MAINTREAMING CHILDREN’S RIGHTS IN ENVIRONMENTAL LAW

Quezon City, Philippines
BANToxics
MAINSTREAMING CHILDREN’S RIGHTS IN ENVIRONMENTAL LAW

Copyright 2021 BAN Toxics

AUTHORS:

Richard Gutierrez, J.D. LL.M.
Executive Director and Founder, BAN Toxics
rgutierrez@bantoxics.org

Myline Macabuhay
Policy and Research Specialist, BAN Toxics
mdmacabuhay@gmail.com

CONSULTING ADVISORS:

Baskut Tuncak
Founder and Chief Executive Officer, Common Rights
btuncak@gmail.com

Mary Joy Maraat
Project Officer, Governance in Justice-Outcome 3,
Philippine Commission on Human Rights (former)
President & CEO, PHI Corporation
maraat.maj@gmail.com

CONTRIBUTORS:

Johanna Gusman
International Human Rights Lawyer
Legal Advisor, Georgetown University Law Center

Jashaf Shamir Lorenzo
Policy and Research Specialist, BAN Toxics
jlorenzo@bantoxics.org

RECOMMENDED CITATION:

Mainstreaming children’s rights in environmental law. Published by BAN Toxics.

This document may not be reproduced in part or in whole without permission from BAN Toxics, Inc. The document is designed to be used for educational and non-profit purposes, provided that proper acknowledgement of the source is made. The organization will also appreciate receiving a copy of the material produced that used this report as reference.

The contents of this report do not in any way present an opinion on the development status of different countries in terms of children’s rights and environmental health. The case studies presented are based on published literature and proper citation of references are provided.

BAN Toxics would like to thank the following organizations who participated in the workshop titled “Human Rights and Chemical Pollution: A Focus on Children’s Rights and Business” held on December 13, 2019:

Commission on Human Rights
Ateneo Human Rights Center
Children’s Legal Rights and Development Center
Children International
Mongabay
VIDES Philippines
Adhikain Para sa Karapatan Pambata
Association for the Rights of Children in South East Asia

This report has been made possible through the support of the Swedish Society for Nature Conservation.
EXECUTIVE SUMMARY

Poor water quality, air pollution, toxic chemical exposures, climate change, and the degradation of the urban environment cause 25% of deaths and disease globally, reaching as high as 7.3 million in the Southeast Asia and Western Pacific regions alone. Unfortunately, much of these negative impacts are borne by the poor and vulnerable. Children have particularly heightened susceptibility to toxic chemicals and pollution in the environment, as their health is determined by biological, behavioral and environmental influences. In particular, children in the Asia Pacific region experience challenges relating to socio-economic resources in the family and the community – segregation, racism, gender-based discrimination, socio-cultural norms, as well as the availability and quality of services and policies directly or indirectly affect these interactive influences.

Approximately 15,000 high production volume chemicals worldwide have the potential to be widely disseminated in the environment. Fewer than half of these have been tested for their potential toxicity, and fewer still for their possible developmental toxicity to fetuses, infants, and children. More alarmingly, regulators fail to assess the likelihood of harm these chemicals cause in real-life conditions, as children are often exposed to multiple substances during sensitive periods of their development. The “silent pandemic” of disability and disease is associated not only with childhood exposures, but also with exposures even before an individual is born—interfering with the normal expression of genes, the development of the brain and other vital organs, and the disruption of key physiological processes necessary for them to grow into healthy individuals.

Hence, the prevalence and persistence of toxic chemicals and the continued pollution of the environment reflects the society’s failure to uphold human dignity, security, and equality. Unfortunately, the manufacture, use, and disposal of chemicals have become such essential building blocks to economic development that exposure within and among generations will continue indefinitely unless mechanisms to protect human health and the environment are established.

Environmental degradation negatively impacts the “right to life, the right to the enjoyment of the highest attainable standard of physical and mental health, the right to an adequate standard of living and its components, such as the right to food, and the rights to safe drinking water and sanitation, and to adequate housing”. The State’s obligations to respect, protect and fulfill human rights are based on established International Human Rights laws. Due to the inherent risks associated with toxic chemicals and pollution, such established duties and responsibilities can be used to induce effective regulation of manufacturing processes and product release, ensuring balance between economic growth and environmental and social protections in States’ jurisdictions. Failure to fulfill these duties and responsibilities can lead to grave consequences, as experienced in the case of:

- Bangladesh’s textile industry, which contributes to air and water pollution in several cities in the country;
- The release of toxic chemicals and pollutants affecting workers, children and their families, as well as surrounding communities in countries with significant informal electronic waste recycling communities such as China, Malaysia, and Thailand, among others;
• Contaminated food products such as “melamine milk,” “toxic bean sprouts,” and “cadmium rice” (among others) which have been known to directly affect newborns and children;

• Cambodia’s pesticide use, which led to several poisonings due to aggressive promotions of agro-chemical companies, and limited farmer education on other environmentally friendly pest management options; and

• South Korea’s humidifier debacle, which showcases the confluence of poor public safety awareness, shady collusion between businesses and bureaucrats, poor government supervision and regulation, and unethical business practices.

While States retain a duty to protect populations against corporate human rights abuses, businesses have a responsibility to respect the rights of the child. This includes adopting due diligence to prevent childhood exposure, including identifying potential adverse impacts from business activities and relationships and includes taking measures to prevent such impacts from materializing. Businesses should also respect human rights, avoid infringing on the rights of others and address adverse human rights impacts with which they, or their business relationships, are involved. These responsibilities exist independently and do not diminish any of the obligations of the State.

Access to remedy is not only a human right per se, but is a prerequisite for the full enjoyment of human rights. As part of their duty to protect against business-related human rights abuse, States must take appropriate steps to ensure, through judicial, administrative, legislative, or other appropriate means, that when such abuses occur within their territory and/or jurisdiction, those affected have access to effective remedy. These such steps enable children who are affected by poor environmental health avoiding being trapped in the long and difficult road of seeking compensation and redress from entities that profit from damaging human health and the environment, such as in the case of the Marcopper mining disaster in the Philippines.

National environmental laws and policies infrequently address the rights of children, thereby hindering rights-based approaches to environmental problems affecting children. This document delivers tools that are designed to assist stakeholders in the development of policies, regulations, and programs in accordance to the overall goal of protecting and upholding the rights of children in environmental law.

The first tool aims to facilitate and enable stakeholders to examine whether an existing or draft environmental policy or regulation is able to promote and safeguard children’s rights from toxic chemical pollution by ensuring that its text is reflective of this. This involves identifying key principles and elements of children’s rights protection, divided into five general categories:

• Overarching principles, or guiding principles that serve as foundation/rationale of the law/policy;

• Prevention of exposure, which includes criteria integrating different children’s rights affected by toxic chemicals and pollution;

• Transparency and accountability, which focuses on the duties and responsibilities of the State, business enterprises and other stakeholders;

• Access to remedy, which includes components ranging from prevention, rehabilitation, remediation, among others; and

• Punishment and redress, which enumerates criminal penalties and sanctions that must be incorporated into policies to discourage perpetrators from contributing to childhood exposure and violating children’s rights.

Meanwhile, another tool presented in the report enumerates “best practices” in integrating children’s rights in policy implementation. This tool aims to ensure that programs and projects in relation to policy implementation reflect the needs of children in the context of sound management of chemicals and wastes, which are divided based on the five stages of policy implementation:

1. Policy outputs of implementing agencies, which involves the development of IRRs (Implementing Rules and Regulations) and action plans of government agencies/ministries mandated by the main policy document to carry out the provisions of the law;

2. Compliance of target groups, which involves identifying whether target groups are able to comply with the requirements set by the national policy/law;

3. Actual impacts of policy outputs, which includes both positive and negative impacts of the policy not only to the sector it regulates, but also the sector it protects;

4. Perceived impacts of policy outputs; and

5. Major revisions of the policy, which allows for the reformulation of the policy, based on the evaluation/assessment of its observed impacts.

Moving forward, capacity-building activities should be prioritized to empower communities and stakeholders to assess and demand for the mainstreaming of children’s rights into their country’s regulation or policy.
TABLE OF CONTENTS

Executive Summary iii
List of Acronyms and Abbreviations vii

Chapter 1. Introduction
Why children are uniquely vulnerable 9
Overview of children’s health in Asia Pacific 11
Objectives of the report 13

Chapter 2. Intersect of Children’s Rights and Chemicals
Duty of States to protect human rights 17
(1) Duty to prevent exposure 19
(2) Right to life 20
(3) Right to a healthy environment 20
(4) Right to the highest attainable standard of health 22
(5) Right to food and water 25
(6) Right to adequate housing 27
(7) Right to be free from the worst forms of child labor 28
(8) Right to information 28
Right to be heard and to participate 31
(1) Responsibilities of businesses 31
(2) Due diligence to prevent childhood exposure 32
(3) Responsibility to prevent exposure through business activities 32
Responsibility to prevent exposure through business relationships 33
Access to Justice and Remedies 33

Chapter 3. Children’s Rights-based Approach to Environmental Health 37
Integrating children’s rights in environmental law 37
Children’s rights protection policy implementation checklist 48

Conclusions 52

LIST OF ABBREVIATIONS

- ASEAN: Association of Southeast Asian Nations
- CEDAW: Convention on the Elimination of All Forms of Discrimination against Women
- CEITs: Countries with economies in transition
- CESC: Committee on Economic, Social and Cultural Rights
- CMIT: Methylchloroisothiazoloinone
- CRC: Convention on the Rights of the Child
- DALY: Disability-adjusted life year
- ECC: Environmental Compliance Certificate
- FAO: Food and Agriculture Organization
- FGDs: Focus group discussions
- GDP: Gross Domestic Product
- HPV: High production volume
- HRC: Human Rights Council
- ICCPR: International Covenant on Civil and Political Rights
- ICESCR: International Covenant on Economic, Social and Cultural Rights
- ILO: International Labor Organization
- IQ: Intelligence Quotient
- KII: Key informant interviews
- KPI: Key performance indicators
- MIT: Methylisothiazolinone
- MMC: Marcopper Mining Corporation
- OECD: Organization for Economic Cooperation and Development
- PAHs: Polyaromatic hydrocarbons
- PBDEs: Polybrominated diphenyl ethers
- PCBs: Polychlorinated biphenyls
- PDTS: Placer Dome Technical Services
- PVC: Polyvinyl Chloride
- SAICM: Strategic Approach to International Chemicals Management
- SDGs: Sustainable Development Goals
- SLAPP: Strategic Legal Action against Public Participation
- SPM: Suspended particulate matter
<table>
<thead>
<tr>
<th>LIST OF ABBREVIATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>UDHR</td>
</tr>
<tr>
<td>UNEP</td>
</tr>
<tr>
<td>UNGP</td>
</tr>
<tr>
<td>US EPA</td>
</tr>
<tr>
<td>USGS</td>
</tr>
<tr>
<td>UNICEF</td>
</tr>
<tr>
<td>UN</td>
</tr>
<tr>
<td>WEEE</td>
</tr>
<tr>
<td>WHO</td>
</tr>
</tbody>
</table>
1 INTRODUCTION

Environmental factors are a root cause of significant burden of death, disease, and disability globally particularly in developing countries. Poor water quality, air pollution, toxic chemical exposures, climate change, and the degradation of the urban environment are believed to contribute to as much as 25% of deaths and disease globally, reaching as high as 7.3 million in the Southeast Asia and Western Pacific regions alone.1

Among those impacted, children are considered to be one of the most vulnerable sectors. Every hour, 100 children under the age of five die due to pneumonia, half of which are associated with air pollution.2 The death toll caused by the polluted environment has reached a staggering 1.7 million children under the age of five each year.3

The evidence outlining the impacts of chemical exposure to the early development of children is significant. Moreover, the sources are varied and include both direct and indirect exposures. For instance, parental exposure to pesticides in their work has been known to lead to congenital malformations in children, childhood cancers, and an increased abortion incidence rate.4 The extent of these impacts have not been fully documented yet, due in part to the fact that chemical exposure has become an everyday occurrence for the vast majority. This has led to the so-called “silent pandemic” of disability and disease associated with exposure to toxic substances and pollution during one’s childhood.

Children may be exposed to toxic substances even before they are born, interfering with the normal expression of genes, the development of brain and other vital organs, and disrupting crucial physiological processes necessary for them to grow into healthy individuals able to realize their full potential.5 Disadvantaged children, or those who were born in low-income, minority, indigenous, and marginalized communities are believed to be impacted the most – conditions in these communities are often associated with malnutrition, unhealthy environments, poor sanitation, and lack of access to healthcare.6 Thus, environmental hazards, coupled with social stress and malnutrition in this setting, pose an almost insurmountable barrier to a child’s normal development and deprive them of their rights to physical integrity, the highest attainable standards of health, and survival.

Approximately 15,000 high production volume (HPV) chemicals worldwide have the potential to be widely disseminated in the environment.7 Fewer than half of these have been tested for their potential toxicity, and fewer still for their possible developmental toxicity to fetuses, infants, and children.8 More alarmingly, regulators fail to assess the likelihood of harm these chemicals cause in real-life conditions, as children are often exposed to multiple substances during sensitive periods of their development.9 Exposure to this “cocktail of chemicals” contribute to the “new pediatric morbidity,”10 characterized by the increasing incidence of illnesses in children such as cancer, asthma, and intellectual disabilities, among others.

Cancer is becoming an increasingly important health problem in low- and middle-income countries in the Asia Pacific region,11 with the number of cancer-related deaths projected to rise continuously to over 16 million in 2025. While cancers are uncommon during the first two decades of life, incidence for the top eight cancers12 (stomach, lung, liver, colon/rectum, esophagus, breast, cervix, and leukemia) may be triggered by exposures to cancer-causing agents preconceptionally, during intrauterine life, or in early childhood.13 Other factors associated with health disparities include socio-economic status, parental education, health insurance status, timely diagnosis, quality of treatment and supportive care, differences in disease biology, genetic polymorphisms in the metabolism of chemotherapeutic drugs, and variations in adherence to therapy.14

The World Health Organization (WHO) estimates that childhood lead exposure contributes to about 600,000 new cases of intellectual disabilities among children each year.15 These effects are believed to be irreversible, disabling a child’s realization of the right to health and other human rights during adult life. The scenario for children in developing countries is much grimmer. For instance, studies have found that “the average blood lead levels among children residing near battery plants in developing countries is 13 times the average level observed for children in [developed countries such as] the United States...”.16

Asthma, a disease characterized by recurrent attacks of breathlessness and wheezing, affects between 100 to 150 million people worldwide and causes over 180,000 deaths every year,7% of which are child deaths.11 Along with exposure to environmental tobacco smoke, chemical irritants and air pollutants are considered significant risk factors for the disease.

If environmental justice is “the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies”,12 continued efforts to acknowledge and eliminate biases of race, poverty, and in address toxic chemical pollution. Most concerning is the global cycling of persistent pollutants, as well as the complexity of global supply chains that enable polluters to evade accountability, also leads to “secondary victimization”16 as those exposed to toxic chemicals often lack access to remedy.

The continued exposure of children to environmental hazards are further compounded by a number of socio-economic issues. Children who are affected by poor environmental health suffer from another kind of victimization—that is, they are trapped in a seemingly long and difficult road in seeking compensation and redress from entities that profit from damaging human health and the environment. Perpetrators of several environmental disasters in the Asian Pacific region, such as the Marcoppo17 mining disaster in the Philippines and the Bhopal18 gas tragedy in India, have long eluded accountability for both the immediate harm they caused communities, but also the legacy pollution they have left in these areas. A discussion of the former is provided in the succeeding chapter, serving as a case study for victims’ inability to access effective remedy.

In 2013, the United Nations Environment Programme (UNEP) released a report highlighting the costs to human health, the environment, and economic development of the increasing production and use of chemicals, particularly in developing countries.12 Businesses maximize their profits by offloading indirect environmental and health costs, often at the detriment of the government and the public. For instance, monetized health effects (i.e., deaths and disability-adjusted life years or ‘DALY’s’) from air pollution in China reached USD 19 billion in 2003,
WHY CHILDREN ARE UNIQUELY VULNERABLE

Children’s health is determined by the interaction of a multitude of influences, reflecting complex processes that heighten their susceptibility to toxic chemicals and pollution in the environment. Biological influences include genetic expressions, prenatal influences, as well as biological constraints and possibilities created by perinatal and postnatal events and prior states of health. Behavioral influences, meanwhile, include the child’s emotions, beliefs, attitudes, behaviors, and cognitive abilities that affect health outcomes. Lastly, environmental influences are the sum of wide-ranging factors that include the presence of pollutants as well as the socio-economic resources in the family and community, segregation, racism, culture, the availability and quality of services, and policies that directly or indirectly affect these interactive influences. Several factors that increase children’s potential risk were highlighted in a 1993 report developed by the US National Research Council:

1. Children have greater exposures to toxic chemicals for their body weight than adults. “Children are not just small adults,” they possess distinct characteristics that contribute to their greater susceptibility to environmental exposures. They gain more weight during the first 4 to 6 months than during the rest of their lives, and their organ systems grow at different rates from infancy to childhood. In general, neonates and infants have a larger surface area relative to their body weights than adults do, although they have fewer alveoli and thus a faster breathing rate. Moreover, children take in 3 to 4 times more calories per pound than adults. As such, children become more heavily exposed to toxic chemicals and pollution as they consume more food, drink more water, and breathe in more air.

2. Children’s exposure routes include not only inhalation, ingestion and dermal absorption, but also through transplacental transfer. Children’s behavior and the way they interact with the environment also plays an important role in determining their exposure to toxic chemicals. Children crawl, roll and climb over contaminated surfaces, leading to higher dermal contact than adults in the same environment. They also have greater oral exposure due to their hand-to-mouth behavior. In most cases, exposures of the fetus stem from maternal exposure. Mothers are exposed during pregnancy from many sources, including maternal occupation, diet and water consumption, and paraoccupation (occupational chemicals or other hazards brought home by other family members). For instance, maternal body burdens of either lead or polychlorinated biphenyls (PCBs) impair the cognitive function of the offspring if present during critical periods of fetal development.

3. Children’s metabolic pathways are immature, and a child’s ability to metabolize toxic chemicals is different from an adult’s. Chemicals in the environment (air, water, dirt, dust, food) move into the body across biological barriers (e.g. skin, lungs, and the gastrointestinal system) through dermal, pulmonary, or oral routes. After uptake or absorption across any of these barriers, they are then distributed throughout the body, metabolized, and eliminated. The body burden of a chemical increases when the rate of exposure to the chemical exceeds the rate at which a body can eliminate it. For instance, a significant positive association was found between the severity of autism and the relative body burden of 4. Children’s early developmental processes are easily disrupted. Rapid, complex, and highly choreographed development takes place in prenatal life, the first years after birth, and continues more slowly throughout childhood into puberty. Due to the increased rate of cellular division and functional immaturity of some excretion systems, developing organs are particularly susceptible to toxic insult. Structural malformations are likely to occur as a result of exposure to chemicals during the embryonic and fetal periods, when the basic structure of organs is being formed. The disruption of cell growth and cell migration can have lifelong consequences on key organ systems. More alarmingly, toxic insult to the developing brain can lead to mortality, growth restriction, and birth defects.

Recent research in pediatrics and developmental toxicology has elaborated on this concept of “windows of vulnerability” — critical periods in early development in which exposures to even minute doses of toxic chemicals can disrupt organ formation and cause lifelong functional impairments. For instance, the exposure of an infant’s brain to lead or any pesticide can lead to developmental disabilities in childhood and increased risk for neurological degeneration such as Parkinson’s disease in adult life. Meanwhile, inappropriate hormonal signals to developing reproductive organs caused by endocrine disrupting chemicals (EDCs) may result in lifelong reproductive impairment. Such EDCs include those that may be found in some household products, plastics, cosmetics (phthalates), and on clothing (e.g. flame retardants). These windows of vulnerability have no equivalent in adult life. More information is needed on the windows of susceptibility to improve the risk assessment of potential environmental health threats to children, adolescents, and adults.

5. Children have more time than adults to develop chronic diseases. Many diseases triggered by toxic...
chemicals, such as cancer and neurodegenerative diseases, are now understood to evolve though multistage, multyear processes that may be initiated by exposures in infancy.\textsuperscript{18} This insight has catalyzed new research to identify how early environmental influences may affect health in childhood and across the human lifespan. As many chemical carcinogens persist in the body for decades, there is an increased risk for all types of cancers to develop through adulthood. Carcinogens may act via mutagenic, non-mutagenic, or epigenetic mechanisms and may also result from disruption of endocrine systems.\textsuperscript{1} This problem is further aggravated by the fact that many chemical carcinogens have become an integral part of our food, water, air, and general environment.

Socioeconomic status also plays a crucial role in the environmental influences affecting children’s health.\textsuperscript{5}

Globally, children are more than twice as likely as adults to live in extreme poverty with more than a fifth\textsuperscript{14} of children under the age of five living in extremely poor households in the developing world. For instance, a 2011 study conducted by the United Nations Children’s Fund (UNICEF) analyzing child poverty in East Asia and the Pacific found that over 30 million children in the region were unable to go to school, or access basic healthcare, safe drinking water, a sanitary toilet or adequate nutrition.\textsuperscript{20} Moreover, South Asia follows sub-Saharan Africa on the highest rates of children living in extreme poverty, reaching 36%.\textsuperscript{21}

Exposure extends to the adolescent stage of development. Unfortunately, many adolescents have jobs that expose them to occupational hazards.

According to the International Labor Organization (ILO), more than 352 million children ages 5 to 17 engage in “economic activity”, about 50% of which work in hazardous situations defined as those “likely to have adverse effects on the health, safety or moral development of children”.\textsuperscript{24} The number of working children in Asia Pacific is by far the largest in the world, representing 18.8% of that specific age group in the region.\textsuperscript{24} Hazardous labor is often informal—some children, for instance, scavenge rubbish dumps, where they may be exposed to discarded batteries, medical wastes, and pesticides. For instance, one district of Manila, Philippines, is reported to have as much as 14,000 child scavengers.\textsuperscript{21}

The discussion of the aggravating effect of poverty to poor environmental health is fundamentally linked with understanding the causes and implications of inequality in the access of material and psychosocial goods and resources. Low socioeconomic status is associated with diminished resources available to families living in poverty, leading to impaired health.\textsuperscript{22} Key indicators of child health, such as neonatal, infant, and child mortality rates, access to clean water and basic sanitation, nutritional status of mothers and infants, and levels of immunization, are often better for the wealthier population groups than for poorer ones. Children born in the poorest 20% of households are much more likely to die of preventable diseases than children in the wealthiest 20%.\textsuperscript{18} These inequalities are further exacerbated due to widespread gender disparities and inequities for women and girls as in the case in South Asia, where they are routinely discriminated against in terms of nutritional status and access to primary health services and education.\textsuperscript{21}

OVERVIEW OF CHILDREN’S HEALTH IN ASIA PACIFIC

The Asia Pacific region contains roughly 60% of the world’s population.\textsuperscript{24} Approximately one-tenth live in extreme poverty and a significant portion of which are children and young people.\textsuperscript{21} The significant number of children in the region affects the prioritization of health issues, allocation of public resources for health, formulation of effective strategies and the implementation of health programmes. While documenting children’s health situation can be particularly challenging due to the vast differences in culture, economic development, political structure, and geography between countries in the region, UNICEF’s 2008 report on the “State of Asia Pacific’s Children” described the harsh economic and social realities faced by hundreds of millions of Asian Pacific children and families children and families.

Child survival is considered a key barometer of progress in human development and child rights and is instrumental in achieving the Sustainable Development Goals (SDGs). Since 1990, Asia Pacific has experienced a 54% reduction in its overall under-5 mortality rate—further declining to 59 per 1,000 live births by 2006.\textsuperscript{20} A bulk of this achievement is due to the reduction of child deaths in South Asia, along with falls in annual deaths in Eastern Asia and Southeast Asia.

Despite these attainments, major challenges for child survival remain. More than 40% of the 9.7 million children under the age of five whom died in 2006 came from the Asian Pacific region, with China, India and Pakistan contributing heavily to that statistic.\textsuperscript{20} Lowering this rate could be particularly challenging, as pockets of poverty and marginalization within and among countries leave vast numbers of children at-risk of increasing relative poverty and continued exclusion from quality primary healthcare services.
In addition, there is a huge disparity between the rich and the poor in the region, especially in East Asia, Southeast Asia, and South Asia. Despite rising average per capita incomes and declining poverty rates, millions of people in some sub-regions still live on less than USD 1 a day. The poorest 20% of the population saw their share of the national income drop from 7.1% to 4.5%. As such, any transition to more market-based healthcare systems will have a marked effect on those with the lowest incomes, further entrenching their poverty and encouraging the migration from rural to urban areas. Currently, the region is observed to have the highest levels of dependence on out-of-pocket expenditure to finance health services.

Rapid urbanization, coupled with the lack of institutional capacities and economic wherewithal to manage such growths, puts pressure on the provision of quality essential services for the people. For instance, while cities in Indonesia expand at a rate of 4.1% per year, a deficit of urban infrastructure can still be noted. A 2016 World Bank study found that only 48% of urban households in Indonesian cities have access to safe water; and only 2% of city dwellers have access to a centralized sanitation system.

The greatest causes of under-5 deaths in the region relate to the neonatal period, or those deaths occurring within the first 28 days of life. The high burden of neonatal deaths is related to insufficient maternal healthcare services, maternal undernutrition, and cultural practices surrounding the birth process and disease. Other key causes of child deaths include pneumonia and diarrheal diseases, which account for around one-third of deaths in East Asia, Southeast Asia and the Pacific.

Gains in reducing hunger in the region have been less marked.

Underweight prevalence is a serious concern in South Asia, which has the highest levels of this condition in the world. More than 42% of children under the age of five in South Asia are moderately or severely underweight, with Bangladesh, India and Pakistan accounting for half of the world's under-5 population. The high prevalence of malnutrition further contributes to the issue at hand – the WHO reiterates that malnutrition is known to compound and worsen the impacts of chemicals exposure. While undernutrition in East Asia and the Pacific was much lower than in South Asia, the rates were still double that of Latin America and the Caribbean. Furthermore, South Asia is known to have the highest prevalence of children under-5 who are moderately or severely wasted globally.

The repercussions of lack of access to adequate environmental health facilities are often deadly. Air and water are fundamental to life and yet, they can act as a poison if they are not free from pollution and infection. Food contamination and food insecurity are dual threats to health, social welfare, and economic development of communities and populations, particularly those that are most vulnerable. The absence of the needed infrastructure and support of basic healthcare services further put children at a disadvantage when addressing issues concerning exposure to toxic chemicals and pollution—thereby hindering the full realization of children’s rights such as the right to the highest attainable standard of health.

### OBJECTIVES OF THE REPORT

Sustainable development is, "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The protection of the environment is intertwined with the promotion and protection of human rights with both having complementary goals and are part of the fundamental pillars of sustainable development. Navanethem Pillay (2012), former High Commissioner for Human Rights, mentioned in her foreword in the Joint report of the OHCHR and UNEP on Human Rights and the Environment that, “efforts to encourage sustainable development must recognise the relationship between human rights and the environment and ensure their mutual benefits are realized. Without integrating human rights and environmental protection, sustainable development and the green economy will not succeed”. Human rights are embedded in several treaties, and linkages between human rights and the environment have been recognized in binding agreements at the regional level. Lawmakers in many countries have drafted and pushed forth constitutional provisions and legislations for environmental protection and sustainability for the enjoyment of human rights. However, even with all the emerging efforts for environmental protection and substantial gains in environmental development and human well-being, not all people and regions have benefited equally from these and their conditions may have deteriorated as an effect. In order to understand the linkages between human rights and sustainable development, answers to the following guiding questions should be determined:

1. **Who is benefitting from the situation?**
2. **What are the negative consequences of the situation? Who is bearing the burden?**

These four questions demonstrate that the ability to sustain the basic standards of living in a healthy environment is not shared equally by all—that is, some people bear a disproportionate amount of the burden and do not always have their interests represented in the decision-making process.

Human rights, such as one’s right to life, can be violated due to threats to environmental health. In this light, the report aims to highlight the different children’s rights implicated by toxic chemicals pollution, through case studies in countries within the Asian Pacific region which delves into the socio-economic conditions of communities, the environmental impacts of sectors, and the toll these put on children. The case studies aim to capture a range of perspectives, providing an opportunity to gain a greater understanding of the impacts of toxic chemicals pollution and their aggravating factors.
However, understanding the linkage between children’s rights and toxic chemicals pollution is insufficient when existing policies fail to safeguard these rights. In parallel, development of effective environmental policy and regulations entails an examination of the infallibility of its provisions. As such, the authors propose the use of a tool to examine whether an existing or draft environmental policy or regulation is able to promote and safeguard children’s rights from toxic chemicals pollution, by identifying key principles and elements of children’s rights protection discussed in Chapter 2. Similarly, mainstreaming children’s rights in environmental law should also extend to its implementation. The report provides a checklist of the basic principles and elements that need to be considered in policy implementation, based on the framework for policy implementation by Mazmanian and Sabatier (1984), which addresses particular policy implementation issues such as:

1. The extent to which implementing officials and target groups act consistently with the objectives and procedures outlined in the policy decisions;
2. The extent to which policy objectives are attained;
3. The principal factors affecting policy outcomes and impacts; and
4. The policy’s reformulation, if any.

Through these two rights-based tools, the authors hope that governments and non-government organizations in the region are provided with an additional arsenal in advocating for the sound management of chemicals and wastes.
2 INTERSECT OF CHILDREN’S RIGHTS AND TOXIC CHEMICALS

Internationally agreed human rights were enshrined in the Universal Declaration of Human Rights (UDHR), which was adopted by the United Nations in 1948. The UDHR, together with the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR), form the International Bill of Human Rights. Because the contemporary concept of human rights is codified in the 1948 UDHR and other international human rights treaties, the responsibilities of states are well established. However, the international legal framework for human rights did not adequately address the responsibilities of companies, and indeed there was a question as to what extent companies were subject to international human rights law. It is now clear that companies are subject to international human rights law and that various watchdog organizations can pursue companies that abuse human rights.\textsuperscript{xvii}

The 3 pillars in the UN Guiding Principles on Business and Human Rights (UNGPs)\textsuperscript{xviii} are the (1) State’s duty to protect, (2) businesses’ responsibility to respect, and (3) State’s duty and businesses’ responsibility to remedy. States must promote human rights and protect against abuses within their territories, including those committed by businesses, and take steps to prevent, investigate, punish and redress human rights abuses. They should enforce laws, ensure that laws do not constrain businesses from respecting human rights, and encourage or require businesses to communicate how they address human rights, and encourage or require businesses to communicate how they address human rights impacts. Those affected by human rights should also have judicial and non-judicial means of redress, which may include an apology, rehabilitation or remediation, compensation, punitive sanction, or guarantees of non-repetition. On the other hand, businesses should respect human rights by avoiding causing or contributing to adverse human rights impacts and by addressing such impacts when they occur. They also need to mitigate impacts directly linked to operations, products or services by their business relationships, even if they did not contribute to those impacts.

DUTY OF STATES TO RESPECT, PROTECT AND FULLFILL HUMAN RIGHTS

The State’s obligations to respect, protect and fulfill human rights are based on established International Human Rights Law. Due to the inherent risk associated with toxic chemicals and pollution, such established duties and responsibilities can be used to induce effective regulation of manufacturing processes and product release, ensuring balance between economic growth and environmental and social protections in their jurisdictions.

The main principle espoused by the UDHR is everyone’s right to “life, liberty and security of person”\textsuperscript{xx} which shall not be deprived on the basis of demographic classification.\textsuperscript{xxi} This principle is reiterated in two binding documents, the ICCPR and the ICESCR, which enumerate the different human rights that individuals should enjoy. The Human Rights Council (HRC) recognizes that this principle and associated rights are at-risk due to the unsound management of chemicals and waste. In particular, environmental degradation negatively impacts the “right to life, the right to the enjoyment of the highest attainable standard of physical and mental health, the right to an adequate standard of living and its components, such as the right to food, and the rights to safe drinking water and sanitation, and to adequate housing”.\textsuperscript{xxii}

Article 2 of the ICCPR imposes a positive obligation on States to uphold the provisions of the treaty, not only by enacting laws that will protect human rights, but also by pursuing “legitimate aims in order to ensure continuous and effective protection of Covenant rights”.\textsuperscript{xxiii} States must be proactive in protecting the inherent right to life (Article 6), as well as the right to freely participate in the conduct of public affairs (Article 19). Furthermore, States are obligated to continuously advance the health and livelihood conditions of their citizens, keeping the people informed of the innate health risks associated with products and processes that will help them engage and participate in government decision-making.

On the other hand, Article 11 of the ICESCR also imposes a positive duty on the States to take appropriate steps to provide an adequate standard of living for all people. In accordance to Article 12, everyone has the right to “the enjoyment of the highest attainable standard of physical and mental health”\textsuperscript{xxiv} and that States must improve “all aspects of environmental and industrial hygiene”\textsuperscript{xxv} and prevent, treat, and control “endemic, occupational, and other diseases”. In terms of balancing the three pillars of sustainable development (economic, social, and environmental), Article 5 of the ICESCR particularly imposes States to refrain from undertaking rights that will lead to the destruction of other rights provided in the same document. This means that States should not seek to achieve economic gain by compromising the health, welfare, and livelihood of the people.

A State may be held responsible for human rights violations by private sectors, and may be considered to have breached their international obligations when human rights violations are either attributable to the State, or where the State failed to take appropriate steps to prevent, investigate, punish, and redress private actors’ violations.\textsuperscript{xxvi} Aside from its obligations to international human rights laws, States are also bound by several conventions which aim to restrict or even ban the production, use, and trade of certain hazardous chemicals for the purpose of protecting human health and the environment. The following are the major multilateral environmental agreements on chemicals and wastes: (1) the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention), Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (Rotterdam Convention), the Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention), the Montreal Protocol on Ozone Depleting Substances (Montreal Protocol) and the Minamata Convention on Mercury (Minamata Convention).\textsuperscript{xxvii} These are supplemented by the Strategic Approach to International Chemical Management (SAICM), a policy framework to “foster the sound management of chemicals ensuring that, by the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health”.\textsuperscript{xxviii}

However, despite the presence of these international agreements, they are “unlikely to fully protect human health and the environment from the risks of dangerous chemicals”.\textsuperscript{xxix} The narrow scope of these Conventions (i.e. chemicals covered, sectors
ensure, through judicial, administrative, legislative, or other appropriate means, that when such abuses occur within their territory and/or jurisdiction, those affected have access to effective remedy. According to the report of the UN Special Rapporteur, an effective remedy includes (a) the right to equal and effective access to justice, (b) effective and prompt reparation for harm suffered; and (c) access to relevant information concerning violations and reparation mechanism.

The right to access effective remedy is closely linked to businesses’ human rights due diligence. While States are bound to “take appropriate steps to ensure the effectiveness of domestic judicial mechanisms when addressing business-related human rights abuses”, business enterprises that have caused or contributed to adverse impacts must “provide for or cooperate in their remediation through legitimate processes” (Principle 22). However, access to remedy must not be confused with corporate accountability, as measures that hold companies accountable may not always result in provision of remedies of infringements suffered.

Access to remedy is not only a human right per se, but is a prerequisite for the full enjoyment of human rights. Article 8 of the Universal Declaration of Human Rights states that “everyone has the right to an effective remedy by the competent national tribunals for acts violating fundamental rights granted to him by law or by the constitution of the law”. However, there is a wide difference in its enforcement, with countries that fail to protect the rights of its citizens also being those that experience the biggest challenges when it comes to providing access to remedy.

Prevention is the best and often only means of ensuring access to an effective remedy. Many of the impacts of children’s exposure to toxic chemicals are irreversible. Further, the path for victims to access justice and an effective remedy is long, uncertain and painful. The increasing incidences of cancer, diabetes, respiratory problems, behavior and cognitive disorders, hormonal dysfunctions and other health impacts related to the quality of environmental health show that the violation of a child’s physical integrity from toxics cannot be undone. More importantly, preventive measures ensure that the future generation will not suffer from any adverse impact of legacy pollution caused by business enterprises today, as in the case of the Marcorper mining disaster where the perpetrators are no longer in existence and are financially unwilling to pay for complete remediation. In order to fulfill their duty to protect human rights and to prevent childhood exposure, businesses should transition from the manufacture, use, and emission of hazardous substances to safer alternatives, including alternative materials and mitigation technologies to eliminate the intrinsic or unknown hazards wherever possible.

Another core component of an effective remedy for toxic chemicals and pollution is rehabilitation of the environment and the people affected. Contamination from legacy pollution as well as continued spills and accidental releases is an issue that threatens the health of terrestrial and aquatic ecosystems around the world. Often, multiple agents exist simultaneously, posing a mix of certain or suspected risks. The removal of a chemical substances or hazardous material from the environment will prevent, minimize, or mitigate any further damage to public health, safety, or welfare. Contact with polluting substances can harm human organs – including respiratory, hematopoietic, hepatic, and renal organs – through a variety of acute and chronic mechanisms. Adults and children who are exposed to toxic chemicals and pollution must have access to healthcare, which will enable them to enjoy a full and decent life.

Compensation is also a necessary component of an effective remedy, although it may be insufficient when compared to the irreversible and lifelong consequences of many types of exposures. Realizing this remedy is often elusive, due to (1) the lack of awareness among victims that their disease could have been caused by childhood exposure to toxic chemicals or pollution, (2) the burden of proof placed on children, (3) lack of access to fundamental information on the hazards and uses of substances, (4) the challenge of identifying perpetrators, (5) weak or non-existent legislation, (6) the costs of legal representation for plaintiffs, (7) endless appeals processes, (8) confidential out-of-court settlements, and (9) the use of subsidiaries or contractual relationships to shield corporate liability.

In focus: The Philippine Marcorper Mining Disaster

The Marcorper Mining Corp. (MMC) began operations on the island of Marinduque in September 1969. It was managed by Placer Dome Inc., a Canadian company which owns 39.9% of MMC. Development of the Mt. Tapian reserve was eventually depleted in 1990, leading to the shift of production to the San Antonio open pit several kilometers to the north in 1991. Tailings disposal also shifted from Calancan bay to the old Tapian pit by sealing the tunnel connecting the latter to the Boac river. In parallel, the Department of Environmental and Natural Resources granted MMC an environmental compliance certificate (ECC) on April 16, 1990, allowing them to operate for 10 more years.

In 1991, an earthen dam was built at Maguilla-guila creek, the headwater of Mopog river, to contain the tailings produced from mining operations. MMC received considerable public attention in 1993, when mine wastes were released into the Mopog River as a result of the collapse of the Maguilla-guila siltation dam. This led to the flooding of 21 barangays in the municipality of Mopog, which destroyed homes, contaminated agricultural fields, and killed livestock. Two children also drowned in the rushing water.

Mining operations ceased on March 24, 1996, when the plug that sealed the Tapian pit tunnel to the Boac river fractured. This resulted to the release of an estimated 1.5-3 million cubic meters of sulfidic tailings slurry into the Makulapit and Boac rivers. Heavy sedimentation was observed for 14 km, with some material being washed 25 km away from the mines. Around 700 families (3,000 to 4,000 individuals) from 5 villages were directly affected, and the surrounding terrestrial and aquatic environment was heavily contaminated. Many residents, including children, were found to have toxic blood levels of lead, some of which died as a consequence of lead intoxication.

A wholly-owned subsidiary, Placer Dome Technical
Services (PDTS), was established to carry out post-spill environmental studies and remedial activities. However, in 1997, Placer Dome divested from MMC through a holding company based in the Cayman Islands. In October 2001, the Philippine government ordered Placer Dome to implement the recommendations of the Klohn Crippen report, however, Placer Dome instead pulled its personnel out of the Philippines.  

After divesting from MMC, Placer Dome reiterated that it has no further role to play “in addressing the issues on the Marinduque mining site”, which it says are the responsibility of the owner and operator, MMC. In October 2005, the Marinduque provincial government filed a USD 100 million class action suit against Placer Dome Inc. in the Nevada district court. However, the court dismissed the case for “forum non conveniens”, meaning the United States was a wrong jurisdiction to hear the case. Barrick Gold, the new owner of Placer Dome, offered a USD 20 million settlement with a condition that the petitioners, including Philippine government agencies, waive their accountabilities and responsibilities with regard to the disaster. However, the Marinduque Provincial Council turned down the amount in 2014, stating that the amount was not enough to compensate the damages to the province. In addition, accepting the settlement will mean that the responsibilities of MMC, Placer Dome and Barrick Gold will be passed on to the government, which will result in a conflict between affected communities and the government.
regulated, etc.), the implementation challenges at national levels, insufficient technical and financial resources and capacity, as well as the lack of information needed to make informed decisions, all hamper the development of broad-ranging interventions that protect human health and the environment from toxic chemicals and pollution. For instance, much more work is needed to cover emerging chemicals of concern throughout their full life cycle. Examples of these orphan issues include carcinogens, mutagens, reproductive toxicants, nanomaterials, toxic heavy metals (e.g. lead, cadmium), active pharmaceutical ingredients, endocrine disrupting chemicals, radioactive substances, and substances with epigenetic effects, among others.\(^{13}\)

**DUTY TO PREVENT EXPOSURE**

States have a duty to protect human rights, including the right of the child. Every State has a duty to protect recognized human rights from abuse by third parties, including business enterprises. Therefore, States must protect children against exposure to toxic substances, which is an abuse of many of their human rights.

The State’s duty to protect under human rights law and the principles of prevention and precaution in international environmental law are closely linked. Prevention and precaution are pivotal concepts for the complete enjoyment of human rights in an industrial world. In the environmental context, these principles recognize that the social and economic costs of avoiding damage and injury are almost always less than the costs of repair, treatment, or compensation after the fact. Principle 15 of the 1992 Rio Declaration, commonly known as the Precautionary Principle, states that, “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

The global chemical industry has grown tremendously during the last decades and is expected to dramatically increase in both developing countries and countries with economies in transition (CEFTs). However, the “[m]ismanagement of chemicals can have significant negative effects on human health and the environment... [and that] associated costs to society can be considerable.”\(^{10}\) This only emphasizes that achieving sound management practices for chemicals throughout their life cycle is a fundamental step to mitigating foreseeable risks imposed upon human health and ecosystems.

The Convention on the Rights of the Child (CRC) makes it clear that States have an obligation to prevent children’s exposure to toxic chemicals and pollution. In particular, the report developed by the UN Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes (UN Special Rapporteur) highlights the need to put the best interests of children, including future generations who will inherit the toxic legacy of previous generations, as “primary consideration” in the implementation of the rights enshrined in the CRC.\(^{11}\)

Exposure to toxic chemicals during crucial periods of development can affect a child’s health. Disruption of gene expression and hormone function following exposure to toxic substances can lead to higher probability of diseases and disabilities later in life, and in many cases, premature death. In addition, the child’s right to life, survival and development is contingent upon the realization of the rights to health, food, water, and adequate housing, and to a healthy environment, as well as to physical integrity and to information.

As aptly put by a Special Rapporteur of the UN Commission on Human Rights, “the right to life is... a fundamental right in any society, irrespective of its degree of development or the type of culture which characterizes it, since this right forms part of jus cogens in international human rights law. The preservation of this right is one of the essential functions of the State and numerous provisions of national legislation... establish guarantees to ensure the enjoyment of this right.”\(^{12}\) States must work to limit human exposure to toxic substances, taking all appropriate means, including stricter regulation and enforcement, to help children realize their potential.

1. The best interests of the child — including future generations who will inherit the toxic legacy of previous generations — must be a “primary consideration” in the interpretation and implementation of the rights enshrined in the Convention on the Rights of the Child and... 2. States parties must be “particularly concerned about the special vulnerability of children to threats... 3. States parties must pay particular attention to the special vulnerability of children to threats... 4. States parties must ensure that children are... 5. States parties must ensure that children are... 6. States parties must ensure that children are... 7. States parties must ensure that children are... 8. States parties must ensure that children are... 9. States parties must ensure that children are... 10. States parties must ensure that children are... 11. States parties must ensure that children are... 12. States parties must ensure that children are...
Right to a healthy environment

Principle 1 of the Declaration of the UN Conference on the Human Environment states that, “Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being”. Over 100 States have recognized the right to a healthy environment in their national constitutions, regional agreements, and judicial decisions, among other means of recognition of this human right.

In making the explicit linkage between pollution and contamination and the right of every child to the highest attainable standard of health, the CRC implicitly recognizes the right to a healthy environment.

Furthermore, Article 12 of the ICESCR asserts that States must take steps to achieve the full realization and “improvement of all aspects of environmental and industrial charter”. In the region, the human rights declaration of the Association of Southeast Asian Nations (ASEAN) indicated a list of regional agreements that referenced the right to a healthy environment.

The WHO, in its Global Action for Children’s Health and the Environment, affirms that children should be provided safe environments, and that steps should be taken by countries, international organizations, and national organizations to “achieve healthier, safer and cleaner environments in the places where children live, learn, work and play.”

The interrelationship between the rights to life and to a healthy environment is considered an obvious one, as threats to the environment may threaten the lives of large groups of people directly. However, Ramcharan (1985), former Special Assistant to the Assistant Secretary General for Human Rights, noted the need to go beyond this interpretation, as environmental deterioration or risks not only threaten the loss of life, but also affect the quality of life, thereby affecting the realization of an optimal life span. He summarized the interrelationship between these two rights in the following propositions: 

1. There is a strict duty upon States, as well as upon the international community as a whole, to take effective measures to prevent and to safeguard against the occurrence of environmental hazards which threaten the lives of human beings.
2. Every State, as well as the UN, should establish and operate adequate monitoring and early-warning systems to detect hazardous threats before they actually occur.
3. States which obtain information about the possible emergence of an environmental hazard to life in another State should inform the State at risk or at least alert UN Environment on an urgent basis.
4. The right to life, as an imperative norm, takes priority above economic considerations and should, in all circumstances, be accorded priority.
5. States and other responsible entities (corporations or individuals) may be criminally or civilly liable under international law for causing serious environmental hazards posing grave risks to life.
6. Adequate avenues of recourse should be provided to individuals and groups, at the national, regional or international levels, to seek protection against serious environmental hazards to life.

The realization of a healthy environment clearly requires that States take effective measures to prevent childhood exposures to toxins. For instance, the Philippine Supreme Court’s adoption of the Precautionary Principle in the newly promulgated Rules of Procedure for Environmental Cases affords plaintiffs a better chance of proving their cases where the risk of environmental harm is not easy to prove. This is in line with the provisions of the 1987 Constitution, where the fundamental rights to health and a healthy environment are viewed as basic human rights. Special remedies established include the:

1. Writ of Kalikasan, for persons whose constitutional right to a balanced and healthful ecology is violated by an unlawful act or omissions of a public official, employee, or private individual or entity;
2. Writ of Continuing Mandamus, when an agency of the government unlawfully neglects enforcement of an environmental law, rule or regulation;
3. Rule on Strategic Lawsuit Against Public Participation (SLAPP), which protects persons from frivolous and vexatious lawsuits meant to stifle their efforts to enforce environmental rights.

Environmental pollution often knows no borders—pollutants and contaminants in the air, water, and soil undergo global geochemical cycling routinely evading political boundaries and serving as a conundrum for international relations and diplomacy. For instance, schools in southern Japan and South Korea have had to suspend classes or restrict activities because of toxic chemical smog from factories in China. This characteristic of environmental pollution points towards the need for international cooperation in developing regulatory mechanisms.

In focus: Bangladesh’ Textile Industry

Although a developing country, Bangladesh has emerged to become the third largest garment manufacturer and exporter in the world. The sector accounts for about 80% of the country’s foreign exchange earnings, and 10% of its gross domestic product (GDP). While considered a significant contributor to the country’s economy, textile industry operations bring a host of environmental challenges in many countries, with the industry being a prominent source of pollution in areas such as China, India, and Pakistan, among others. In Bangladesh, for example, factories surround the homes and schools of children in the city. Boilers, thermo packs, and diesel generators used in manufacturing emit hazardous pollutants such as suspended particulate matter (SPM), sulfur dioxide gas, nitrogen oxides, among others. Hazardous wastes such as used oil and empty containers for dyes and chemicals are also generated. Additionally, toxic liquid substances such as salts, dyes, and bleaches are often deposited into surrounding channels, agricultural fields, and rivers. Most of these are discharged without proper treatment as factories are reluctant to invest money in effluent management due to the highly competitive local and global markets.

Adverse impacts on the health and wellbeing of children in several communities were reported. A 2001 study conducted by a group of researchers from the United Kingdom and Bangladesh in 15 villages found cases of physically deformed children living in the study areas. Mathur et al. (2004) found that surface water and end-of-pipe samples from textile industry operations had the effect of inducing genetic mutation. The pollution has made it hard for children to go to schools like the Genda Primary School, located near two garment factories, twelve
right to the highest attainable standard of health

With respect to the rights of the child, Article 24 of the CRC recognizes “the right of the child to the enjoyment of the highest attainable standard of health... taking into consideration the dangers and risks of environmental pollution”. Article 12 of the ICESCR states that Parties should “recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.” Article 10 of the ICESCR also calls for “special measures of protection and assistance to be taken on behalf of all children and young persons without any discrimination”. This principle of non-discrimination is reiterated in the WHO constitution, wherein the right to the highest attainable standard of health is considered “one of the fundamental rights of every human being not limited to physical and mental integrity, but also encapsulates social and environmental determinants such as having an “adequate supply of safe food, nutrition and housing, [and] healthy occupational and environmental conditions”. In the same manner, the right to the highest attainable standard of health is inextricably linked with the rights to human dignity, life, survival and development, among others. Article 24 of the CRC continues by stating that State parties “shall strive to ensure that no child is deprived of his or her right of access to such health care services.” This is directly complemented by the ICESCR which notes that while the progressive realization of this right due to the constraints relating to the availability of resources should be provided, State parties ultimately have “a specific and continuing obligation to move to as expeditiously and effectively as possible towards the realization of Article 12”. The Committee specifically identified a violation of the obligation to protect where there is a “failure to enact or enforce laws to prevent the pollution of water, air and soil by extractive and manufacturing industries”. A State that is unwilling to use the “maximum of its available resources” for the realization of the right to health violates its obligations to Article 12 and carries the burden of justifying that every effort has been taken and all resources have been exhausted in order to satisfy the obligations outlined. Hence, a country’s difficult financial situation “does not absolve it from having to take action to realize the right to health”.

In focus: The Informal E-waste Recycling Sector

Informal waste electronic and electrical equipment (WEEE) recycling, also called “backyard recycling” as it often takes place in the backyard of shops and homes, is a challenge for most developing countries in East and Southeast Asia.

While the sector provides income opportunities, handling and dismantling of WEEE and other wastes in the informal sector are conducted through unsound means. Breaking and crushing are used to utilize space, especially from bulky WEEE such as televisions and computer monitors. Open burning is practiced to retrieve copper wires from polyvinyl chloride (PVC) insulators. Acid working is another method of extracting precious metals, particularly in circuit boards. Workers use simple tools and implements without proper protective equipment, which puts them at risk of exposure to chemicals.

Prior to China’s ban on waste imports at the end of 2017, the town of Guiyu in Guangdong Province was previously known as one of the world’s biggest e-waste disposal sites. Various studies have reported soaring levels of toxic heavy metals and organic contaminants such as arsenic, barium, beryllium, brominated flame retardants, cadmium, hexavalent chromium, lead, mercury, PCBs, and phthalates in samples of dust, soil, river sediment, surface water, and groundwater in the town.

The release of toxic chemicals and pollutants lead to diseases. Workers suffer from high incidences of birth defects, infant mortality, tuberculosis, blood diseases, anomalies in the immune system, damage to the kidneys and respiratory systems, lung cancer, underdevelopment of the brain in children, and damage to the nervous and blood systems. Children at e-waste recycling sites reported suffering from medical problems such as breathing ailments, skin infections, and stomach diseases. A study by Xu et al. (2012) reports that, as a consequence of informal e-waste recycling, Guiyu has about four times higher risk of stillbirth (4.72%) than the study’s control site, Xiamen (1.03%).
The pollutants' environmental transport and transformation processes allow them to affect other communities. Surface dust samples from recycling shops, adjacent roads, a schoolyard and an outdoor location in Guiyu showed elevated levels of heavy metals such as cadmium, cobalt, chromium, copper, nickel, lead, and zinc. Lead levels at the town’s schoolyard and food market also showed that public places were adversely impacted and that the risk posed warrants an urgent investigation into heavy metal-related health impacts. Environment-to-food chain contamination leads to the accumulation of contaminants in agricultural lands making them available for uptake by grazing livestock. For instance, research by Wang et al (2012) found high concentrations of polyatomic hydrocarbons (PAHs) near a dismantling site, corresponding to high levels of daily intake of PAHs. This indicates that the consumption of vegetables grown near e-waste sites is risky. In studying the impacts of informal e-waste recycling in Guiyu, Wei and Liu (2012) identified the following barriers to the sector: (1) illegal importation from developed countries, (2) booming development of the informal recycling sector, (3) environmental and health impacts caused by informal disposal, (4) diversion of WEEE from formal to informal recycling operations, and (5) morbidity of China’s regulatory and legal system. These barriers are strikingly similar to the challenges faced by other countries with thriving informal e-waste recycling sectors.

The Chinese ban on waste imports has directly impacted countries in Southeast Asia and nearby regions. Waste trading companies such as Wai Mei Dat, for example, moved their operations to countries such as Lao PDR and Thailand following the ban, directly contributing to increased waste imports into these countries. In the first five months following the ban, it was estimated that at least 37,000 tonnes of e-waste entered Thailand, with more believed to have come in illegally. Similarly, Malaysia experienced a surge of e-waste imports during the period, culminating in the Malaysian government returning as much as 4,120 tonnes of plastic waste to thirteen different countries, and prompting government officials to close down around 200 illegal plastic recycling centers in 2019.

Right to food and water

According to Article 25 of the UDHR and Article 11 of ICESCR, “everyone has the right to a standard living adequate for the health and well-being of himself and of his family, including food”. This is not only limited to the quantity of food accessible to individuals, but also ensures that food is “free from adverse substances”, and that measures are in place to “prevent contamination of foodstuffs through… bad environmental hygiene”.

The right to adequate food is further affirmed in the Food and Agriculture Organization’s (FAO) Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security, “access to, and consumption of adequate, safe and nutritious food” is also enshrined in the Food Assistance Convention. Unfortunately, pollution of water bodies by toxic metals threatens important food sources for a vast majority of human populations. Mercury contamination in fish and shellfish is a prime example. In this situation, restricting fish consumption may not be a realistic option as a large portion of the developing world traditionally relies on seafood as a main source of protein. A basic tenet of the right to the highest attainable standard of health espoused in the ICESCR is the State’s obligation “to ensure access to the minimum essential food which is nutritionally adequate and safe, to ensure freedom from hunger to everyone.”

As such, under International Human Rights Law, States are expected to protect human food sources from toxic contamination, thereby ensuring the highest attainable standard of human health.

Meanwhile, the right to water is closely tied to the right to food as food webs and water sources interact in conjunction, and human survival is dependent upon both. The US Geological Society (USGS) estimates that the average human can survive only one week without water. The right to water is implicitly referenced by the ICESCR as part of the right to an “adequate standard of living” (Article 11), as well as the right to enjoy “the highest attainable standard of physical and mental health” (Article 12). On the other hand, the right to water entitles everyone to “sufficient, safe and acceptable water for personal and domestic use”. Article 24 of the CRC asserts the same, citing that children should be provided with “clean drinking water, taking into consideration the dangers and risks of environmental pollution”. In this light, States are obligated to take steps to “prevent threats to health from unsafe and toxic water conditions”. These include monitoring and proactive protection of natural water resources. Specific considerations should be paid to rural and deprived urban areas, as well as to indigenous peoples’ access to water, so that such areas are protected from unlawful encroachment and pollution.

In focus: Contaminated Food Products

Chemical contamination in foods is a major food safety issue globally which poses serious threats to human health. The WHO acknowledges this, and states that “food contamination that occurs in one place may affect the health of consumers living on the other side of the planet.” Incidences of food contamination occur in many countries – the contamination of drinking water contaminated with heavy metals is common, for example, in many low- and middle-income countries.

Many such incidents of contamination in food products have been recorded in China, one of the world’s leading producers of food products. In 2016, the China Food and Drug Administration conducted 15 million individual inspections in the food sector and found more than 500,000 incidents of illegal behavior. This is hardly news for the country, which is consistently rocked by food safety scandals, including the incident of melamine-laced milk in 2008. Below are some of the food safety scandals that wrecked the country in the past decade:

- **Melamine milk scandal.** In 2008, six babies were killed and 300,000 others were left sickened after consuming infant formula contaminated with the industrial chemical, melamine. Melamine is used to make plastics, fertilizers, and concrete, but was added to food products to increase the nitrogen content of the milk, thereby increasing their apparent protein content. Based on animal tests, melamine alone causes the formation of bladder stones. These can block kidney tubules which can stop the production of urine, thereby causing kidney failure, and in some cases, death.
- **Toxic bean sprouts.** In 2011, China’s Ministry of Agriculture found that sprouts that have been sold in many Chinese cities were soaked in illegal additives such as sodium nitrite and urea as well as antibiotics and a plant hormone called 6-benzyladenine. These were added to make the vegetables grow faster and look shinier. Sodium nitrite hinders bacterial growth in food but is carcinogenic to humans. Meanwhile, 6-benzyladenine is suspected of damaging fertility of the unborn child and can cause convulsions, headache, nausea, and vomiting.
- **Pesticide-contaminated ‘yard-long’ beans.** In March 2010, more than 3.5 tons of “yard-long” beans contaminated with the banned pesticide isocarbophos were found in the city of Wuhan.
Isocarbofaphos can cause respiratory depression, muscle twitching and tremors, and in severe cases, seizures, incontinence, and loss of consciousness. Toxic bean sprouts have also been sold in schools, factories, and hotels in the city of Sanmenxia in 2011.

- **Leather milk.** Similar with the scandal in 2008, milk contaminated with leather-hydrolyzed protein was also discovered in February 2011. Leather protein is derived from scraps of animal skin and was added to milk to increase its protein content. Its use has been banned by the government as early as February 2009, based on reports as early as 2005, indicating its potential harm. As with the 2008 melamine milk scandal, the most vulnerable victims are infants.

- **Cadmium rice.** A Greenpeace study conducted in 2014 found that rice planted in Hunan province, an area that ranks first in rice output in the country, contained excessive levels of cadmium. This can be traced to the extent of soil contamination in the country, with a national soil survey indicating that 16.1% of all soil and 19.4% of farmland was contaminated by organic and inorganic chemical pollutants. Rice is China’s staple food, but is also unusually vulnerable to pollution as it easily absorbs metals from the soil. The Greenpeace study notes that ‘cadmium rice’ maybe one of the many concerns regarding rice produced in the country, with ‘lead rice’ and ‘arsenic rice’ to follow.

In 2009, China enacted the Food Safety Law, which aimed to prevent and to resolve future incidences of food safety violations in the country. However, given the scandals involving contaminated food enumerated above, the law found only limited success, and has allowed multiple incidences of failure to protect peoples’ and children’s right to nutritious and safe food. A study by Illin-Schneider (2013) argued that this is due to (1) obsolete and lacking national food safety standards, (2) failure to streamline the number of agencies involved in monitoring and enforcement, (3) the law’s focus on ‘curative’ approaches, and (4) implementation challenges rooted in local economic protectionism, corruption, unscrupulous practices, and lack of integrity and environment influences on food safety.

### Right to adequate housing

Article 12 of the CESC states the right to adequate housing, and “to the continuous improvement of living conditions”. Similar with the right to health, the Committee on Economic, Social and Cultural Rights reiterated in its General Comment that the “right to housing should not be interpreted in a narrow and restrictive sense”, and that it should “be seen as the right to live somewhere in security, peace and dignity.”

As a determinant of the right to the highest attainable standard of health, adequate housing “ensures protection from injuries, poisonings, and thermal and other exposures that may contribute to chronic disease and malignancies”. Principle 2 of WHO’s “Health Principles of Housing” further states that special attention should be paid “to structural features and furnishings, indoor air pollution, chemical safety, and the use of the home as a workplace”.

Across cultures and over centuries, people of varied means have made homes for themselves and their families. However, it is sometimes this very dwelling that can contribute to the incidence of injury and disease to children and their family members. The proliferation of toxic chemicals in housing materials, as well as housing products is a cognizable threat to the right to adequate housing. Phthalates used in a vast number of household consumer products (e.g., flooring, shower curtains, synthetic leather) have come under scrutiny in recent years due to its effects on reproductive health. Meanwhile, the use of lead paint in houses places the health of children and adults at risk, especially those from poor communities where houses are built when it was still legal to use lead in indoor housing paint. The rapid growth in housing development particularly in the Asian-Pacific region has also contributed to chemicals issues in the home. The use of asbestos, as an example, as a building and insulation material is estimated to generate as much as 48.8 million tons of asbestos waste from 2013 to 2022.

The State’s obligations to uphold peoples’ right to adequate housing are connected not only with the obligations concerning the right to the highest attainable standard of health, but also with those related to the peoples’ right to access information. Where States fail to inform about the existence of such chemicals and to redress the harmful impacts resulting from the presence of toxic chemicals in households, international, and regional mechanisms should be evoked.

### Right to be free from the worst forms of child labor

Article 32 of the CRC recognizes the right of the child to be protected from “economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child’s education, or to be harmful to the child’s health or physical, mental, spiritual, moral or social development”. Meanwhile, Article 3 of the ILO Convention on the Worst Forms of Child Labor describes work that harms a child’s health as one of the worst forms of child labor. This has been further clarified to include “work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes... damaging to their health.”

However, loopholes in policies and failure to address the root causes of child labor perpetuates the continued exploitation of children in the workplace. Globally, more than 352 million children ages 5 to 17 engage in “economic activity”, an internationally accepted standard that includes unpaid and illegal work as well as work in the informal sector. This situates a large portion of these children in hazardous occupations, which have adverse effects on their health, safety, and moral development. For instance, child laborers in the agricultural sector are unpaid family members, exposing them to occupational diseases and fatalities caused by the use of agrochemicals.

Due to the informal nature of hazardous work, child laborers are also deprived of their right to “information on the identity of chemicals used at work, the hazardous properties of such chemicals, precautionary measures, education and training”, as stated in ILO’s C170 Chemicals Convention. As such, child laborers often lack the autonomy to exercise their right “to remove themselves from danger resulting from the use of chemicals when they have reasonable justification to believe there is an imminent and serious risk to their safety and health”.

Each State party to ILO Convention No. 182 is required to “take immediate and effective measures” to prohibit and eliminate labor practices harmful to the health or development of child workers, while ILO recommendation No. 190 states that criminal penalties should apply for violations.

An extension of the right to be free from the worst forms of child labor is the need to also protect and fulfill the rights of parents to safe work. A parent’s exposure to toxic chemicals can extend to his/her children, especially for the unborn child who can be exposed during intrauterine life. Cases of children born with disabilities because their mothers worked...
with toxic chemicals before or during pregnancy, or were harmed by toxic residues brought into the home from work (“take-home exposures”) by their parents or others, illustrate the importance of protecting the population at large.85

Right to information

Under Article 19 of the ICCPR, “everyone has the freedom to seek, receive and impart information and ideas of all kinds”. On the other hand, Article 13 of the CRC emphasizes that a child’s right to freedom of expression shall include the “freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child’s choice”. When human rights are violated due to toxic chemicals and pollution, gaining access to information is essential in order to assert other rights, such as the right to be heard and to participate, due process, guarantee to a fair trial, and the right to remedy. There is wide recognition of the public’s right to know about toxic chemicals in the environment in which they live. In addition, governments are increasingly recognizing the public’s right to access information about toxic substances in products.

Despite the hundreds of thousands of chemicals released in the market each year, large data gaps on their effects on human health and the environment still exist, as only a fraction of chemicals has been thoroughly evaluated. While certain states have taken measures to supplement the public’s right-to-know, including the development and enforcement of labeling laws which help guide consumers on their purchases, corporate misinformation campaigns amplify contrarian views on the topics, and lead to more digression from the results of actual science.86 Article 17 of the CRC highlights the obligation of State Parties to “ensure that the child has access to information and material from a diversity of national and international sources, especially those aimed at the promotion of his or her... physical and mental health”. Health and safety information about hazardous substances must be available and accessible, in a form that functions to protect the rights of everyone, in particular those most at risk, such as children. As such, children must have access to environmental health information that is “understandable and appropriate to children’s age and educational level”.87 However, much of the health impacts associated with childhood exposure to toxics occur at the earliest of ages, before children are in a position to make choices for themselves. And, there are only limited steps that parents can take, particularly in socio-economically disadvantaged circumstances, to protect themselves and their children from exposure to toxic substances.

The obligations of States to uphold the right to information includes monitoring and evaluating the impacts of laws, policies, and mechanisms in protecting children from toxics, through monitoring the extent of use, emissions, and releases of toxic chemicals in products and processes, as well as determining the incidences of diseases associated with childhood exposure.88 This can be achieved through collaboration with different stakeholders, as well as through the institution of complaint mechanisms for consumers and communities.

This is from my 2015 HRC report. I think the above can be misinterpreted to say if we (the State) give you information and you are still exposed, its not our fault.

“58. Health and safety information about hazardous substances must be available and accessible, in a form that functions to protect the rights of everyone, in particular those most at risk, such as children.”

As such, children must have access to environmental health information that is “understandable and appropriate to children’s age and educational level”.86 Child-specific disaggregated data must be available to account for differences in exposure among specific groups of children.

59. During sensitive periods of development, children cannot process or use information about the risks of toxics. Moreover, information about health risks and possible sources of exposure is neither available nor accessible to parents and guardians for tens of thousands of substances manufactured and used by industries in food and consumer products, which often end up contaminating air and water.86

60. Even if information is available and accessible, parents are often powerless to comprehend, assess and use the information to prevent exposure. Incomplete information, including on prevention and mitigation measures, can exacerbate impacts.89

61. States have an obligation to monitor and evaluate the impact of laws, policies and mechanisms in protecting children from toxics. States have a duty to ensure that parents and children have information about children’s health and are supported in using it.88 States should engage in data gathering, collaboration with civil society, and investigations, and should ensure transparency, as well as complaint mechanisms for consumers, communities and other populations at elevated risk.89 States have an obligation to monitor childhood exposure to toxics, as well as the incidence of cancer, diabetes and other diseases linked to childhood exposure, and other related impacts. Monitoring emissions into the environment and the presence of toxics in products and food has helped States prevent exposure and reduce the risk of adverse health impacts.”
In focus: Pesticide Use in Cambodia

The use of pesticides continues to be a problem in many Southeast Asian countries, with pesticide use skyrocketing in the last 20 years. In Thailand and Vietnam, as an example, pesticide use over the last decade continues to grow steadily at a rate of 7 to 10%. Countries such as the Philippines and Malaysia remain heavy users of pesticides.  

Cambodia, one of the least-developed countries in the sub-region, continues to be impacted by the use of pesticides. In 2012, agriculture contributed 27% to the national GDP, employing 67% of the workforce.  

The introduction of modern agriculture in the early 1960s has led to the replacement of traditional crop varieties by modern ones. This eventually led to a significant change in Cambodia’s agriculture, changing pest dynamics and increasing the use of chemical pesticides. 

Cambodia’s pesticide market has continued to expand over the last decade, although most available pesticides are imported both legally and illegally from Thailand and Vietnam.  

Some of the most popular pesticides, such as organophosphates, methylparathion, and mevinphos are extremely hazardous and banned according to Cambodian law. However, inappropriate pesticide use in the agriculture sector persists as these products are used by untrained and often illiterate farmers, incurring serious health consequences. 

A study by the Food and Agriculture Organization (FAO) found that 84% of farmers use highly hazardous pesticides—43% using class IA, 6% using class IB, and 32% using class II. While the 2011 Law on Management of Pesticides and Fertilizers prohibits the use of particularly dangerous chemicals, the space between the letter of the law and its implementation remains significant. 

Indiscriminate use of pesticides not only put sustainable agricultural production at risk through the disruption of vital ecosystem services, but also raises food safety concerns. 

Although no official study on the impact of consuming unsafe food in Cambodia exists, the public has become increasingly concerned about the food they eat. In 2016, around 1,000 cases of food poisoning were reported in the country.  

In 2013, nearly 50 children were rushed to the hospital with food poisoning after cooks failed to wash pesticide out of food storage containers in a wedding party.  

The use of pesticides is directly linked to aggressive promotions of its product by agro-chemical companies, and limited farmer education on other environmentally friendly pest management options. Cambodia also faces parallel problems regarding human capacities, experience, legal framework, and facilities and mechanisms for managing chemicals and information dissemination. 

To protect human rights affected by hazardous substances such as pesticides, States have the obligation to generate, collect, assess, and update information; effectively communicate such information, particularly those who are disproportionately at-risk of adverse impacts; and to engage in international cooperation to ensure that transboundary movement of hazardous chemicals are addressed. Information on risks, mitigation measures and safer alternatives can help prevent harm and save lives from premature deaths due to pesticides. 

Right to be heard and to participate

Article 2 of the Universal Declaration of Human Rights states that, “everyone has the right to take part in the government of his country, directly or through freely chosen representatives”, which was further affirmed by Article 25 of the ICCPR. On the other hand, Article 12 of the CRC obligates State Parties to assure the child the “... right to express [his/ her] views in all matters affecting [him/her]”, and that these views will be “given due weight in accordance with [his/her] age and maturity”. 

The right to be heard is a guiding principle of the CRC and is inextricable from public health and environmental threats such as toxics and pollution. To be “heard” implies that the child is not merely expressing himself/herself, but that someone is listening to him/her, attempting to understand him/her, and responding to what he/she is expressing.  

However, children may be exposed to harmful substances before they are capable of forming their own opinions and participating in decisions about their well-being—this is in the period in their lives when they are most at-risk from toxic exposures that can lead to the development of associated diseases, disorders, and illnesses. 

Article 12 of the CRC recognizes the child as a full human being with the ability to participate in society and in decisions about his or her well-being. Children’s participation is important as it contributes to a child’s personal development, leads to better decision-making and outcomes, and strengthens accountability of both State and non-State actors. 

Other international environmental treaties have also taken measures to ensure that the public is given broad rights of participation in decision-making processes. States must respect, protect, and fulfill the rights of each child in their jurisdiction without discrimination of any kind. All legislations, policies and programmes should not be intentionally or unintentionally discriminatory toward children in both their content and implementation. 

RESPONSIBILITIES OF BUSINESSES

While States retain a duty to protect populations against corporate human rights abuses, businesses have a responsibility to respect the rights of the child. Principle 17 of UNGP proposed the concept of ‘human rights due diligence’ as a mechanism for improved practice and a method for demonstrating respect for human rights. In the domain of business, rights due diligence requires a 180-degree shift—from an approach that focuses solely on the business entity to one that has an equivalent focus on the human rights of individuals and groups affected by a business’s activities or relationships. 

Hence, this responsibility exists independently and does not diminish any of the obligations of the State. 

Business activities account for most childhood exposures to toxic chemicals and pollution. Most business sectors are directly or indirectly involved in the production, use, release, or disposal of hazardous substances. These include extractive industries, energy, chemical manufacturing, construction, food and agriculture, household products, cosmetics, furniture, clothing, electronics, recycling, waste disposal, the automotive sector, and others. 

In Focus: South Korea’s Humidifier Sterilizer Debacle

The case of humidifier sterilizers sold in South Korea in 2001 to 2011 and responsible for lung ailments of around 500 people including 250 deaths, showcase the confluence of poor public safety awareness, shady collusion between businesses and...
Due diligence by businesses to prevent childhood exposure

Principle 17 of the UNGP states that, “in order to identify, prevent, mitigate and account for how they address their adverse human rights impacts, business enterprises should carry out human rights due diligence. The process should include assessing actual and potential human rights impacts, integrating and acting upon the findings, tracking responses, and communicating how impacts are addressed.”

Due diligence starts with identifying potential adverse impacts from business activities and relationships and includes taking measures to prevent such impacts from materializing. This is supported by the Organization for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises, which states due diligence as “the process through which enterprises can identify, prevent, mitigate, and account for how they address their actual and potential adverse impacts as an integral part of business decision-making and risk management systems.” Businesses should rely on internal and/or external experts and meaningful consultation with affected groups and other relevant stakeholders to document human rights risks. In addition, effective integration of due diligence requires that businesses assign responsibility within the organization for addressing adverse human rights impacts.

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

Responsibility to prevent exposure through businesses’ activities

According to Principle 11 of the UNGP, “business enterprises should respect human rights. This means that they should address adverse human rights impacts with which they are involved.” The OECD Guidelines likewise state that enterprises should “respect human rights, which means they should avoid infringing on the human rights of others and should address adverse human rights impacts with which they are involved.”

Prevention of exposure to toxics and to substances with unknown risks are the main foundation of businesses’ responsibility to respect human rights. The responsibility to prevent children from being exposed to toxics and pollution will require the modification, cessation, or relocation of certain activities that present unmanageable or simply unknown risks to children. Recalling the China melamine case, businesses must ensure their products do not contain toxic or otherwise hazardous substances. On the other hand, businesses that generate waste, or products that become waste, also have a responsibility to ensure that such wastes will not pose threats to human health and the environment and inform communities or consumers who may be exposed. In instances when toxic chemicals are released into the environment, businesses are also required to remediate contamination.

Expressing a policy commitment to respect human rights is still the first step that companies should take to fulfill their responsibility to respect human rights. While certain businesses argue that the precautionary principle is not “science-based”, and that protecting human rights is the obligation of the State, the “responsibility to respect human rights is a global standard expected of all businesses in all situations and size of operations. It exists independently of the States’ abilities and/or willingness to fulfill their own human rights obligations, and does not diminish their obligations.”

Ramcharan (1983) noted that human rights, particularly the right to life is “an imperative norm” and should “take priority above economic considerations and should, in all circumstances, be accorded priority.”

Responsibility through business relationships

If the adverse impacts are caused or contributed by a company, it should inform consumers and impacted communities take necessary steps to cease or to prevent its contribution. In addition, businesses also have a responsibility to prevent and to mitigate child rights impacts that are linked to the operations, products and/or services of their business relationships including upstream suppliers.

Companies often find themselves embroiled in infinitely varied and complex situations concerning human rights violations taking place in their supply chain. Depending on the extent of business relationships, they can try to increase their leverage (e.g. offer capacity-building and collaboration with partners) or consider ending the relationship with the business relation. In the end, the best way for companies to prevent harm is through the prevention of exposure, which is best achieved by avoiding the manufacture, use, and emission of hazardous substances wherever possible.

ACCESS TO JUSTICE AND REMEDIES

Principle 25 of the UNGP states that, “as part of their duty to protect against business-related human rights abuse, States must take appropriate steps to
3 CHILDREN’S RIGHTS-BASED APPROACH TO ENVIRONMENTAL HEALTH

This chapter presents two toolkits developed to assist decision-makers and relevant stakeholders in the development of environmental law that is consistent with the rights of children. These toolkits are not meant to be exhaustive but should provide guidelines that are designed to raise essential questions that must be considered in the development of environmental law.

TOOLKIT ON INTEGRATING CHILDREN’S RIGHTS IN ENVIRONMENTAL LAW

What is this toolkit all about?

The previous chapter of the report provided a discussion on the different children’s rights implicated in toxic chemicals and pollution, using case studies from different countries in the Asia-Pacific region as examples of the extent of violations and challenges. Moving forward, there is a need to examine national policies and laws to identify whether they integrate the basic elements of human rights as enshrined in international human rights law.

This tool allows the user to examine whether an existing (or draft) environmental law contains provisions supporting the elements of children’s rights, or if it does not fulfill any of the elements.

Who are the users of this toolkit?

This toolkit was developed by the authors to help child rights advocacy groups and environmental NGOs/CBOs and other concerned stakeholders in analyzing whether children’s rights are taken into consideration in the development of national or local environmental laws.

Examination of an existing (or draft) policy and its associated Implementing Rules and Regulations (IRR)s can be conducted individually, or through a group. The former will allow for an independent review of the policy at-hand and can serve as a good exercise in policy analysis and critical-thinking to solve a range of subjects and issues. Meanwhile, the latter will ensure sharing of knowledge and abilities to get a better understanding of the problem through the provision of a platform to discuss different perspectives. Regardless of the route with which the analysis is conducted, it is important that the user/s read through the preceding section and other literature on children’s rights in order to answer the tool adequately.

What is included in the toolkit?

The children’s rights elements for this tool are included in this toolkit. These elements are divided into five general categories:

1. Overarching principles. These are the guiding principles that should be present throughout the law, serving as its foundation/rationale.

2. Prevention of exposure. These criteria delve into the rights enumerated in the previous sections and include questions that specifically look at the presence of provisions for each right.

OBJECTIVES OF THE REPORT

9. Transparency and accountability. These questions focus on the duties and responsibilities of the State, business enterprises and other stakeholders. Providing a separate category for these ensure that no pertinent duty/obligation by any actors are missed.

4. Access to remedy. This category includes all aspects of the right to access remedy, including components ranging from prevention, rehabilitation, remediation, among others.

5. Punishment and redress. Although part of the right to access to remedy, this category enumerates the criminal penalties and sanctions that must be incorporated into policies to discourage perpetrators from contributing to childhood exposure and violating children’s rights.

The toolkit also provides a general list of basic principles that should be considered throughout the process of using the toolkit. These questions serve as guidelines that user/s should use to assess the effectiveness of policies and recommendations that are developed through the use of the toolkit.
socioeconomic and environmental factors affecting the health and well-being of children?

How does the law recognize the aggravating influence of poverty on the impacts toxic substances and pollution?

1.1 Life-cycle Approach

How does the law cover all life cycle stages of relevant product/s or process/es?

How does the law address potential children’s rights violations in all life cycle stages of relevant product/s or process/es?

1.2 Adherence to international human rights laws

How does the law facilitate the full realization of children’s rights as stipulated in international conventions and declarations?

1.3 Roles of the State (see section 3)

How does the law stipulate the specific obligations/ responsibilities of national and local State actors?

1.4 Roles of non-State actors (see section 3)

How does the law stipulate the specific obligations/ responsibilities of non-State actors, including businesses, CSOs, and other stakeholders?

How does the law require companies to conduct human rights due diligence? Is there an explicit requirement for toxic chemical related due

<table>
<thead>
<tr>
<th>2. Prevention of Exposure</th>
<th>2.8 Right to an Adequate Standard of Living</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Right to be heard</td>
<td>How does the law ensure access to safe drinking water, safe from any pollutants/ contaminants?</td>
</tr>
<tr>
<td>How does the law ensure that children are able to form his or her own views on issues that may be relevant to his or her life?</td>
<td>How does the law ensure access to safe and nutritious food?</td>
</tr>
<tr>
<td>How does the law provide opportunities for children to influence relevant decision-making processes concerning the development and implementation of the law FOR at-hand?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.2 Right to information</th>
<th>2.9 Right to Non-Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the law enable children and their caregivers access to information about chemicals in products and processes, as well as their potential impacts to the child’s rights, especially as regards their health?</td>
<td>How does the law contain provisions that may be intentionally or unintentionally discriminatory toward children?</td>
</tr>
<tr>
<td>How does the law ensure that environmental information made available to children and their caregivers is understandable and appropriate to their age and educational level?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.3 Right to Life, Survival and Development</th>
<th>2.10 Right to be Free from the Worst Forms of Child Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the law ensure to the maximum extent possible the survival and development of the child?</td>
<td>How does the law provide clear delineation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.4 Right to Physical and Mental Integrity</th>
<th>2.6 Right to a Healthy Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the law protect unborn children/fetus from “toxic trespass”, or from exposure to chemicals and/or pollution?</td>
<td>How does the law ensure that social determinants of health (i.e. housing, occupational and/or environmental conditions) do not put children at-risk from exposure to toxic substances or pollution?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.5 Right to the Highest Attainable Standard of Health</th>
<th>2.7 Environmental Justice</th>
</tr>
</thead>
<tbody>
<tr>
<td>How does the law prevent any adverse harm to children’s physical, mental, psychological and and social development? How does the law protect children not only from acute (high levels) poisonings, but also from chronic (low levels) exposure to toxic substances and pollution?</td>
<td>How does the law ensure that natural resources are used in a sustainable manner, without compromising the ability of future generations to meet their own needs? Furthermore, does the law prioritize people and environmental development over profitability in the context resource management?</td>
</tr>
<tr>
<td>How does the law ensure that children have access to preventive health services?</td>
<td></td>
</tr>
<tr>
<td>How does the law provide preparedness measures in case of emergencies concerning toxic substances and pollution?</td>
<td></td>
</tr>
<tr>
<td>2.6 Right to a Healthy Environment</td>
<td>2.7 Environmental Justice</td>
</tr>
<tr>
<td>How does the law ensure safe air quality for children (and their communities)?</td>
<td>How does the law ensure that natural resources are used in a sustainable manner, without compromising the ability of future generations to meet their own needs? Furthermore, does the law prioritize people and environmental development over profitability in the context resource management?</td>
</tr>
<tr>
<td>How does the law ensure access to and availability of safe water quality for children (and their communities)?</td>
<td></td>
</tr>
<tr>
<td>How does the law ensure good soil quality for children (and their communities)?</td>
<td></td>
</tr>
<tr>
<td>How does the law recognize the aggravating influence of climate change on the impacts of toxic substances and pollution? Does it provide preventive and mitigating measures against the impacts of climate change?</td>
<td></td>
</tr>
<tr>
<td>2.7 Environmental Justice</td>
<td></td>
</tr>
</tbody>
</table>
between child work and child labor, including labor practices likely to be hazardous or harmful to their health or development?

How does the law prevent children from employment in any work that deprives them of their childhood, interferes with their ability to attend regular school, and that is harmful to their mental, physical and social development?

How does the law protect children from secondhand exposure to toxic substances and pollution, stemming from their parent’s occupation?

How is the law consistent with international standards for defining child work, child labor, and related issues such as those developed by UNICEF and the ILO?

3. TRANSPARENCY AND ACCOUNTABILITY

A. State Actors

3.1 Institutional Framework

How will the law establish an integrated approach toward the implementation of its provisions?

How does the law stipulate the functions of each department/ ministry/ State agency in the implementation of its provisions?

How does the law provide a framework for collaboration among departments/ ministries/ State agencies?

How does the law enable the creation of specific action plans and its associated performance measurement tools? How does the law provide mechanisms for its adoption in local policies?

3.2 Financial Resources

How does the law allocate financial resources toward the implementation of its provisions?

3.3 Capacity-building

How does the law include provisions for capacity building of State actors (national and local) that will facilitate fulfillment of their duties?

3.4 Due Diligence

How does the law require duty bearers to exercise due diligence in identifying and eradicating public sector involvement or complicity in environmental destruction?

3.5 Transboundary Resolution

How will the law strengthen international measures to administer children’s rights protection that cross international boundaries?

B. Non-State Actors

3.6 Polluter Pays Principle

How does the law prevent the externalization of environmental and health costs in the conduct of business activities/ operations?

3.7 Burden of proof and precaution

How does the law place the burden of proof to businesses, ensuring that their products or processes are safe not just for the average adults but also for children?

How does the law require businesses to practice the precautionary principle, ensuring that products or processes whose ultimate effects are disputed or unknown will not be used by children?

3.8 Due Diligence

How does the law stipulate businesses’ obligation to prevent childhood exposure and adverse child rights impacts that are linked to their operations, products or services?

How does the law prevent businesses from transferring the burden of harm to children and their families?

3.9 Global Supply Chain

How does the law stipulate businesses’ obligation to prevent and mitigate adverse child rights impacts that are linked to the business’ supply chain?

3.10 Non-recurrence and Rehabilitation

How does the law require businesses to transition to safer alternatives to eliminate exposure of women and children to hazardous substances, including alternative materials/ technology/ processes, and in the absence of alternative materials / technology / processes mitigation technologies to eliminate intrinsic or unknown hazards wherever possible?

How does the law require businesses to remediate/ rehabilitate areas that were contaminated by their activities/ operations?

4. Accountability, Access to Remedies and Access to Justice

4.1 Access to Remedy

How does the law provide for access to and appropriate remedial procedures for children affected by pollution or toxics?

4.2 Availability of Information

How does the law ensure children and their caregivers access to information about preventive and curative measures, as well as reparation mechanisms in instances when their rights are violated?

4.3 Prevention of Double Jeopardy

How does the law place the burden of proof on children or their caregivers on proving that a toxic chemical was the cause of their injuries?

How does the law protect child victims (and their advocates) from any legal actions intended to censor, intimidate, and silence them, thereby burdening them with the cost of a legal defense?

4.4 Legal Assistance

How does the law provide legal assistance to victims of rights violations for the duration of any criminal, civil, or other actions against perpetrators?

4.5 Health Assistance

How does the law provide health assistance to victims of rights violations, including access to costly treatments for diseases caused by exposure to toxic substances and pollution?

4.6 Intergenerational effects

How does the law provide a mechanism to ensure that future victims of environmental health crimes are able to access all aspects of effective remedy?
How to use the toolkit?

In order to utilize the tool, the user should undertake the following steps:

Step 1:
The users of the toolkit will collect a published copy of the existing (or draft) policy related to the environmental issue of concern. In addition, the researcher should secure copies of associated implementing rules and regulations (IRRs) that assigned government agencies have developed since the law has taken effect.

Step 2:
The researcher will read through the national policy (and associated rules and regulations) to be acquainted with the provisions enshrined in the law. Reading through the documents once or twice will provide the user with a general understanding of the extent of integration of the elements of children’s rights in environmental law.

Step 3:
The user will start the review with the main document of the policy, passed by the country’s congress or parliament, usually referred to as enabling legislation.

Step 4:
The user will answer the questions raised for each element of children’s rights.

Example:
The researcher will conduct the review by answering:

- Identify the provisions specifically integrating the concerned children’s right if it is contained in the existing (or draft) policy and/or its associated rules and regulations. For example, National Policy on Toxic and Hazardous Waste Control and Management

- Article X of the existing (or draft) national policy prohibits the use of incineration technologies in the management of toxic and hazardous wastes to ensure that no emissions will be released to the environment and affect children (and communities) near or distant the source of pollution.

- If the existing (or draft) policy and/or its associated rules and regulations do not contain provisions integrating the element in question, or if such provisions are not clear from the face of the regulation, discuss the types of provisions expected to be included in an existing (or draft) policy which integrates the concerned children’s right. For example:

- The existing (or draft) law did not include any of the following measures to ensure safe air quality for children (and communities): (1) prohibition of incineration technologies, (2) setting of permissible exposure limits, (3) self-reporting of treatment/storage facilities, or (4) monitoring by responsible government ministries.

- Indicate ‘Not applicable’ if the element in question is not related to the existing policy and its associated rules and regulations. For example,

Step 5:
Repeat the process using the associated IRRs of the main policy document, as some children’s rights elements may be incorporated instead in the IRR. However, make sure that this is indicated in the explanation provided in the third column. Additionally, users may also consider reviewing connected policies and provisions.

*All figures, connected policies and provisions may also be highlighted within the law.
What is included in the checklist?

The checklist is divided based on the five stages of policy implementation (Figure 1), highlighting “best practices” in integrating children’s rights in policy implementation:

1. Policy outputs of implementing agencies. This stage involves the development of IRRs and action plans of government agencies/ ministries mandated by the main policy document to carry out the provisions of the law. The checklist identifies the necessary documents, tools, and approaches that should be present when developing such IRRs and action plans.

2. Compliance of target groups. This stage involves identifying whether target groups (e.g. business enterprises) are able to comply with the requirements set by the national policy/law. In this regard, information management tools are enumerated to provide baseline data that will help in monitoring compliance and the effectiveness/efficiency of policy implementation.

3. Actual impacts of policy outputs. This includes both positive and negative impacts of the policy not only to the sector it regulates, but also the sector it protects. This category thus includes elements needed to monitor childhood exposure, ranging from technical considerations to socio-economic conditions.

4. Perceived impacts of policy outputs. As the right to access effective remedy is considered a prerequisite for the realization of other rights, this category ensures positive policy impacts.

5. Major revisions of the policy. This stage allows for the reformulation of the policy, based on the evaluation/assessment of its observed impacts.

How to use the checklist?

In order to utilize the checklist, the user should undertake the following steps:

Step 1: Review documents (or literature) describing the implementation process of a policy, starting with the planning process, up to monitoring/assessment activities to be conducted by the concerned government agency/ministry or any third-party institution. In addition, the user can conduct key informant interviews (KIs) with the implementers of the policy, as well as focus group discussions (FGDs) with representatives of the sector being regulated and the stakeholders being protected.

Step 2: Based on the results of the review of related literature, the KIs and the FGDs, the user will fill out the second column of the checklist with the following:

Sample:
- Indicate ‘Accomplished’ in the second column if the item of concern was conducted/considered in the course of implementing the policy.
- Describe how this item was carried out.

For example,

<table>
<thead>
<tr>
<th>National Policy on Toxic and Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Establish mechanism/structure for inter-agency coordination</td>
</tr>
<tr>
<td>Accomplished. Through Department Order X, the Inter-agency technical working group was established, composed of the heads of the departments of environment, health, labor and employment, trade and industry, among others.</td>
</tr>
</tbody>
</table>

KPIs should take into consideration the objectives of policies and programs. For example, KPIs may include a) the amount of consultations conducted with children and youth in specific regions/target areas, or b) percentage of children and youth receiving benefits as stated in policies.

For additional information, visit the UNICEF data hub via: https://data.unicef.org/resources/progress-for-every-child-in-the-sg-srd-2020/
- Indicate ‘Not accomplished’ in the second column if the item of concern was not conducted/considered in the course of implementing the policy. For example,

<table>
<thead>
<tr>
<th>National Policy on Toxic and Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.1 Collect child-disaggregated socioeconomic and environmental baseline data</td>
</tr>
</tbody>
</table>

- Indicate ‘Pending’ if the government agency/ministry is still in this particular stage of implementation. For example,

<table>
<thead>
<tr>
<th>National Policy on Toxic and Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.7 Explore the use of innovative strategies (e.g. economic incentives)</td>
</tr>
</tbody>
</table>

Similar to the first tool presented in this report, the user would require a deep understanding on the extent of the implementation of the policy being examined. For non-government organizations, they can use the checklist to seek accountability from government institutions in the implementation of a certain policy.
CONCLUSIONS

Millions of children in the Asia Pacific region continue to be exposed to toxic chemicals and pollutants. Children are now exposed to hazardous substances while playing on the ground, bathing in rivers, going to school, eating or drinking, or working. Many hazardous substances have particularly harmful consequences for children, whose developing bodies absorb them more readily than those of adults, and are especially vulnerable to certain toxic chemicals, leading to irreversible long-term damage, disability or death. Hence, children’s rights to life, health, education, development, and survival are violated. More so, children from the poorest and most marginalized families in the Asia Pacific region are especially vulnerable to the impacts of toxic chemicals and pollution, even though they have contributed the least to the environmental issue, as they often live in the most degraded or polluted environment. Several examples of cases reflecting the intersect of social, political, environmental, and economic aspects of chemicals and pollution issues affecting children’s rights are discussed in Chapter 2.

Using international hard and soft law mechanisms can help to bolster legal arguments to redress the deleterious impacts of chemicals to the environment and human health, as well as prompt governments and business to diligently consult with and inform communities of the potential threat that chemicals may have on their standard of life. In this regard, a rights-based approach can be used as both a tool to curb potential hazards from chemicals, as well as an accountability mechanism when harms do occur.

This document provides tools to (1) examine whether an existing or draft environmental policy or regulation is able to promote and safeguard children’s rights from toxic chemical pollution, by identifying key principles and elements of children’s rights protection, and (2) determine the extent of the integration of basic principles and elements that need to be considered in policy implementation. It is hoped that these tools will provide stakeholders with additional arsenal in advocating for the sound management of chemicals and wastes. Moving forward, the following capacity-building activities can be prioritized to empower communities and stakeholders to assess and to demand for the

- Increase capacity of environmental and human rights NGOs in utilizing the tool to examine existing (or draft) policies in their respective countries. Results of the analysis can be used as basis of advocacy/action plan to promote children’s rights and environmental health. Similarly, government agencies can be capacitated to utilize the tool to develop (or reformulate) policies.

- Increase capacity of NGOs and government agencies to evaluate the implementation of environmental policies, to ensure that they use best practices to protect human rights.

- Engage children and young people in promoting for children’s rights in environmental law, by training them on the utilization of the tool, thereby capacitating them to evaluate local policies.


Ibid.


Koo, 2016.


Ibid.

Ibid.


Plummer et al., 2000

Lindon et al., 2014


David and Plummer, 2006


Ibid.

Ibid.


Ibid.

Temper et al., 2015.

Ibid.

Davis, supra note 17

Ibid.


Cinco, 2015

Cinco, 2015.cxxi
