recent OECD Due Diligence Guidance for Responsible Business Conduct further stresses that enterprises should communicate externally relevant information on due diligence policies, processes and activities conducted to identify and address actual or potential adverse impacts, including the findings and outcomes of those activities.⁵⁶

Under the ILO Chemicals Convention (c. 170) businesses must not only prevent, assess, monitor and record workers' exposure to hazardous chemicals, but they must also ensure that this data is accessible to workers.⁵⁷ Such provisions should be a fundamental component of any business enterprise's human rights due diligence. Furthermore, businesses are expected to make risk assessments about the use of chemicals at work and take appropriate measures.⁵⁸ This follows from the responsibility of businesses to conduct human rights due diligence.⁵⁹

In addition, the ILO Chemicals Convention requires biomonitoring of the workplace. At the moment, 21 countries have ratified the ILO Chemicals Convention, including important electronics production hubs such as Brazil, China, the Republic of Korea and Mexico. The convention specifies that employers have a responsibility to monitor exposure when "this is necessary to safeguard their safety and health or as may be prescribed by the competent authority".⁶⁰ Applicable employers are required to make this information available to employees and their representatives, and to keep records for a specified period of time.⁶¹

ILO Standards also require businesses to ensure that all chemicals used at work are marked or labelled and that chemical safety data sheets (SDS) are provided.⁶² In addition, businesses are obliged to make available to workers (and their representatives) a record of all hazardous substances used in the workplace, which is duly cross-referenced to the corresponding Chemical SDS.⁶³ Where businesses fail to provide their employees and contractors with this type of

54 A/HRC/30/40 (n 4), para. 71.

55 See, UN Guiding Principles on BHR (n 38), Principles 15 and 17 and OECD Guidelines for Multinational Enterprises. The human right due diligence duty of businesses requires assessment of actual and potential human rights impacts.

56 OECD, "Due Diligence Guidance for Responsible Business Conduct", 2018, available at <http://mneguidelines.oecd.org/OECD-Due-Diligence-Guidance-for-Responsible-Business-Conduct.pdf>.

57 ILO c.170 (n 6), Art. 12(a-d).

58 ILO c.170 (n 6), Art. 13.

59 Assessing, monitoring, recording and making available information on worker exposure is an essential component in order for businesses to determine risks and prevent any harm. See UNGP on BHR (n 38), Principle 18, and specifically see, A/HRC/30/40 (n 4), Paras. 83 and 87.

60 ILO c.170 (n 15), Art. 12(c).

61 ILO c.170 (n 15), Art. 12(d).

62 ILO c.170 (n 15), Art. 7, 8 and 10(1).

63 ILO c.170 (n 15), Art. 10(4).

information in an appropriate and comprehensible form, this is deception and can constitute exploitation.⁶⁴

Businesses are required to obtain relevant information from chemical suppliers, to refrain from using chemicals that lack information and to ensure only certain chemicals are used (consistent with ILO c. 170 Article 6-8).⁶⁵

The right of workers to information about toxic substances reinforces the argument that the exploitation of workers includes circumstances when they are deceived about their actual and potential exposure to toxic substances.

64 Compare, GC 34 (n 4), para. 18, A/HRC/30/40 (n 4), paras. 24 and 29, as well as, ILO c.29 (n 6), ILO r.177 (n 6), and the ECtHR and UK case-law described above.

65 ILO c.170 (n 15), Art. 10(3).

3 States' obligations, business enterprises' responsibilities and relevant recommendations

As discussed above, wherever workers – either employees or contractors – are not provided with relevant information regarding toxic and otherwise hazardous substances in their workplace, this could constitute exploitation by deception.

States and businesses have duties and responsibilities to be aware of working conditions. With this in mind, we are making the following recommendations to States and businesses, and to representatives of workers in the electronics industry.

3.1 States' obligations and recommendations to address them

States are required to respect, protect and fulfil human rights and must take all necessary steps to do so.⁶⁶ States also have a duty to investigate actual and potential human rights impacts from exposure to toxic substances that may arise throughout the lifecycle of products, such as electronic products.⁶⁷

Recognise exploitation by deception

States should recognise exposure to hazardous substances by workers without their prior informed consent as a form of exploitation. States should include the exposure of workers to hazardous substances without their prior informed consent as part of their definition of exploitation, modern slavery, servitude, forced or compulsory labour, and the like.

The notion that any worker would ever willingly consent to being harmed (or to potentially exposing their unborn child to harm) as the “price” of a job is contrary to the fundamental human right to a safe and healthy working environment and to the right to health. A “hazard duty” pay or other enticements to gain “consent” are indefensible rationalisations for exposing workers to substances at levels that are known or should be known to be hazardous to their health or that of their prospective offspring.

Enforce exploitation by deception

States should ensure that criminal and civil sanctions are available for the exploitation of workers, including when employers expose them to hazardous substances, as well as to substances that are or should be known to be hazardous.

States should treat the exposure of workers to hazardous substances as a criminal offence. Therefore, criminal sanctions should be available and legislation should be in place that allows for criminal liability and the prosecution of businesses that expose workers to substances that are or should be known to be hazardous.

66 See, ICCPR (n 24) and ICESCR (n 2), Article 2(1-2). UN Human Rights Committee (HRC), General Comment no. 31 [80], “The nature of the general legal obligation imposed on States Parties to the Covenant” (2004), CCPR/C/21/Rev.1/Add.13, Paras. 6-7.

67 A/HRC/30/40 (n 4), Para. 50.

In claims of occupational exposure to hazardous substances, States should guarantee that workers do not bear the burden of proof. This burden of proof should shift to employers as they are responsible for monitoring and preventing exposure.

States should ensure that their laws allow jurisdiction for offences committed abroad. Home States should assert jurisdiction for corporate abuse of workers' rights abroad due to toxic exposures, including criminal sanctions where appropriate.

Implement the worker's right to know

States should rigorously implement the worker's right to know, and ensure that necessary information about hazardous substances is available and accessible in a form that enables workers to understand the hazards and risks of their job.

Deception should be defined to include the failure to assess, monitor and record workers' exposure to hazardous chemicals, as well as to make information about known and unknown risks fully accessible to workers and their representatives.

3.2 Responsibilities of businesses in the electronics sector and recommendations to address them

Businesses have a responsibility to respect human rights. As such, businesses should avoid infringing on the human rights of others and should address human rights impacts that they are involved in.⁶⁸ This responsibility includes internationally recognised human rights – such as the right to safe and healthy working conditions.⁶⁹

The responsibility of businesses also includes respecting the right to information.⁷⁰ To meet this responsibility, businesses should put in place appropriate policies and processes, including: policy commitments, human rights due diligence processes and remediation processes.⁷¹

In discharging their responsibility to conduct human rights due diligence, businesses are responsible for identifying and assessing the actual and potential impacts of hazardous substances and wastes, either through their own activities or as a result of their business and supply chain relationships;⁷² and to effectively and efficiently communicate information to workers, other businesses, governments and the public.⁷³

Responsibility to inform workers

Businesses have a responsibility to provide workers, and by extension their representatives, with various types of information. This includes: information about hazards associated with exposure to chemicals used in the workplace;⁷⁴ practices and procedures for safe use of chemicals at

68 United Nations, "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect, and Remedy' Framework," (2011) (UN Guiding Principles), Principle 11.

69 UN Guiding Principles on BHR (n 38), Principle 12, and ICESCR (n 2), Article 7(b) on BHR.

70 UN Guiding Principles on BHR (n 38), Principle 12, A/HRC/30/40 (n 4), Para. 78, and Dubai Declaration on International Chemicals Management in UNEP, Strategic Approach to International Chemicals Management (2006), Para. 10.

71 UN Guiding Principles on BHR (n 38), Principle 15.

72 A/HRC/30/40 (n 4), Para. 83, and UN Guiding Principles on BHR (n 38), Principle 18.

73 A/HRC/30/40 (n 4), Paras. 87-89.

74 ILO c.170 (n 15), Art. 15(a).

work;⁷⁵ and how to obtain and use information provided by labels, chemical safety data sheets and other resources.⁷⁶

Businesses must never keep health and safety information confidential, either from workers, their representatives or relevant government agencies.

Businesses must make occupational and health information available to workers in a form that is functional, understandable, updated and useful for workers. This information should include actual and potential exposures to hazardous substances, and should be based on routine exposure monitoring (that is designed to detect both health-protective concentrations (and duration) as well as health monitoring for indicators of diseases potentially related to the toxic chemicals in the workplace.

Businesses should ensure that their employees, contractors and other workers in their supply chain are fully informed of their occupational health hazards and risks. This is based on a worker's right to know and on the fact that communicating how impacts are addressed is a key element of due diligence.

Responsibility to generate information

It is not acceptable for businesses to plead ignorance of the risks associated with toxic and otherwise hazardous substances and waste products in their activities or their business relationships, including in the lifecycle of their products.⁷⁷ This responsibility also extends to the relationships of businesses in the supply and value chains of the electronics industry.⁷⁸ Businesses have the tools and more than adequate capacity to evaluate hazards and risks in chemicals, materials and throughout the supply and value chain of their products.

Employers have an obligation to inform themselves about hazards and risks in order to minimise the exposure of their workers to hazardous substances. Businesses must undertake an assessment of the hazards and risks of chemicals used at work and take measures to minimise worker exposure, while also informing workers of their assessment and prevention measures taken.⁷⁹ Businesses have a responsibility to inform themselves of working conditions in both their facilities and along their supply chains.⁸⁰

Electronic brands, as well as their suppliers, should ensure that they routinely generate exposure monitoring data (calibrated to health protective levels). They should do so all the way along their supply chain and to the maximum extent possible.

Responsibility to inform workers about their rights

Businesses have a responsibility to inform workers about their rights, including the right to information, the right to safe and healthy working conditions, the right of workers to remove themselves from unhealthy working conditions and the right to freedom of association.

75 ILO c.170 (n 15), Art. 15(d).

76 ILO c. 170 (n 15), Art. 15(b).

77 ILO c.170 (n 15) requires businesses to "prevent, assess, monitor and record" the exposure of workers to hazardous chemicals, see Art. 12(a-c).

78 ILO c.170 (n 15) regarding information from chemical suppliers. See also UN Guiding Principles on BHR (n 38), Principle 13 regarding business relationships.

79 See e.g. ILO c.170 (n 145) articles 13 and 15. See also UN Guiding Principles on BHR (n 38), Principle 15.

80 See UN Guiding Principles on BHR (n 38), Principle 15.

The right to information is a precondition for the realisation of several human rights.⁸¹ Businesses have a responsibility to provide “any and all information necessary to respect human rights affected by hazardous substances”.⁸² From this follows that business entities have a responsibility to inform workers of their rights. These rights include the rights to safe and healthy working conditions, life, highest standards of health, physical integrity and non-discrimination, as well as special protections enumerated for children, women and migrants.

Workers also have individual and collective rights to information, meaningful participation and freedom of association and collective bargaining to help improve the safety of working conditions.⁸³ The right of workers to remove themselves from situations they are reasonably justified to believe are dangerous, including the risks of toxic chemical exposure, and the right to freedom of expression are both central human rights. Workers must be informed about these rights.⁸⁴

Furthermore, workers must be informed about the mechanisms to individually and collectively exercise their right to access justice and effective remedies. An effective remedy includes not only health care, compensation and guarantees of non-repetition, but also adequate training to ensure a just transition to safe and healthy work.⁸⁵

Responsibility to implement human rights due diligence throughout the lifecycle of products
All companies, including those that sell finished products, have a responsibility to ensure that the rights of workers throughout their product’s lifecycle are respected and protected. This includes a positive obligation to ensure that workers throughout the product’s lifecycle are not exploited.

Businesses should include exposure to hazardous substances as part of their human rights due diligence, and they should apply such due diligence throughout their supply chain and the lifecycle of their products. As part of their human rights due diligence, businesses in the electronics industry need to identify, prevent, mitigate and account for how they address occupational exposure of workers to toxic and otherwise hazardous substances throughout the lifecycle of their products and supply and value chain. Companies should ensure maximum transparency regarding this human rights due diligence.

Business enterprises’ supply and value chain is often located in various countries which have differing standards for occupational health and safety. In such cases, the highest standard that offers the most protection to workers, should be applied along the entire supply and value chain.

3.3 Recommendations to workers’ representatives

Workers or their representatives should pursue remedies for workers who are being exposed to hazardous substances or who are not being properly informed of the health hazards they face due to actual and potential exposure. This should be treated as exploitation by deception under applicable national laws and international mechanisms.

81 A/HRC/30/40 (n 4), Paras. 23-25.

82 A/HRC/30/40 (n 4), Para. 89.

83 Regarding collective rights, see, GC 23 (n 2), Para. 25, and ILO c.170 (n 15), Article 18(3) (“workers’ representatives”).

84 ILO r.177 (n 15), Paras. 25(1)(b) and 26(b), ILO c.170, Paras. 18(1) and 18(3), and A/HRC/30/40 (n 4), Para. 31.

85 A/HRC/30/40 (n 4), Para. 35, see UN Guiding Principles on BHR (n 38), Principle 25.

The obligation to communicate such information about hazardous substances to workers and the public is enshrined in the European system of human rights, where it has been stipulated as part of the State's positive obligations under Article 2 of the ECHR.⁸⁶ A State's failure to disseminate this information might be indicative of a violation of the State's obligations under Article 2 of the ECHR.⁸⁷ Any person, non-governmental organisation or group of individuals that claim to be victim of a violation of ECHR articles by a State that is party to the ECHR may file an application to the European Court of Human Rights.⁸⁸

In the case of non-compliance of a State that has ratified ILO conventions, a complaint can be filed by other ILO Member States, a delegate to the International Labour Conference, or the ILO Governing Body.⁸⁹ These complaints may also be referred to the International Court of Justice for litigation.⁹⁰

Workers throughout the lifecycle of the electronics industry should be regularly monitored for exposure to any toxic substances in the workplace and informed of the results. This includes ambient air monitoring, which is designed to detect "low levels" of exposures to multiple chemicals.

"Biomonitoring" – the measuring of the amounts of hazardous substances in people – may also provide important information in the prevention and reduction of occupational exposure of workers to hazardous substances.⁹¹ Biomonitoring initiatives can help to provide disaggregated information on the adverse human health effects associated with hazardous substances. Disaggregated information about the adverse effects linked to hazardous substances may help to identify individuals at risk of disproportionate impacts, as well as helping to provide an effective remedy to any harms.⁹²

Until businesses take their responsibilities seriously and make sure electronics workers along their supply chain are not being deceived about the hazards they face every day in the workplaces, workers around the world will continue to face egregious forms of exploitation and infringements of their human rights.

86 Öneriyildiz v. Turkey, App. No. 48939/99, European Court of Human Rights (ECtHR) (2004), Paras. 89-90 and 108-109.

87 The success of such claims is subject to the established jurisprudence of the ECtHR. The operative choices of the local authorities of a State is subject to the requirements of: prescribed by law, legitimate interest, necessity in a democratic society, proportionality and margin of appreciation.

88 European Convention on Human Rights (ECHR), Article 34.

89 International Labour Organization (ILO), "Constitution of the International Labour Organization (ILO)", (1919) (ILO Constitution), Article 26.

90 ILO Constitution (n 59), Article 29.

91 A/HRC/30/40 (n 4), Para. 57.

92 A/HRC/30/40 (n 4), Para. 68.

Box 1 Health and safety information must never be confidential or secret

Claims of confidentiality or secrecy by businesses are a persistent challenge to realising the right to information in the context of toxic chemicals. States must ensure that confidentiality claims are legitimate to protect and realise human rights.

Under the principle of maximum disclosure, there is a presumption that all information held by public bodies should be subject to disclosure, subject to a narrow set of public-interest limitations, including the protection of public health.⁹³

Some types of information should never in a legitimate way be considered confidential:

- 1** Information about systematic or widespread human rights violations.
- 2** Information about other violations of human rights that would prevent accountability, meaningful public participation, or access to an effective remedy.
- 3** Public health and safety information on hazardous substances.⁹⁴

States cannot choose to withhold this type of information. Similarly, under the UN Guiding Principles (11, 12 and 18), businesses should not be able to withhold such information according to their responsibilities to respect human rights and to conduct human rights due diligence.

It is never legitimate to claim that public health and safety information on hazardous substances is confidential.⁹⁵ Indeed, international agreements on toxic chemicals stipulate that health and safety information about hazardous substances should not be confidential.⁹⁶ The refusal of States or businesses to disclose information because it would adversely affect profits or competitiveness is not a legitimate exception to the right to information.

93 A/HRC/30/40 (n 4), Para. 38.

94 A/HRC/30/40 (n 4), Para. 41.

95 A/HRC/30/40 (n 4), Para. 42.

96 United Nations Environment Programme (UNEP), "Stockholm Convention on Persistent Organic Pollutants (PoPs)," (2001), Art. 9; and UNEP, Minamata Convention on Mercury (2017), Art. 17. See also the Dubai Declaration on International Chemicals Management in UNEP (n 74).



GoodElectronics
Sarphatistraat 30
1018 GL Amsterdam
The Netherlands

+31 20 639 12 91
info@goodelectronics.org
www.goodelectronics.org

