

## **Business & human rights in the chemical industry: An assessment of company responses to human rights issues**

Potentials for progressive corporate practice & governmental frameworks

January 2018

As one of the largest manufacturing industries in the world, the chemical industry<sup>1</sup> converts oil, gas and other raw materials to create over 70,000 different chemical products. Many of these are fundamental components of consumer and industrial products such as plastics, building materials, textiles, electronics, cosmetics, pharmaceuticals and cleaning solutions, as well as pesticides and other agricultural chemicals.<sup>1</sup> This industry employs more than 20 million people with a revenue valued at over €3500 billion in 2015.<sup>2</sup>

While a number of chemical products are recognised as safe, a large quantity of chemical products are hazardous, presenting significant risks to both human health and ecosystems. For example, numerous communities suffer from toxic pollution emitted by nearby manufacturing facilities either producing or using chemical products.

In 2011, the UN Human Rights Council affirmed that hazardous substances, including toxic chemicals and pollutants, pose a serious risk to the full enjoyment of human rights. The mandate of the UN Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes covers monitoring and reporting on the human rights impacts of such substances throughout their lifecycle, including production, management, handling, distribution and final disposal.<sup>3</sup>

Under his mandate, the responsibility of businesses in the chemical industry to respect human rights, as set out in the UN Guiding Principles on Business and Human Rights (UNGPs), is an area of particular importance. As part of their responsibility to respect human rights, businesses must undertake human rights due diligence throughout their operations. This briefing provides a snapshot overview of allegations of human rights abuses brought against companies in the chemical industry. The information is based on data collected by the Business & Human Rights Resource Centre between 2012 and 2017, publicly available information and information about current regulatory frameworks and industry initiatives. It is not intended to be comprehensive and covers only a small number of companies, particularly when compared to the industry's size, but aims rather to provide an insight into some of the core human rights challenges and opportunities for the industry.

### **Analysis of company responses**

#### *Overview of company approaches*

Between 2012 and 2017, the Business & Human Rights Resource Centre received information concerning 28 cases of reported human rights abuse by businesses in the chemical industry. The Resource Centre sought a total number of 57 company statements from 37 companies in the chemical industry in response to these cases. Some companies were approached more than once in relation to different cases. Alongside manufacturers of basic chemicals, companies approached for a response included producers of speciality chemicals, such as crop-protection and other

<sup>1</sup>The Essential Chemical Industry Online (2016) *The Chemical Industry*, available at: <http://www.essentialchemicalindustry.org/the-chemical-industry/the-chemical-industry.html>

<sup>2</sup>The European Chemical Industry Council (2017) *Facts and Figures 2016*, available at: <http://www.cefic.org/Facts-and-Figures/>

<sup>3</sup>Office of the United Nations High Commissioner for Human Rights (2017) *Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes*, available at:

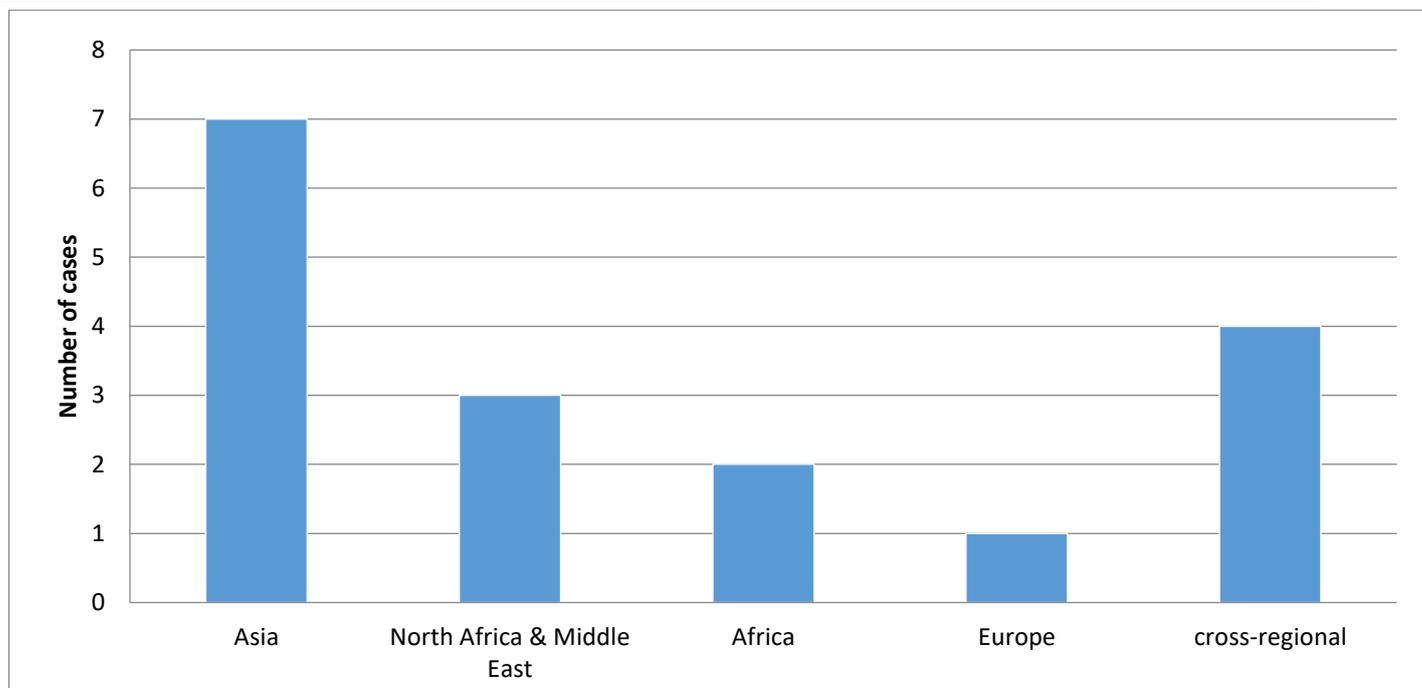


Figure 1: Geographic distribution of cases of alleged human rights abuse

agricultural as well as consumer products such as cosmetics. As various chemical companies also produce pharmaceuticals and given the similar concerns surrounding the production, management and disposal of potentially hazardous substances, responses from pharmaceutical companies were included in these totals.

### Scope of the briefing

However, due to the focus of the mandate of the UN Special Rapporteur, only those instances of reported human rights abuse linked to the toxic or otherwise hazardous properties of chemical products were included for further analysis. This was true in 17 out of the 28 cases and 27 out of the 57 company responses sought by the Business & Human Rights Resource Centre. The following analysis is based on these 27 company responses from 15 chemical and pharmaceutical companies. These 17 cases and 27 company responses are a sample of allegations of human rights abuses against chemical companies. They by no means cover all cases of alleged human rights abuse associated with the business operations of chemical companies.<sup>ii</sup>

Companies responded to 81% of these invitations to comment, which is above the Resource Centre's global average response

rate of 75%.<sup>4</sup> This high response rate in relative terms suggests a willingness on behalf of companies in the chemical industry to engage with the issues raised.

### Where does alleged abuse take place?

Sixteen out of the 17 cases of alleged human rights abuse took place in countries outside of Europe and North America. The majority of cases occurred in Asia (41% of cases), followed by cases affecting more than one region (24%), North Africa & the Middle East (18%) and Africa (12%). Only 5% of cases concerned abuses in Europe (see figure 1).

There were only four cases where the country of reported abuse and the location of the corporate headquarters coincided (two in China and two in Israel with impacts in China and Israel respectively). Seventy-nine percent of documented cases on the other hand concerned extra-territorial human rights abuses, i.e. where impacts were reported abroad. These cases involved six companies headquartered in Europe (Germany, France and Switzerland) with impacts reported in India, South Africa, Cameroon and the UK, as well as cross-regionally and four companies headquartered in the Americas (USA, Canada and Venezuela)

<sup>4</sup>Business & Human Rights Resource Centre (2018) *Company Response Rates*, available at: <https://business-humanrights.org/en/company-response-rates>

with impacts reported in India and Morocco, as well as cross-regionally.

The regional weighting in terms of reported human rights abuse as opposed to the location of the corporate headquarter underscores the global reach of the industry. It also shows that both the human rights issues occurring in connection with business activity in the chemical sector and the challenges with addressing them are global in their nature.

#### *Which human rights issues are at stake?*

This section explores two key human rights issues that chemical companies can impact: (1) workers' rights and (2) indigenous and communities' rights. These represent areas of risk based on the information provided to the Resource Centre. They do not cover the full scope of human rights impacts chemical companies can have. Others include the rights of women and children outside the context of child labour.

Almost half of reported cases associated with exposure to hazardous substances occurred within companies' supply chains (upstream sourcing of raw material as well as the sale and use of substances downstream).<sup>iii</sup> This finding

suggests that companies may face particular challenges monitoring and conducting human rights due diligence throughout their supply chains, which can pose severe risks to human rights. Chemical companies' supply chains are complex, involving large numbers of suppliers and subcontractors spanning several countries with distinct legal and regulatory frameworks. Often those most affected by adverse human rights impacts in business supply chains belong to groups for whom it is harder to draw attention to these issues or secure a remedy, like workers, indigenous and low-income communities (see also key issues 1.2 and 2).

A key step that companies can take to prevent and address human rights impacts related to their products is to use a lifecycle approach; failing to do so bears increased human rights risks. With a lifecycle approach, everyone in the entire chain of a products' lifecycle has a responsibility to consider the environmental, social and economic impacts of a product at every stage of its lifecycle.<sup>5</sup> These stages include the extraction of raw materials; manufacture and further processing; the development of products; the use of manufactured and marketed products; the

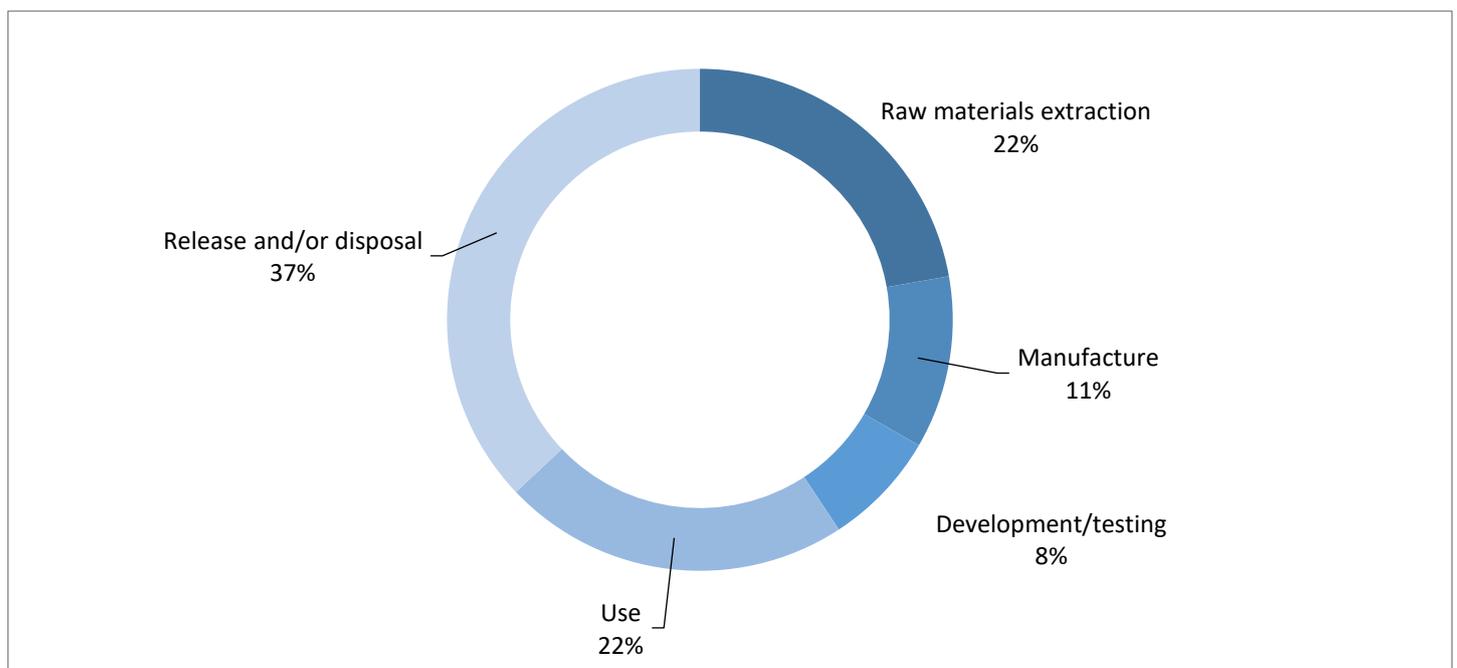


Figure 2: Human rights impacts by lifecycle stage.<sup>5</sup> Note: Some cases concerned more than one stage.

<sup>5</sup>International Council of Chemical Associations (2016) *An Executive Guide: How to Know If and When it's Time to Commission a Life Cycle Assessment*, available at: <https://www.icca-chem.org/wp-content/uploads/2016/05/How-to-Know-If-and-When-Its-Time-to-Commission-a-Life-Cycle-Assessment.pdf>

emission of chemical pollutants into the environment as well as the improper disposal of waste. Particularly high-risk substances include those with intended biological activity, such as pesticides and fertilizers.

Among the allegations received by the Resource Centre, human rights abuses were reported at every stage in the lifecycle of chemical products (see figure 2).

### Key issue 1: Workers' rights

#### 1.1 Workplace health and safety

Almost two thirds of the cases documented related to human rights within the workplace, with health and safety being key concerns. Allegations included health consequences of accidents at work and health risks associated with child labour and childhood exposure to hazardous substances, among others. Human rights issues related to health and safety in the workplace are also inextricably linked to the right to information. People have a right to know whether they are or may be exposed to hazardous substances. To realize this right, information must be accessible and non-

discriminatory. In many cases, workers lacked accessible information on health and safety issues, for example when that information was not made available in their language or clearly labelled pictures were not provided (see also key issue 2).

#### 1.2. Workers' rights in supply chains

Workers' rights were implicated at every stage in the lifecycle of hazardous products, however abuses against workers' rights in supply chains were especially common. Seventy-five percent of cases concerning workers' rights were linked to supply chains – both raw materials extraction and the use of manufactured products (see figure 3). While employers also have a responsibility to respect human rights, the UN Guiding Principles on Business and Human Rights state that a company must address human rights impacts that may be directly linked to their operations, products or services by its business relationships,<sup>6</sup> not just those directly under its own control. Companies should use their leverage to support and require suppliers and distributors to adhere to human rights and labour standards, and communicate

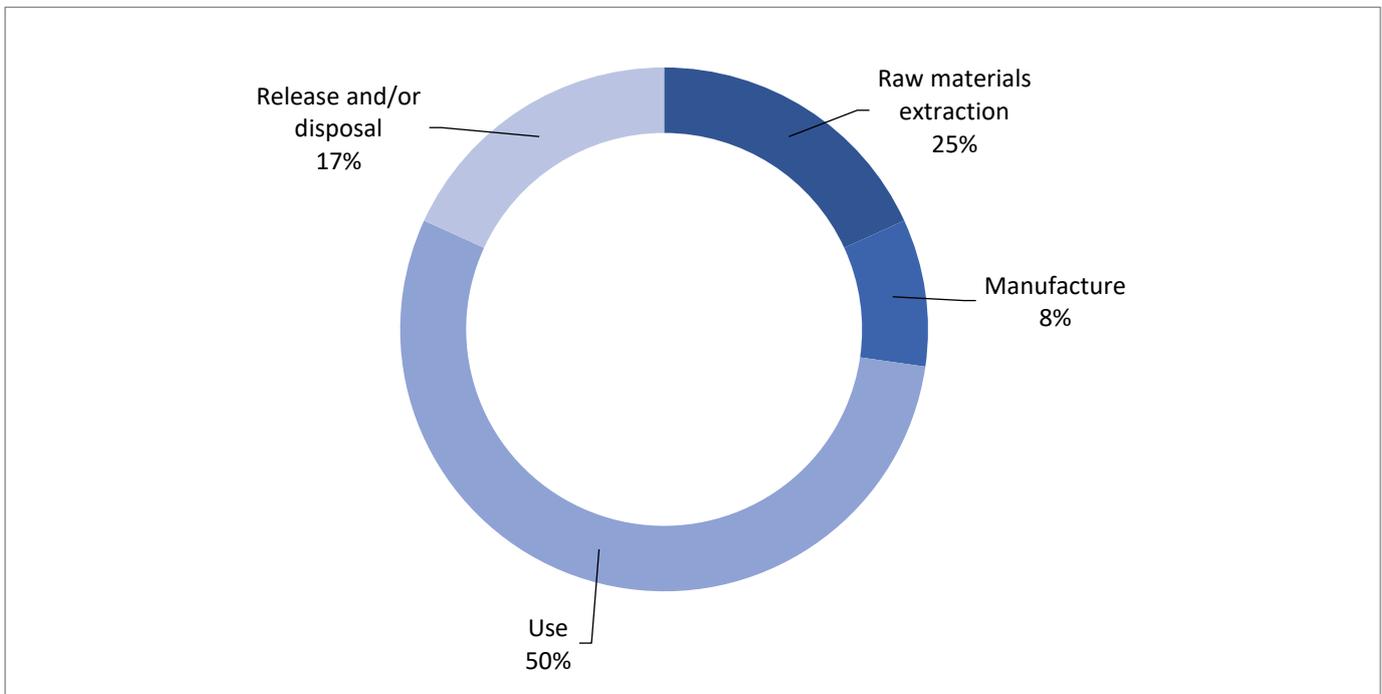


Figure 3: Workers' rights impacts by lifecycle stage.

<sup>6</sup>Office of the United Nations High Commissioner for Human Rights, United Nations (2011) *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, available at: [http://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR\\_EN.pdf](http://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf), p.17

these expectations clearly. There is also a need for more rigorous supply chain monitoring and human rights due diligence by companies.

### *Key issue 2: Indigenous and communities' rights*

Another major issue is the violation of the rights of local, indigenous and low-income communities affected by the chemical industry. Among the allegations received, these groups were disproportionately affected by toxic contamination and pollution. Allegations concerned violations of the right to a clean environment, health, food and access to water, as well as the right to information regarding contamination levels and adverse impacts on human health. In these cases too, it is often harder for these groups to raise awareness of human rights impacts that adversely affect them given a lack of power and access to resources.

#### *Case study 1*

A 2016 report by Facing Finance accusing **Pfizer** of poor supply chain management in China and India regarding the environmental impact of suppliers from whom they source pharmaceutical ingredients. The report alleged that Pfizer's suppliers were dumping toxic waste into rivers, contaminating local water supplies. While the report also mentions instances where quality assurance resulted in the recall of two product batches,<sup>7</sup> it is interesting to note that among this data set there were no allegations from consumers. This does not necessarily mean that these are not an issue but rather that they were not among the allegations the Resource Centre tracked.

#### *Case study 2*

In October 2015, the European Centre for Constitutional and Human Rights (ECCHR) along with several NGOs submitted a monitoring report to the Panel of Experts on Pesticides Management at the UN Food and Agriculture Organisation (FAO) in October 2015, alleging that **Bayer's** and **Syngenta's**

business practices were violating the FAO/World Health Organisation (WHO) Code of Conduct on Pesticide Management.<sup>8</sup> The report, based on accounts of Punjabi farmers in India, claimed that the companies were involved in the sale of highly hazardous pesticides but failed to label products in a way that is accessible to the farmers, to provide protective clothing and sufficiently train workers. Bayer issued a statement<sup>9</sup> saying they undertake all efforts to adhere to international best practices in the area of crop protection management. Syngenta's response<sup>10</sup> stated they had launched a renewed training program with a specific focus on the FAO/WHO Code of Conduct with regard to safety.

ECCHR and its partner organisations have called on Bayer and Syngenta to halt the distribution of dangerous pesticides in India as well as for a response from the governments in Germany and Switzerland, where Bayer and Syngenta are based. In 2016, ECCHR also filed a complaint in Germany for the possible violation of national export rules, under which pesticides may only be exported if labelled with warnings necessary for the protection of human health.<sup>11</sup> The monitoring report, which examines the extra-territorial obligations of Germany and Switzerland beyond national legislation, was assessed at the FAO/WHO Joint Meeting on Pesticide Management (JMPM), held in New Delhi in April 2017. In November 2017, the JMPM published its recommendations, which merely referred to a multi-stakeholder dialogue without assessing corporate adherence to the

<sup>7</sup>Facing Finance (2016) *Dirty Profits: Report on Companies and Financial Institutions Benefiting from Violations of Human Rights*, available at: <https://business-humanrights.org/sites/default/files/documents/Facing%20Finance%20Report.pdf>, p. 34

<sup>8</sup>European Center for Constitutional and Human Rights (2017) *Bayer and Syngenta: FAO/WHO fail to assess whether pesticide sales in India breach international standards*, available at: <https://www.ecchr.eu/en/business-and-human-rights/agro-industry/fao-who-complaint.html>

<sup>9</sup>Bayer (2017) *Bayer's response*, Business & Human Rights Resource Centre, available at: <https://business-humanrights.org/en/india-report-alleges-bayer-syngenta-failed-to-adequately-manage-health-environmental-risks-associated-with-pesticides-incl-company-responses#c159259>

<sup>10</sup>Syngenta (2017) *Syngenta's response*, Business & Human Rights Resource Centre, available at: <https://business-humanrights.org/en/india-report-alleges-bayer-syngenta-failed-to-adequately-manage-health-environmental-risks-associated-with-pesticides-incl-company-responses#c159260>

<sup>11</sup>European Center for Constitutional and Human Rights (2017) *Double standards in the sale of pesticides*, available at: <https://www.ecchr.eu/en/business-and-human-rights/agro-industry/bayer.html>

Code of Conduct or providing practical guidelines for remedial company behaviour.<sup>12</sup> In an open letter to the JMPM, ECCHR expressed concern that a lack of specific recommendations allows the business practices described to continue, thus offering no follow-up mechanism on how to improve the shortcomings identified in the report.<sup>13</sup>

## Current regulatory frameworks and initiatives

Chemicals are regulated at both the national and supranational level. Governments have a critical role to play in protecting human rights by providing adequate regulation of companies in the chemical industry and monitoring their compliance with those regulations.

### Regulations

There are several UN conventions that address the management and disposal of hazardous substances and their waste throughout their lifecycle. The Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal, the Stockholm Convention on Persistent Organic Pollutants (POPs) and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade<sup>iv</sup> are jointly administered by the United Nations Environment Programme (UNEP) as a way of promoting synergies between the three. Each addresses different but related aspects of managing toxic chemicals at the global level. Their fundamental purpose is to protect human health and the environment against the harmful effects of hazardous chemicals and wastes. However, the treaties cover the lifecycle of only a few hazardous chemicals, leaving a gap in the human rights protection framework as it relates

to potential human risks posed by other chemicals.<sup>14</sup>

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals, is a European Union regulation, which establishes procedures for collecting and assessing information on the potential impacts of chemical substances on human health and the environment. Under REACH, companies are obliged to register the substances they manufacture and market in the EU and communicate risk management measures.<sup>15</sup> Similar laws are being drafted in countries such as Korea, Russia and Turkey.

The Globally Harmonised System of Classification and Labelling of Chemicals (GHS) provides a basis for harmonising rules and regulations on chemicals at the national and global level. GHS is a non-legally binding internationally agreed-upon standard developed and managed by the UN Secretariat. It provides criteria for the classification and communication of globally uniform information on physical, environmental and health and safety information about hazardous chemical substances, including labels and safety data sheets.<sup>16</sup>

### Voluntary initiatives

The Strategic Approach to International Chemicals Management (SAICM) is a voluntary UN policy framework aimed at promoting the sound management of chemicals. It has the broadest mandate of global agreements for chemicals. Although not legally binding, SAICM provides important objectives for human rights through its global political commitment to reform how chemicals are managed in order to minimize adverse impacts on the environment and human health.<sup>17</sup>

The International Code of Conduct on Pesticide Management, introduced by the FAO and

<sup>12</sup>World Health Organisation, Food and Agriculture Organisation of the United Nations (2017) *Report: 10<sup>th</sup> FAO/WHO Joint Meeting on Pesticide Management*, available at: [http://www.fao.org/fileadmin/templates/agphome/documents/Pests\\_Pesticides/Code/JMPM\\_2017\\_Report.pdf](http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/JMPM_2017_Report.pdf)

<sup>13</sup>European Center for Constitutional and Human Rights (2017) *Bayer and Syngenta: FAO/WHO fail to assess whether pesticide sales in India breach international standards*, available at: <https://www.ecchr.eu/en/business-and-human-rights/agro-industry/fao-who-complaint.html>

<sup>14</sup>United Nations Environment Programme (2017) *Chemical & Wastes Conventions*, available at:

<http://web.unep.org/chemicalsandwaste/conventions>

<sup>15</sup>European Chemicals Agency (2018) *Understanding REACH*, available at: <https://echa.europa.eu/regulations/reach/understanding-reach>

<sup>16</sup>United Nations Economic Commission for Europe (2018) *About the GHS*, available at:

[http://www.unece.org/trans/danger/publi/ghs/ghs\\_welcome\\_e.html](http://www.unece.org/trans/danger/publi/ghs/ghs_welcome_e.html)

<sup>17</sup>Strategic Approach to International Chemicals Management, United Nations Environment Programme (2017) *SAICM Overview*, available at: <http://www.saicm.org/About/SAICMOverview/tabid/5522/language/en-US/Default.aspx>

approved by the WHO, is a voluntary global framework that sets standards of conduct for government authorities and the pesticide industry in relation to sound pesticide lifecycle management practices.<sup>18</sup>

### *Industry initiatives*

Responsible Care is the global chemical industry's initiative to contribute to the implementation of SAICM. The initiative was developed in response to the 1984 gas leak at a Union Carbide pesticide plant in Bhopal, India<sup>19v</sup> and membership grew significantly in the wake of the Tianjin chemical disaster in China in 2015.<sup>20vi</sup> It commits companies, national chemical industry associations and their partners to “*continuously improve the environmental, health, safety and security knowledge and performance of our technologies, processes and products over their life cycles so as to avoid harm to people and the environment*”.<sup>21</sup> The Responsible Care Global Charter extends this goal of improvement to activities associated with the safe use of products along supply chains.<sup>22</sup>

In 2006, the International Council of Chemical Associations (ICCA) also launched the Global Product Strategy (GPS) as part of efforts to meet these goals. GPS is designed to improve the management of chemical products by making product safety information available to the public and along the value chain, as well as reporting on best risk assessment practices and product management procedures.<sup>23</sup>

However, despite their origin in the serious human rights impacts of the global chemical industry, neither the Responsible Care Global Charter nor the GPS makes reference to

human rights nor do they require members to implement the UN Guiding Principles on Business and Human Rights.

As part of a pilot project in Germany, Chemie<sup>3</sup>,<sup>24</sup> a joint sustainability initiative of the Chemical Industry Association, the Chemicals Union (IGBCE) and the Employers' Confederation (BAVC) – together with several small and medium sized enterprises – developed a guide on sustainable supply chain management. The aim is to make companies more aware of human rights impacts in their supply chains.

### *Company action*

In 2011, a number of German chemical companies – including **BASF**, **Evonik** and **Henkel** - founded a voluntary initiative called Together for Sustainability (TFS). The current 19 European member companies have agreed on a single audit program to improve sustainability practices within the supply chains of the chemical industry.<sup>25</sup> Separately, BASF has also committed itself to implementing the UN Guiding Principles on Business and Human Rights and human rights due diligence in a systemic manner – including in relation to its toxic products and environmental impacts.<sup>26</sup>

Syngenta launched its Good Growth Plan in 2013, a six-point plan which commits to training agricultural workers on the hazards and risks associated with exposure to chemicals through local partnerships and retailers who sell their products.<sup>27</sup> One concern, however, is the emphasis on workers needing to change their behaviour as opposed to creating products without hazardous substances. Other companies that have made strides to incorporate human rights into their business model and codes of conducts include Bayer<sup>28</sup>

<sup>18</sup>Food and Agriculture Organisation of the United Nations, World Health Organisation (2014) *The International Code on Pesticide Management*, available at:

[http://www.fao.org/fileadmin/templates/agphome/documents/Pests\\_Pesticides/Code/CODE\\_2014Sep\\_ENG.pdf](http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf)

<sup>19</sup>Union Carbide Corporation (2017) *Bhopal Gas Tragedy Information*, available at: <http://www.bhopal.com/>

<sup>20</sup>Business & Human Rights Resource Centre (2015) *China: Explosions at Tianjin Ruihai Intl. Logistics warehouse kill over 100*, available at: <https://business-humanrights.org/en/china-explosions-at-tianjin-ruihai-intl-logistics-warehouse-kill-over-100?dateorder=dateasc>

<sup>21</sup>American Chemistry Council (2017) *Responsible Care*, available at: <https://responsiblecare.americanchemistry.com/default.aspx>

<sup>22</sup>International Council of Chemical Associations (2015) *The Quest for Performance Excellence*, available at: <https://www.icca-chem.org/responsible-care/>

<sup>23</sup>American Chemistry Council (2017) *Global Product Strategy*, available at: <https://www.americanchemistry.com/GPS/>

<sup>24</sup>Chemie<sup>3</sup> (forthcoming, 2018) *Leitfaden: Nachhaltiges Lieferantenmanagement für mittelständische Unternehmen der chemischen Industrie*, see: <https://www.chemiehoch3.de/de/home.html>

<sup>25</sup>Together for Sustainability (2016) *What is Together for Sustainability?*, available at: <https://tfs-initiative.com/about-us/>

<sup>26</sup>BASF (2017) *Our responsibility to respect human rights*, available at: <https://www.basf.com/en/company/sustainability/employees-and-society/human-rights.html>

<sup>27</sup>Syngenta (2017) *Help people stay safe*, available at: <https://www4.syngenta.com/what-we-do/the-good-growth-plan/help-people-stay-safe>

<sup>28</sup>Bayer (2017) *Responsibility and Commitment: Bayer Human Rights Policy*, available at: <https://www.bayer.com/en/bayer-human-rights-policy.pdf>

and **Dow**.<sup>29</sup> As part of its product stewardship program, Bayer also commits to assessing possible health and environmental risks of its products along the entire supply chain.<sup>30</sup>

Overall, companies in the chemical industry have displayed willingness to engage with human rights issues. Some companies have identified policies and practices to address human rights. However, only a few address human rights due diligence and the links between the use of chemicals and their health and environmental impacts in a holistic and stringent manner. The industry bears great potential for improved human rights performance.

### Conclusion

- Chemicals can have significant negative impacts on people's lives, particularly vulnerable groups such as workers, indigenous and low-income communities: both in their workplaces and in their homes, affecting resources that their communities depend upon.
- While there are positive steps – regulations at the global level, industry-wide initiatives, and individual company actions – critical gaps remain, particularly in protecting the rights of workers, children, low-income communities and other vulnerable groups.
- One such gap is the implementation of human rights due diligence and monitoring throughout company supply chains, which are companies' responsibilities under the UNGPs.

### *Recommendations to states:*

- States must enforce regulations regarding the chemical industry to prevent human rights abuses resulting from their commercial products and pollutants linked to their activities.
- States must elevate protections for children, the poor, women of reproductive age, workers, persons with disabilities, older persons, indigenous peoples, migrants and minorities, while taking into account gender-specific risks, in relation to chemical products and related activities.
- States must compel all businesses in their jurisdiction to ensure that their supply chains do not cause or contribute to human rights abuses due to toxic or otherwise hazardous substances, including extraterritorially.

### *Recommendations to businesses:*

- Businesses should conduct human rights due diligence for the life-cycle of toxics in their products and their operations, including supply and value chains, and should identify and assess risks, prevent and mitigate impacts, and be transparent and accountable regarding their efforts.
- Human rights due diligence by the chemical industry must include the potential risk of abuse following the sale of toxic chemicals and pesticides, as well as the raw materials used for their production and the conditions at manufacturing facilities. Manufacturers have a responsibility to engage in continuous efforts to identify the hazards and risks of their chemical products and to prevent impacts, including through the development of safer alternatives.

<sup>29</sup>DOW (2017) *Dow's Position on Human Rights*, available at: <http://www.dow.com/en-us/about-dow/our-company/codes-of-conduct/human-rights>

<sup>30</sup>Bayer (2017) *Product Stewardship*, available at: <https://www.bayer.com/en/product-stewardship.aspx>

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<sup>i</sup> For the purpose of this briefing, the chemical industry comprises the companies that produce industrial chemicals.

<sup>ii</sup> Note: The Business & Human Rights Resource Centre only approaches companies for a response if there is no public statement available.

<sup>iii</sup> Upstream is taken to refer to the flow of materials into a company and downstream the flow of materials from the company to the user/consumer.

<sup>iv</sup> Note: The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade is also administered by the FAO.

<sup>v</sup> In December 1984, a Union Carbide pesticide plant in Bhopal, India, leaked over forty tons of the poisonous gas methyl isocyanate into the community surrounding the plant. Indian officials estimate that the gas leak left nearly 3000 people dead and 50,000 people permanently disabled and that 15,000 people died subsequently from exposure to the poisonous gas. Some of the injured people of Bhopal attempted to litigate claims against Union Carbide (part of Dow Chemical since 2001) in the US. Dow has since been called upon to assume some of the liability for the disaster's aftermath. The Business & Human Rights Resource Centre approached Dow for statements in 2012 and 2014 (available at: <https://business-humanrights.org/en/dow-chemical>).

<sup>vi</sup> On 12 August 2015, a series of explosions killed 173 people and injured hundreds of others at a container storage station at the Port of Tianjin. The second explosion involved the detonation of about 800 tonnes of ammonium nitrate.

## About us

The Business & Human Rights Resource Centre is the only non-profit organization drawing attention to the human rights impacts (positive & negative) of over 7000 companies worldwide. Our website is relied on by business people, advocates, investors and the UN. We expose reality in a field too often dominated by rhetoric, and help protect vulnerable people and communities against abuses. We also provide guidance materials and examples of good practice, to help companies understand their human rights responsibilities.