

ALANA INSTITUTE'S CONTRIBUTION TO CALL FOR INPUT ON “REALIZING CHILDREN’S RIGHTS THROUGH A HEALTHY ENVIRONMENT” REPORT OF THE UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS.

1. About the Alana Institute.

The **Alana Institute** is a non-profit civil society organization that seeks to safeguard the conditions necessary for the integral experience of childhood through its programs. Founded in 1994 and supported by an endowment fund since 2013, the Alana Institute’s mission is to “honor children.” Among its many programs are **Absolute Priority**¹, **Children and Consumerism**², and **Children and Nature**³, which deal with human rights issues for children and adolescents.

At the moment, they seek to contribute with a new overall opinion on the rights of children and their relation to healthy environment. Therefore, this document intends to present the main violations, worries and recommendations found by the activities of these programs, especially in the subjects (i) climate changes and (ii) air pollution, in order to contribute with the efficacy of the Convention on the Rights of the Child.

2. A brief overview of Convention on the Rights of the Child and norms regarding childhood in Brazil.

The Convention on the Rights of the Child, incorporated in Brazil by Decree 99.710 from 1990, sets forth in Article 24.2, in dealing with the right to health, that "States Parties shall ensure the full application of this right and, in particular, adopt appropriate measures (...) in view of the dangers

¹ The **Absolute Priority** program was created with the mission to bring visibility and effectiveness to Article 227 of the Brazilian Federal Constitution, which places children and adolescents as the absolute priority for families, society and the State. The program also develops initiatives with the Executive, Legislative and Judiciary branches, in order to demand the guarantee, with absolute priority, of children and adolescents’ rights when they are violated, and in the promotion of social and budgetary public policies. It acts, specifically, in projects in the areas of Access to Justice, Climate Justice, Media and Information, and Public Budget. More information at: prioridadeabsoluta.org.br/english.

² **Children and Consumerism**’s objective is to present ways to minimize and prevent the harm caused by marketing communications aimed at children. The program defends the end of any and all marketing communications aimed at children, in order to protect them from the abuses practiced by advertising. It acts by sending notifications to businesses and reporting abuses to the appropriate public offices. In addition, the program also participates in the drafting and execution of public and legislative policies related to publicity aimed at children. More information at: criancaeconsumo.org.br.

³ **Children and Nature** program is favorable for children, especially those in urban contexts and those who are in contact with natural areas. The program works to influence and carry out intersectoral actions that result in a journey rich in nature, through studies, research and experiences that facilitate access to children, in addition to influencing the public that favor the contact of children, and the network in which it is inserted, with green areas. More information at: criancaenatureza.org.br.

and risks of environmental pollution". The Convention therefore establishes the need for States to consider the dangers and risks of environmental pollution, which requires States to curb illegal air pollution⁴.

According to the Committee on the Rights of the Child of the United Nations, the existence of a healthy environment is a necessary condition for the full realization of the rights guaranteed by the Convention, so that pollution represents an impediment to the realization of the right to an adequate standard of living⁵.

2.1 The horizontal effect of children's rights.

The Convention on the Rights of the Child, in an extremely innovative text for an international treaty under public international law, foresees the horizontal effect of children's rights in relations between private actors, including companies that directly or indirectly impact children and their rights.

Specifically, private institutions are bound directly by the text of the Convention itself. Companies and corporations must primarily consider the best interests of the child in their actions and impacts, as provided in its art. 3, 1: "All actions concerning children, whether carried out by public or private welfare institutions, courts, administrative authorities or legislative bodies, must primarily consider the best interests of the child".

Thus, it is understood that the Convention itself can be invoked to ensure that companies undertake environmental and human rights due diligence and do not contribute to abuses of children's rights. In this field, Committee's General Comment 16 is also relevant: it states that provided that the best interests of the child shall be a primary consideration for the State and it must guarantee that business activities are restricted when they pose a threat to child rights. Therefore, it is mandatory to recognize horizontal effects of children's rights under the Convention on the Rights of the Child.

2.2 The Brazilian legislation.

In alignment with the Convention on the Rights of the Child, of which Brazil is a signatory, the Article 227 of Brazil's Federal Constitution founded the doctrine of fully protecting childhood and adolescence, and established that the rights of children and adolescents⁶ must be promoted and

⁴ Available at: <https://www.ohchr.org/Documents/HRBodies/CRC/Discussions/2016/CIEL.pdf>. Accessed on August 20, 2018.

⁵ U.N. CRC, 34th Sess., No. 5, at paras 224-225.

⁶ According to Brazilian legislation, a child is any person under the age of 12, and an adolescent is any person between 12 and 18 years old, as stated in the 2nd article of the Children and Adolescent's Statute.

protected above all else, as an absolute priority, by the State, the family and society. Therefore, it is important to recognize horizontal effects of children's rights under the Brazilian Constitution too.

Based on this constitutional norm, the Children and Adolescent's Statute (Federal Law n. 8.069 from 1990) recognized children and adolescents as people at a special stage of development and as rights-bearing individuals, worthy of receiving integral protection and of having their best interest guaranteed, and as such establishes that their rights must be prioritized by policies, budgeting, and public services.

These legislations as a whole must be recognized by the State, civil society and family in all activities in their exercise, such as the drafting of budget laws⁷, as well as judicial decisions, as the Brazilian Federal Supreme Court has shown on several occasions⁸⁹.

The list of rights ensured in absolute priority to children and adolescents includes, in particular: the rights to life, healthcare, nutrition and food security, and the balanced environment.

The right to healthcare, as provided for in the Constitution and the ECA (Child and Adolescent Statute), is realized through social policies that allow the birth and healthy and harmonious development, under conditions worthy of existence. Considering their importance, these rights are considered fundamental rights and presupposed for the exercise of any other right¹⁰. Therefore, it is up to the Country to prevent air pollution, monitor climate changes and prevent the proliferation of diseases, by taking preventive measures to mitigate the negative impacts of climate changes on the population's health.

Food security and nutrition are also constitutionally protected and essential especially for children and adolescents, as they are necessary to enable the development of a healthy individual¹¹. Ensuring the right to nutrition depends on regular and permanent access to enough quality food

⁷ DALLARI, Dalmo A. (2010): In: *Child and Adolescent Statute Commented*, São Paulo: Malheiros, p. 47

⁸ "There is no doubt about the legal possibility of judicial determination for the Executive Power to implement constitutionally defined public policies, as in the present case, where constitutional command demands, with absolute priority, the protection of the rights of children and adolescents, clearly defined in the Children and Adolescents Statute. This has also been decided by the Superior Court of Justice (STJ-Resp 630.765/SP, 1st Panel, Reporting Judge: Luiz Fux, DJ (Justice Official Gazzette) 12.09.2005). In the present case, it is possible to see possible insufficient protection of the rights of children and adolescents by the Country, which must be restrained, as already highlighted. The judiciary is not creating public policies, nor is it usurping the initiative of the executive power." (BRAZIL. Supreme Court of Justice. Suspension of injunction 235-0 Tocantins. Reporting Judge: Gilmar Mendes. Published in the DJ (Justice Official Gazzette) of 04.08.2008).

⁹ "It is true that the theme of the protection of children and adolescents, and specifically of adolescent offenders, is treated with special attention by the Constitution. As can be seen, both the caput of article 227, as well as its first paragraph and sections have normative commands focused on the Country, as highlighted above. In this sense, the constitutional determination of absolute priority in the realization of these normative commands stands out, due to the high significance of protection of the rights of children and adolescents. The objective dimension of the fundamental right to the protection of children and adolescents is relevant. According to this objective aspect, the Country is obliged to create the factual presuppositions necessary for the effective exercise of this right." (BRAZIL. Supreme Federal Court. Suspension of injunction 235-0 Tocantins. Reporting Judge: Gilmar Mendes. Published on the DJ (Justice Official Gazzette) of 04.08.2008).

¹⁰ AMIN, Andréa Rodrigues. In: MACIEL, Katia Regina Ferreira Lobo Andrade et al. *Child and Adolescent Law Course: theoretical and practical aspects*. São Paulo: Lumen Juris, 2010. p. 32

¹¹ COUTINHO, Janine Giuberti, et al. *Malnutrition and obesity in Brazil: addressing based on the single nutrition agenda*. Available at: <http://www.scielosp.org/pdf/csp/v24s2/18>. Access on August 22, 2018.

without compromising access to other essential needs. In other words, ensuring the full right to food requires ensuring food security. Climate changes have a significant impact on agriculture and Brazil is expected to reduce its total cultivation area due to desertification of certain areas¹². Thus, impacts arising from the climate crisis may reduce the supply and variety of food in the country, causing food to become more expensive, which may impact food security, which depends on the constant supply of food in adequate quantity, quality and variety. Similarly, access to potable water, sanitation and hygiene is also compromised by climate changes and environmental disasters, undermining the development of children and adolescents. Supply crises are known to be aggravated by climate changes in the rainfall regime and poor management of the basic sanitation system¹³.

Finally, the right to a balanced environment, ensured in article 225 of the Federal Constitution of Brazil, allows the interpretation that there is no quality of life without environmental quality, so that the ecologically balanced right receives protection of fundamental human right¹⁴. The violation of the right to a balanced environment leads to the violation of several other rights set forth herein, such as the right to food, food security, life and healthcare. In addition to such violations, the guarantee of such a right is extremely necessary, since the lack of nature in children's lives has negative impacts on child development, such as obesity, hyperactivity, depression, attention deficit, among others¹⁵.

Nationally and internationally established rights give rise to concrete obligations for countries to formulate public policies to mitigate the effects of climate changes, especially on children and adolescents. Violation of these obligations implies unconstitutionality and violation of international treaties. Therefore, it is necessary and urgent for Brazil to take the necessary measures to ensure the rights of children and adolescents in the face of climate changes and of air pollution in order to assure the children's right to healthy environment.

3. Climate changes and their impacts on children rights.

The effects caused by extreme weather events and environmental disasters are responsible for the deaths and terrible living conditions of humans in the poorest and most vulnerable areas of the planet, affecting mainly children, and they are the group that absorbs most of the deaths caused by these factors (80%). As a result of these situations, an estimated 175 million children are affected annually worldwide. Given the specific vulnerabilities arising from childhood and adolescence, the

¹² Global Warming and the New Geography of Agricultural Production in Brazil, Embrapa, 2008, published by the British Embassy in Brazil.

¹³ National Plan for Adaptation to Climate Changes. Available at: http://www.mma.gov.br/images/arquivo/80182/PNA_%20Volume%202.pdf. Access on August 22, 2018.

¹⁴ MILARÉ, Édís; LOURES, Flavia Tavares Rocha. Environment and the Rights of the Personality. *Revista de Direito Ambiental*, São Paulo, v. 37, p.11-27, jan. 2015.

¹⁵ Environment and behavior. Volume 45 Issue 5, June 2013. Available at: <http://journals.sagepub.com/toc/eaba/45/5>. Accessed August 12, 2018.

effects are greater because they have weaker biological systems and are more susceptible to negative environmental impacts as they are still in the early stages of development.¹⁶

The effects described are aggravated in early childhood (children up to six years of age) and in pregnant women due to the fact that they are in the early stages of biological and psychological development. The main risks are poor development of the respiratory system, increased vulnerability to vector diseases, malnutrition caused by restricted access to adequate food, diarrhea and other health problems from lack of access to healthcare, sanitation services and hygiene, all caused or intensified by climate changes and environmental disasters. In this regard, studies also note that among victims of climate disasters, children are two to three times more likely than adults to develop symptoms of post-traumatic stress disorder (PTSD)¹⁷.

Importantly, the consequences and burdens of climate changes are not evenly distributed in different parts of the world. Developing countries and vulnerable groups within and outside these countries are most severely affected¹⁸. Climate changes, natural disasters, droughts and floods lead to scenarios in which the poorest and most marginalized people have the least resources to survive and bypass emergencies.

Thus, considering that 17.3 million Brazilian children and adolescents live in poverty¹⁹, it is possible to affirm a higher index of vulnerability of the population to the impacts of climate changes, causing the violation of several rights. Within highly vulnerable groups, indigenous population are at great risk for maintaining their livelihoods and the natural resources that depend on their survival, as they are connected to highly biodiverse ecosystems that are in serious threat of imbalance and extinction. Indigenous children suffer from inequality in various sectors, with high levels of illiteracy and lack of access to education²⁰ and health, as well as high rates of child mortality²¹, indicating greater vulnerability of this population, especially in the context of climate changes.

3.1 Child's right to connect with nature and to a healthy environment.

The concept of a human right to nature connection got its first major boost in September 2012, when Annelies Henstra, a Dutch human rights lawyer; Cheryl Charles, cofounder of the Children & Nature Network; and others made the case at the World Conservation Congress of the International

¹⁶ Terra dos Homens. Protecting Environmental Child Rights. Available at: http://www.terredeshommes.org/wp-content/uploads/2013/01/tdh_Environmental-Child-Rights_2012-11-final.pdf. Accessed August 12, 2018.

¹⁷ UNICEF Office of Research (2014). 'The Challenges of Climate Change: Children on the front line', Innocenti Insight, Florence: UNICEF Office of Research.

¹⁸ DARA (2013). Climate vulnerability monitor: A guide to the cold calculus of a hot planet. Madrid: DARA. Available at: <http://daraint.org/wp-content/uploads/2012/09/CVM2ndEd-FrontMatter.pdf>. Access on August 22, 2018.

¹⁹ According to a study based on data from the National Continuous Household Sample Survey (Pnad Contínua). FUNDAÇÃO ABRINQ Childhood and Adolescence Scenario in Brazil. 2018

²⁰ Situation of Brazilian Childhood and Adolescence 2009. The Right to Learn, Enhance progress and reduce inequalities. Available at: https://www.unicef.org/sitan/files/Brazil_SitAn_2009_The_Right_to_Learn.pdf. Access on June 3, 2018.

²¹ Available at: https://www.unicef.org/brazil/pt/Cap_08.pdf. Access on July 30, 2018.

Union for Conservation of Nature. Held in Jeju, South Korea, the conference attracted over 10,000 people, representing more than 200 governments and government organizations and more than 1,000 nongovernmental organizations. Through the leadership of Henstra, Charles, and Keith Wheeler, chair of the IUCN Commission on Education and Communication, the conference passed a historic resolution declaring that children have a human right to experience a healthy natural world²².

The resolution called on the IUCN's membership to promote the inclusion of this right within the framework of the UN Convention on the Rights of the Child, which must be considered by the United Nations High Commissioner for Human Rights²³.

3.2 The co-relation between advertising directed to children and the impact on their health and the environment.

Research and studies suggest that children up to 6-8 years old do not differentiate between advertising and content, nor do they have the necessary judgement to distinguish fiction from reality and, until they are 12, do not understand the persuasive nature of advertising^{24,25}, making them easily influenced by this type of commercial strategy. In the face of the digitalization of means of communication and the increased access to the internet, children's programs and commercials frequently invite their audience to visit their websites, social networks, and channels on video platforms on the internet.

Besides, to expose children to advertising content directed at them often contributes towards intensifying problems that jeopardize child development such as: precocious eroticism, behavioral disorders, family stress, violence, and alcoholism, lack of environmental sustainability as well as eating disorders, such as obesity, anorexia and bulimia

Many studies show the co-relation between advertising directed to children and the impact on their health and the environment. A report by The Economist launched in 2017 revealed that the prohibition of child advertising could save up to R\$76 billions in regards to mental and physical health of children²⁶. Complementary evidence shows that almost 85% of advertisements for children

²² IUCN. Child's right to connect with nature and to a healthy environment. Available at: <https://portals.iucn.org/docs/2012congress/motions/en/M-132-2012-EN.pdf>. Access on August 22, 2019.

²³ LOUV, R. Outdoors for All. Sierra Magazine. May/June 2019. Available at: <https://www.sierraclub.org/sierra/2019-3-may-june/feature/outdoors-for-all-nature-is-a-human-right>. Access on August 22, 2019.

²⁴ Report by Professor Yves de la Taille on PL 5921/2001 develop by request of the Federal Psychology Council, 'Advertising Aimed at Children - Psychological Considerations' Available at: https://site.cfp.org.br/wp-content/uploads/2008/10/cartilha_publicidade_infantil.pdf. Access on September 22, 2019.

²⁵ Children and television advertising – Swedish Consumer Agency Erling Bjurström, sociologist hired by the Swedish Government in 1994-95. Available at: <http://criancaconsumo.org.br/wp-content/uploads/1994/02/Children-and-television-advertising.pdf>. Access on September 22, 2019.

²⁶ The Economist. The impacts of banning advertising directed at children in Brazil. <http://criancaconsumo.org.br/biblioteca/the-impacts-of-banning-advertising-directed-at-children-in-brazil/>

in the U.S. in 2013 promoted high-fat, high-sugar or high-sodium foods and beverages²⁷. Another unfold of the impact of children advertising on the environment is related to planned and psychological obsolescence, the mechanism of using hardware and software to make a product's life-cycle shorter, of electronic products and its increasing hazardous e-waste production²⁸.

Global syndemic is taking place, as reported by The Lancet, which brings the symbiosis of the effects of obesity, undernutrition and climate change²⁹. Among these effects, the most recent mobilization from youth all over the world around the movement "Fridays For Future" demonstrates their concern around the climate emergency. Nonetheless, the term 'climate anxiety' has been adopted to demonstrate the impact on mental health in regards to climate change, as well as discussions on how to address this issue³⁰.

The response to children's right to health also involves further analysis on the toxicity and environmental impacts of plastic during this phase of life. Alana Institute is undertaking a research with the Federal University of São Carlos (Ufscar) about these impacts of plastic in children to be launched in December, 2019. However, a lot has been done to show some of these impacts, such as the link between exposure to chemicals in plastics and childhood obesity³¹, the toxicity of different chemicals present in plastic³² and the rapid growth of plastic's contribution to climate change³³. Therefore, it is necessary to recognize the co-relation between advertising directed to children and the impact on their health and the environment

3.3 The claim to Children Rights Committee of the United Nations.

Fourteen children have submitted a claim to Children Rights Committee, submitted under Article 5 of the Third Optional Protocol to the United Nations Convention on the Rights of the Child. It claims that the countries Argentina, Brazil, France, Germany and Turkey are either deliberately omitting or acting contrary to what they undertook to do in the Paris Agreement. In this way, the

²⁷ Healthy Food America. Limits on Marketing to Kids. http://www.healthyfoodamerica.org/limits_on_marketing_to_kids. Access on September 22, 2019.

²⁸ Greenpeace. Toxic tech - the dangerous chemicals in electronic products. <https://www.greenpeace.org/archive-international/PageFiles/24478/toxic-tech-chemicals-in-elec.pdf>. Access on September 22, 2019.

²⁹ The Lancet. The global syndemic of obesity, undernutrition, and climate change. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)30310-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)30310-1/fulltext). Access on September 22, 2019.

³⁰ American Psychological Association. Mental health and our changing climate: impacts, implications and guidance. <https://www.apa.org/news/press/releases/2017/03/mental-health-climate.pdf>. Access on September 22, 2019.

³¹ Journal of the Endocrine Society. Exposure to common chemicals in plastics linked to childhood obesity. <https://www.sciencedaily.com/releases/2019/07/190725092521.htm>. Access on September 22, 2019.

³² The Guardian. Explained: the toxic threat in everyday products, from toys to plastic. <https://www.theguardian.com/us-news/2019/may/22/toxic-chemicals-everyday-items-us-pesticides-bpa>. Access on September 22, 2019.

³³ Center for International Environmental Law, Plastic & Climate: The Hidden Costs of a Plastic Planet. <https://www.ciel.org/plasticandclimate/>. Access on September 22, 2019.

countries would be violating provisions of the Convention on the Rights of the Child, especially the rights to life, health and culture.

The petition describes the concrete effects that climate change has on children, such as asthma due to air pollution and diseases such as dengue and Chikungunya. Regarding to Brazilian context, specifically, the petition alleges that the current government is actively dismantling environmental regulation and enforcement. It cites the drastic cuts in the budget of the Ministry of the Environment, the attempts to change the Forest Code, the changes in Environment Council, and so on. It also says Brazil has doubled fossil fuel subsidies since 2007 and that energy investments are mostly concentrated in sources non-renewable and that the country is among the world's largest emitters of carbon, in 22nd position. The petition also highlights the increase in the burning and deforestation of the Amazon. The conclusion is that there is a responsibility of the extraterritorial Brazilian State, because the Brazil government generates negative effects on the international community as a whole. The complaint calls on the Children Rights Committee to: (i) declare that climate change is a crisis for children's rights; (ii) declare that the five countries are responsible for the climate crisis because they ignore the scientific evidence on prevention and mitigation; (iii) declare that countries are violating the rights of the child, especially the rights to life, health, culture; (iv) advise countries to review and amend their policies and laws; (v) recommend greater international cooperation and binding measures; and (vi) recommend children must be heard.

4. Air pollution and the impacts on children rights.

Reducing air pollution is one of the most important actions to be taken by children and adolescents; after all, there is evidence of the impact on the life and health of such individuals, especially regarding respiratory, cardiological and cognitive issues, which have their reflection from intrauterine development to adulthood. Also, it is important to highlight that States and companies are responsible for children rights in this field

4.1 The children's vulnerability to air pollution.

Air pollution is disproportionately dangerous for children and adolescents, given their special condition of being in development. Its metabolic, physiological and behavioral characteristics³⁴, different from those observed in adults, make children and adolescents especially sensitive to changes in the environment, including air.

³⁴ Bunyavanich, S.; Landrigan, C.P.; McMichael, A.J.; Epstein, P.R. The impact of climate change on child health. *Ambul. Pediatr.* 2003,3, 44-52.

The first indicative of this vulnerability is related to pulmonary physiology. Children have fewer alveoli. The areas of air passage are smaller, so if inflamed, they are more easily blocked; the cellular layer of the inner part of the respiratory tract is more permeable in the case of young children³⁵. The immune system of children is also developing, which makes them more susceptible to viruses and bacterial infections, increases the risks of respiratory infection and reduces the child's ability to overcome them³⁶. In addition, the infant brain is still in the making, and especially up to five years old, microparticles of pollution more easily permeate children's blood systems and negatively impact their cognitive development³⁷.

Added to this is the fact that children and adolescents breathe more air per unit of body mass than adults and therefore inhale proportionally more pollutants when compared to these³⁸. Because they are in a phase of significant growth, their metabolism is more accelerated, which consumes more energy and, therefore, they have a higher respiratory rate.

4.2 Impacts of air pollution on children's rights.

Worldwide, more than 169,000 deaths of children under five years old are linked to air pollution from emissions from vehicles, energy from fossil fuels and waste incineration³⁹. In Brazil, every 100,000 people aged up to five years old, 41.38 die from some type of pollution⁴⁰.

Furthermore, there is serious scientific evidence⁴¹ that the exposure of pregnant women and babies to pollution exacerbates the risk of infant mortality: a percentage increase in late fetal losses is identified because of an increase in interquartile concentrations of air pollutants⁴². Studies also show that chronic exposure to high levels of particulate matter is associated with higher rates of fetal loss, early birth and lower birth weight⁴³.

The situation may get worse. According to the Organization for Economic Co-operation and Development (OECD), the mortality of children under five years old may be 50% higher in 2050 as

³⁵ UNICEF. Clear the Air for Children. Available at: https://www.unicef.org/publications/files/UNICEF_Clear_the_Air_for_Children_30_Oct_2016.pdf. Accessed on August 21, 2018.

³⁶ Idem.

³⁷ Ibidem.

³⁸ Committee on Environmental Health. Ambient air pollution: Health hazards to children. Pediatrics. 2004.

³⁹ WHO. Inheriting a sustainable world? Atlas on children's health and the environment. 2017. Available in: <apps.who.int/iris/bitstream/10665/254677/1/9789241511773-eng.pdf>. Accessed on July 24, 2018.

⁴⁰ WHO. Inheriting a sustainable world? Atlas on children's health and the environment. 2017. Available at: <apps.who.int/iris/bitstream/10665/254677/1/9789241511773-eng.pdf>. Accessed on July 24, 2018.

⁴¹ Institute of Environment and Sustainability, University of California. Environmental Report Card for the County of Los Angeles. 2015. Available at: <http://www.environment.ucla.edu/reportcard/article1700.html>. Accessed on July 24, 2018.

⁴² PEREIRA et al. *Perdas Fetais e Poluição do Ar em São Paulo*. [Fetal Losses and Air Pollution in São Paulo. 1998.

⁴³ UNICEF. Clear the air for children. Available at: https://www.unicef.org/publications/files/UNICEF_Clear_the_Air_for_Children_30_Oct_2016.pdf. Accessed on August 20, 2018.

a result of air pollution. Another published study shows more worrying projections: the mortality from pollution can double by 2050⁴⁴.

The conclusions on the impacts of pollution on cognitive development are also assertive. Exposure of pregnant women can affect white matter responsible for communication between different parts of the brain, which in the future can cause developmental delays, lower intelligence quotient and increase the signs of anxiety, depression and attention problems⁴⁵. In addition, as blood-brain barrier in children are still developing, this tissue is less resistant and more vulnerable, so that inhaled ultrafine particulate matter can enter the bloodstream, which can cause blood-brain barrier degeneration, leading to oxidative stress, neuroinflammation and neural tissue damage, which is reflected in reduced cognitive function. The scientific literature also analyzes the connection between ambient air pollution and neurotoxicity in the brain structure, which would contribute to neurodegenerative diseases, reduce human intelligence and lead to cognitive impairment in old age⁴⁶.

Studies show that air pollution is closely linked with respiratory problems such as pneumonia and bronchitis, among others, as the lung capacity of children living in polluted environments can be reduced by 20% - a consequence similar to the effect of growing up in a house as passive smoker. Studies also show that adults who were exposed to chronic air pollution when children tend to have respiratory problems later in their lives⁴⁷. In addition, the impact of air pollution on the health of children under five years old is highlighted, since half of the world's deaths in this age group are related to acute respiratory infections that can be related to this type of pollution⁴⁸.

With reflexes especially in adult life, exposure to air pollution exacerbates cardiovascular problems such as stroke and heart failure⁴⁹.

In summary, several diseases in children and adolescents are caused by air pollution: cardiovascular diseases, such as cardiac ischemia, infarction and high blood pressure; respiratory diseases such as oxidative stress and inflammation of the respiratory tract. Coughing and wheezing, irritation of the nasal passages and throat, immune responses, acute respiratory infections (including bronchitis and pneumonia), chronic respiratory infections (including asthma), chronic obstructive pulmonary disease (which includes bronchitis and emphysema), damage to lung development, lung

⁴⁴ UNICEF. Clear the air for children. Available at: https://www.unicef.org/publications/files/UNICEF_Clear_the_Air_for_Children_30_Oct_2016.pdf. Accessed on August 20, 2018.

⁴⁵ Idem.

⁴⁶ Ibidem.

⁴⁷ UNICEF. Clear the air for children. Available at: https://www.unicef.org/publications/files/UNICEF_Clear_the_Air_for_Children_30_Oct_2016.pdf. Accessed on August 20, 2018.

⁴⁸ WHO. Health and the environment: addressing the health impact of air pollution. Available at http://apps.who.int/gb/ebwha/pdf_files/WHA68/A68_R8-en.pdf. Accessed on June 23, 2018

⁴⁹ UNICEF. Clear the air for children. Available at: https://www.unicef.org/publications/files/UNICEF_Clear_the_Air_for_Children_30_Oct_2016.pdf. Accessed on August 20, 2018

cancer, impairment to cognitive development, due to oxidative stress, neuroinflammation and neural tissue damage, eye irritation, low weight at birth, premature birth, among others⁵⁰.

4.3 Brazilian scenario related to air quality standards.

Less than 2% of municipalities are covered by air quality monitoring in Brazil. Brazilian State maintains the outdated air quality's standards, that are more permissive than the safety values defined by the World Health Organization (WHO). And the proposal to update the debate is progressing very slowly to adapt the Brazilian standard to international standards, in order to guarantee real levels of air safety⁵¹.

It is also important to highlight measuring air quality in schools is fundamental to guarantee a safe and healthy environment to children and establish emergency protocols in case of high levels of air pollution. Therefore, public policies must be promoted to guarantee the best interest of children in this field.

4.4 Brazilian scenario related to vehicles emission pollutants' control.

In the fight against pollution sources, Brazil is the only country among the so-called developing countries that has not yet updated its standard for restricting the limits of emissions of polluting gases by vehicles, in order to match the new, more rigid international standards, for example, the European standard.

A step forward in the Program for the Control of Air Pollution by Automotive Vehicles for the permissible levels of emissions of heavy vehicles, for example, would be a significant advance, since these represent only 5% of the road fleet, but 88 % of emissions of particulate matter and nitrogen oxides in Brazil⁵². Brazil already took steps towards reaching a Euro-VI standard, but the implementation, that was supposed to start by 2019, was postponed to 2023.

This delay is completely unreasonable since Brazil already has the necessary tools to implement Euro-VI standards, including the access to the motors' technology and the access to the necessary fuel⁵³. Apart from that, the deferment can cause 10.000 premature deaths⁵⁴: 2.500

⁵⁰ Idem.

⁵¹ VORMITTAG, Evangelina; COSTA, Renan Rodrigues da; BRAGA, Aline Atsuta; MIRANDA, Marina Jorge de; NASCIMENTO, Nicole Cristina do e SALDIVA, Paulo. *Monitoramento da Qualidade do Ar no Brasil*. [Air Quality Monitoring in Brazil.] 2014. Available at : <https://www.saudeesustentabilidade.org.br/publicacao/pesquisamonitoramento-da-qualidade-do-ar-no-brasil/> Accessed on: September 24, 2018.

⁵² WRI BRASIL. *Qualidade do ar no Brasil: o que está em jogo na mudança dos padrões*. [Air quality in Brazil: what is at stake in changing standards.] Available at: <https://wribrasil.org.br/pt/blog/2018/06/qualidade-do-ar-no-brasil-o-que-esta-em-jogo-na-mudanca-dospadros>. Accessed on: September 23, 2019.

⁵³ Available on: <https://theicct.org/publications/cost-benefit-analysis-brazils-heavy-duty-emission-standards-p-8>. Accessed on: September 23, 2019.

⁵⁴ Idem.

premature deaths are no longer avoided in the country. Moreover, the adoption of the new standard would save US \$ 74 billion in health spending from 2018 to 2048 in Brazil.

By not choosing to change the standards and technology, the companies are deciding to continue discriminating children of different nationalities by giving a weaker protection to children from Global South and by increasing the exposition of these children to several health issues associated with air pollution.

Therefore, it is necessary to recognize the liability of car manufactures for the air pollution, the need of implementing newer and cleaner technology, and the violation of duty of care, violation of the precautionary principle, violation of the principle of prevention, general civil liability for tortious act, both arising out of violations of children rights.

4.5 Economic impacts of air pollution.

An OECD study shows that annual global air pollution expenditures account for about 0.3% of the global Gross Domestic Product (GDP) and this figure should increase to 1% by 2060 if there are no changes⁵⁵. Yet a World Bank study carried in 2013 reveals that deaths from air pollution represent \$ 225 billion in labor losses and \$ 5 trillion in welfare losses⁵⁶.

4.6 Air pollution, child labor and outdoor play.

In 2008, Brazil promulgated Decree 6.481 of 2008, concerning International Labor Organization (ILO) Convention 182, which became part of the Brazilian Law in 1999, including the list of worst child labor conditions prepared by the International Labor Organization.

Categories on the list include street work and other street activities such as street trading, car keeper, child office work, tour guides, transportation of people or animals, usually performed in urban contexts. The inclusion is due to the fact that these works have as occupational risks exposure to solar radiation, rain and cold weather. Among the main consequences that these working conditions may cause are premature aging, skin cancer, dehydration and respiratory diseases.

⁵⁵ OCDE. The Economic Consequences of Outdoor Air Pollution. 2016. <https://www.oecd.org/environment/indicators-modelling-outlooks/Policy-Highlights-Economic-consequences-of-outdoor-air-pollution-web.pdf>. Accessed on August 20, 2018

⁵⁶ World Bank. The Cost of Air Pollution: Strengthening the economic case for action. 2016. <http://documents.worldbank.org/curated/pt/781521473177013155/The-cost-of-air-pollution-strengthening-the-economic-case-for-action>. Accessed on August 20, 2018

Confirming this understanding, in a report published in 2018 by the World Health Organization, recent data and studies state that outdoor workers are particularly vulnerable to air pollution, with research noting the impairment of lung function in these workers⁵⁷.

The situation of children exposed to outdoor work is particularly serious, considering that they should not be subjected to the efforts required by the work activity and are still in the period of biological formation, making exposure to air pollution specifically harmful.

Thus, there is a double harm to children: as a result of child labor, which violates their peculiar condition of development; as well as due to the air pollution to which they are exposed, which further aggravates the situation. Therefore, the addressing and prevention of child labor, especially in outdoor contexts, it is necessary and urgent.

Also, research data⁵⁸ proves that the connection with nature brings many benefits for the development and health of children, among them: stimulation of all the senses; more active and exploratory learning; favoritism in the formation and maintenance of the social bonds; inspiration for moments of concentration; stimulation to physical activities; reduction of violence; integral childhood development; direct health benefits; improved healthy diet; contribution to nature conservation; stimulating conscious consumption; building a healthier society. Therefore, it is necessary to outline strategies and actions that involve families, educators and the government to materialize the possibility of childhoods abundant in nature⁵⁹.

4.7 Civil society mobilization.

It's also extremely notable the role of organized civil society to advocate for children's rights and a healthy environment. A good example is the BreatheAir Coalition in Brazil, which consists of more than 40 organizations and has 9 collective commitments around air quality advocacy, among them: adopt and improve air quality standards; improve fuel and engine technologies in the transportation sector, as well as promote active mobility; promote accessible information on air quality; and adopt emergency protocol policies in schools.

⁵⁷ Breathe clean air: everywhere, for everyone Protecting workers from air pollution outdoors and indoors, Word Health Organization (Oct / 2018).

⁵⁸ Available at: <https://criancaenatureza.org.br/para-que-existimos/os-beneficios-de-brincar-ao-ar-livre/>. Accessed on August 20, 2018

⁵⁹ LOUV, R. **The Last Child in the Woods**. Workman Publishing Company. April 2016

5. Recommendations.

In the face of the scenario presented in this document, the **Alana Institute**, through its aforementioned programs, seeking to contribute to the efficacy of the Convention on the Rights of the Child, presents the suggestions that the United Nations High Commissioner for Human Rights:

- Declares that climate change is a crisis for children's rights;
- Declares children have a human right to experience a healthy natural world;
- Declares that children have the inherent right to connect with nature in a meaningful way, as a substantial part of his or her everyday life and healthy development, and to enjoy, maintain and strengthen this connection through the direct and ongoing experience of nature;
- Hear and consider the children's opinion related to climate change and their right to healthy environment;
- Recognizes the horizontal effect of Children Rights Convention and declares that companies must undertake environmental and human rights due diligence and do not contribute to the discrimination of children and to violation of other children's rights, especially in the field of climate changes and air pollution;
- Recognizes the co-relation between advertising directed to children and the impact on their health and the environment;
- Recommends that States take measures to prevention and mitigation of climate change;
- Recommends that States must establish air quality standards, aligned to WHO's recommendations, with fixed deadlines for change, appropriate critical episodes, communication to the accessible population, and the control instruments needed to reduce emissions in order to ensure the health of the population and the healthy environment;
- Recommends that States must establish emergency protocols in case of high levels of air pollution;
- Recommends that States must adopt more restrictive vehicular pollutants' emission limits, in line with the most current, clean and effective mechanism to combat the emission of pollutants by vehicles;
- Recommends that States must adopt measures in order to avoid children labor and to promote the safe outdoor play;
- Recommends to Children Rights Committee, in the case of children against Argentina, Brazil, France, Germany and Turkey, to issue an *interim measure* of in the face of irreparable risk to victims, request clarification, initiate investigations, and issue recommendations to the denounced States.