GA4: Environmental Committee

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Issue: Mitigating industrial water pollution in Latin America

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I. Introduction

Water security around the globe has always been a major concern of the international community. Water being the most fundamental building block of life, humanity has always endeavored to protect, utilize or take advantage of their possession of water resources. The Industrial Revolution had a tremendous effect on the utilization of natural resources. Since it increased the demand for industrial production and materialism, the demand for natural resources proportionally increased. Among wood, coal, land, petrol, gas and various types of resources there is one that is also a vital part of the survival of humanity: water. It has been involved in the production of various industries since then, from agriculture to textile. In light of the fields of application of water, protection of these resources remain crucial to keep on a sustainable system of production for all countries.

Picture 1: Map demonstrating water resources across South America

Water can be used for an abundance of causes for the productivity of a country. Besides being a compound that is required for the survival of the human race, it has qualities that ameliorate the practical life, economy and sustainability of nations all around the world. It can be used in a variety of industries such as energy production, food sourcing, agriculture and more areas that are quintessential parts of human social development. With water being polluted rapidly, countries risk jeopardizing these areas of human life, as well as their economy which is important for the further industrialization and improvement of the country's economic power. Many countries in Latin America suffer from economic crises. These countries include but are not limited to Venezuela, Argentina, Colombia and Mexico. Latin America being a region that struggles in the international community with diplomacy as well as providing their citizens with adequate life standards, water pollution caused by industrialization could lead to even further discontentment in the continent.

The Latin America and Caribbean region (LAC) has the potential of being stuck in a cycle in which while endeavoring to further industrialize the country they pollute and deteriorate the resources, thus eliminating the whole initiative of trying to take advantage of the resources to develop the country. At first glance, the issue might seem purely environmental and related to natural resources. However, this issue runs deep in the fundamental basis of surviving as a country in the international community. It affects the life

quality, means of production and the reputation of a nation on the international arena. Countries with the most political power across the globe already endeavor to diminish all sorts of pollution including in their waters. Some countries condemn nations or regions that fail to protect the environmental legacy of the world since it affects not only the host country but the world as a whole. All of the globe essentially shares maritime resources, causing some cases of pollution to affect nearby nations. This failure to act on water pollution attracts attention to the LAC region, making it increasingly hard for governments to save their reputation as well as the life quality of their citizens from the hostile conditions of industrial water pollution.

II. Involved Countries and Organizations

United States of America

The United States has been a major perpetrator of environmental destruction across the globe. Although, at first sight, the US might seem not as relevant to Latin American pollution, it actually contributes a substantial amount to the industrial water pollution in Latin America. Since the United States of America has been prioritizing improving their industrial production over the environmental well-being of the world, American companies have been perpetuating detrimental actions towards the environment that are not always sustainable. Latin America being very close to the US and countries like Venezuela having some of the world's richest petroleum reserves, USA has been known to intervene with the industrial actions in the region. Although the effect is sometimes indirect, it is safe to say that the United States is a major actor that continuously contributes to the industrial water pollution in the LAC region.

Mexico

The United Mexican States or simply Mexico is a major counterpart of the Latin American region. It is a part of the North American continent, bordering the United States of America. There are regions like the Upper Atoyac basin that face strong public health crises because of water pollution. The region is one of the 30 regions that are deemed as being in a state of socio-economic and healthy emergency in Mexico. It is polluted by sewage and waste from homes, farmland and factories that are utilized for industrial practices. Additionally, the disposal of solid waste of the whole country contributes to this environmental catastrophe, further deteriorating the security of water resources in Mexico.

Colombia

Colombia is one of the richest countries in terms of freshwater resources. This abundance of resources has led the country to utilize it very poorly, considering the devastating economic and social situation that the country currently faces. Some 300 km North of Bogotá, Puerto Wilches sits on the riverbanks of the Magdalena River. Despite being next to one of Colombia's main arteries, the rural town of 30,000 inhabitants has no access to clean water. The infrastructure of the country cannot keep up with the amount of pollution there is, meaning the poverty and the economic instability in the country keeps the country from cleaning its waters.

Brazil

Being the biggest country in terms of surface area, Brazil is the agricultural hub of Latin America. As previously mentioned, agriculture is one of the industries that significantly affect the water pollution levels in Latin America. It is a leading producer of coffee, sugarcane, soybean, beef and poultry. Brazil being the strongest industrial and agricultural power, it has more production of goods. However, the country fails to sustain its consumption of natural resources. As it industrializes more and increases its production, factors like pesticides and cattle farming businesses increase the water pollution. Pesticides make water resources less potable in Brazil

III. Focused Overview of the Issue

Unfortunately, the popularity of water utilization has led to two consequential matters of international issues. One of them being the conflicts that arise from the failure of countries to share maritime borders. Another is the immense pollution of water resources, which can be observed all around the globe. Latin America is a region that particularly relies on water utilization in their industries due to its access to some of the world's most valuable waters like the Amazon Basin. When these valuable resources get polluted, it gets gradually difficult for nations to utilize them for their benefit. It also significantly deteriorates the life quality of citizens. Some people source their potable water from these water resources in low-income areas of Latin America, thus water pollution carries a fatal risk for public health. Without water security, people risk their health

Picture 2: Water pollution in the Amazon River Basin

and life quality. This could lead to major human rights crises, diminishing the political, social and regional power of any nation. Water pollution is a serious public health concern that should be dealt with in order to foster further development while taking into account the humanitarian aspect of environmental stability.

In the contemporary international arena, Latin American countries face various threats caused by pollution. 77 million people lack access to safe water. This means that from production to consumption, a substantial amount of individuals are under fatal threat. 100 million people lack access to sanitation, which is closely intertwined with water pollution. When the industry pollutes the water resources, it is unsanitary to consume it. This can lead to many losses of lives in a country since many bacteria and viruses can emerge from the consumption of unsafe water bodies. Between 1960 and 2000, the amount of people in the LAC region that have access to sanitation increased from %14 to %49. Even though this is a tangible increase it is still not even half of the population. Many major water basins from North to South America are under great strain because of growing populations such as the Great Lakes, Lake Chapala in Mexico.

Lack of pricing in the potable water industry is also a major concern. Because of the difficulty to clean the waters polluted by the industry, it gets increasingly difficult to produce potable water. The price of the water proportionally increases, making it much less accessible for the population considering the economic unrest in the region.

1. Agriculture

The industry of agriculture should be specifically mentioned since LAC countries are highly dependent on agricultural exports. Some countries in the Latin America and the Caribbean region are highly dependent on farming and agriculture to sustain their economy. This means that there is a substantially high amount of agricultural practices. Farms discharge large amoınts of agrochemicals, organic matter, drug residues, sediments and saline drainage into water resources. This effectively pollutes the water bodies.

Pesticides are also released when they are used in the area of agriculture. It is important to remember that the water cycle takes all waters used to the water resources eventually, causing the water bodies to be contaminated by the large amounts of pesticides used. This increases the chance of poisoning and also decreases the soil quality, hence hindering agricultural productivity in the first place.

IV. Key Vocabulary

Agriculture: Except as otherwise specifically defined, the words “agriculture” and “farming” shall include cultivation of the soil, dairying, forestry, raising or harvesting any agricultural or horticultural commodity, including the raising, shearing, feeding, caring for, training and management of livestock, including horses, bees, the production of honey, poultry, fur-bearing animals and wildlife, and the raising or harvesting of

oysters, clams, mussels, other molluscan shellfish or fish; the operation, management, conservation, improvement or maintenance of a farm and its buildings, tools and equipment, or salvaging timber or cleared land of brush or other debris left by a storm, as an incident to such farming operations; the production or harvesting of maple syrup or maple sugar, or any agricultural commodity, including lumber, as an incident to ordinary farming operations or the harvesting of mushrooms, the hatching of poultry, or the construction, operation or maintenance of ditches, canals, reservoirs or waterways used exclusively for farming purposes; handling, planting, drying, packing, packaging, processing, freezing, grading, storing or delivering to storage or to market, or to a carrier for transportation to market, or for direct sale any agricultural or horticultural commodity as an incident to ordinary farming operations, or, in the case of fruits and vegetables, as an incident to the preparation of such fruits or vegetables for market or for direct sale. (According to the Connecticut Department of Agriculture).

Water Pollution: It is the release of substances into subsurface groundwater or into lakes, streams, rivers, estuaries, and oceans to the point that the substances interfere with beneficial use of the water or with the natural functioning of ecosystems. (According to Britannica)

Sustainable Development: An approach on societal economics that aims to constantly improve humanity while always preserving the natural resources in the environment and trying to build a better future for the next generations.

Environmental Impact Assessment (EIA): A series of actions where the environmental footprints of an industrial implementation is tracked, evaluated and formed into a report in order to diminish its negative effects on the environment including waters.

Pesticides: Pesticides are any toxic substance used to kill animals, fungi, or plants that cause economic damage to crop or ornamental plants or are hazardous to the health of domestic animals or humans. All pesticides interfere with normal metabolic processes in the pest organism and often are classified according to the type of organism they are intended to control. (According to Britannica)

Oil Leaks: Oil leaks are the pollution caused by substances such as petroleum when they leak into the waters and deteriorate marine life as well as human life.

Textile Industry: Textile is the industry that produces fashion goods, clothing and cloth related materials out of natural resources like cotton or petroleum utilizing a significant amount of water in the process.

V. Important Events & Chronology

Date (Day/Month/Year)	Event
23/03/1969	La Plata Basin Agreement
03/07/1978	Amazon Cooperation Treaty
03/07/1992	Rio Earth Summit
21/05/1997	United Nations Watercourses Convention
15/12/2000	The Mercosur Environmental Protocol
22/04/2010	Mexico Federal Law of Protection and Defense of Water
06/07/2018	ECLAC Regional Water Action Agenda for Latin America and the Caribbean

VI. Past Resolutions and Treaties

- UN Watercourses Convention (1997)
- UNECE Water Convention (1992)
- Regional Water Action Agenda for Latin America and the Caribbean (2023) https://www.cepal.org/sites/default/files/events/files/regional_water_action_agenda_lac.pdf
- LAC Countries Reaffirm their Commitment to the Regional Water Action Agenda (2024)
- Amazon Cooperation Treaty (1978)
- Guarani Aquifer Agreement (2010)
- Ramsar Convention on Wetlands (1971)
- Framework for the Sustainable Management of Its Water Resources with Respect to the Hydrological Effects of Climate Variability and Change (2005)
- United Nations Resolution 64/292 (2010)
- United Nations Resolution 70/1 (2015)
- United Nations Resolution 72/277 (2018)

The resolutions, conventions and agreements provided are documents that have been implemented on the globe but especially the LAC region since the beginning of issues regarding industrial water pollution. Considering that mitigating the water pollution in Latin America requires the full cooperation of the whole continent, these agreements have not been successful in achieving a middle ground to collectively eliminate maritime pollution problems. Most of these documents are only ratified by a couple of countries from the region, meaning that some countries do not comply with international standards of environmental protection regarding water resources. Although these documents establish a useful framework on what should be done to mitigate industrial water pollution, they are insufficient in resolving the issue at hand.

VII. Failed Solution Attempts

Most of the solutions have failed to reach the desired outcome of diminishing the water pollution caused by industrialization in Latin America since they overlook the fact that not all countries have the financial resources to build the infrastructure that is crucial in achieving an environmentally sustainable water cycle. Countries such as but not limited to the United States of America have been ignoring its environmental effect, especially under the Trump Administration. Even though the change of power in the US in the 2020 Presidential Elections led to some development in the country's policies, it still remains a major liability for clean water resources in the Latin America and Caribbean (LAC) region. The United States of America taking a step back from its responsibility in the environmental destruction caused in Latin America and the Caribbean as well as in the rest of the world is a tremendous menace towards collective improvement in the area of sustainable development.

Some international conferences such as the Rio Earth Summit have been organized to address environmental concerns in the Latin America and the Caribbean region, however since the majority of the summits organized do not address the industrial aspect of water pollution in Latin America, they fail to establish a viable and detailed solution to the issue. Most of the conferences and organizations formed focus on global warming, which is also a very important global issue. However, they fail to specifically focus on the Latin America region and the water pollution that takes place. A majority of content regarding water pollution is discussed in other regions of the world and not enough research and questioning is made on the specific region of LAC.

Furthermore, the resolutions, agreements and discussions made are not binding for countries. This makes it complex to make sure every nation comprehends the cruciality of the issue at hand and actually applies the regulations that are provided in these unions. Nations such as the United States of America do not usually comply with international standards that are set either by the United Nations or the countries themselves.

VIII. Possible Solutions

In order to solve the industrial water pollution issue at hand in the Latin America and the Caribbean (LAC) region, the socio-economic, societal and international factors of the region should be considered. It is also important to emphasize that this issue is specifically related to the water pollution caused by industrialization in the region.

Delving into the high amounts of industrialization is crucial in gaining a tangible grasp of why the continent is polluting way faster than usual. Since the Industrial Revolution, all nations have been focusing on producing and developing even further. They wanted to produce more than their fellow nations in order to surpass them in an international race where every country desires to acquire major economic power. Producing more meant exporting more goods, which essentially leads to higher income for the national

government. The economic power gained by the means of production such as agriculture, technology, art and entertainment led to a global hunger for regional and international power. Every single nation still desires to increase their national income by cutting the costs of their production and increasing the sale of the products that they have produced through the companies that operate inside the nation.

This race leads to countries trying to utilize cheap goods to produce their exports. Since acquiring natural resources in an environmentally friendly way requires way more financial resources than destroying the earth, most countries chose to increase their exports and cut their costs over environmental development. They eliminated the waste produced by the industry by dumping it to the waters, instead of using more expensive sustainable methods.

Consequently, in order to decrease the amount of industrial water pollution in the LAC, it is imperative to eliminate this race of production. Reminding all nations that competing for the economic power that they desire might also destroy the future that they hold through various implementations that will be suggested by delegates can be an important step towards achieving this incentive.

Most of the time, the economic conditions of the countries in the LAC region are overlooked. For instance Venezuela is in a major economic crisis and the corrupt government cannot sustain itself. Another example can be Argentina which is suffering a financial crisis that cannot be resolved at the moment. In these conditions, it is almost impossible for these nations to consider tackling environmental problems when there is armed violence, famine, governmental threat or political unrest to solve first. In order to aid these countries gain the financial resources to actually consider taking action regarding the industrial water pollution, the international community should stand in solidarity with the LAC region.

In the modern age, a lot of new technological developments are emerging. This means that many methods can be used to improve environmental sustainability in the LAC region. As previously mentioned, agriculture is an industry that detrimentally affects the water bodies by discharging chemicals, pesticides and other materials. By using newly developed filtration methods, it is possible to decrease the water pollution by a significant amount.

However, these technological developments can be inaccessible for some countries in the LAC. In order to ease the access, it is necessary to form an international collaboration network. Countries that possess adequate financial resources may choose to allocate some of their environmental technologies to less developed countries. A framework can be formed to achieve this goal of easing the utilization of necessary technologies to improve water quality.

IX. Useful Links

- United Nations Environment Programme (UNEP) – Water Pollution
  UNEP provides evidence-based data to inform effective water quality management and policy decisions and partners with stakeholders to ensure sustainable management and protection of water resources. It supports communities in actively participating in water quality monitoring and improvement efforts.
- Economic Commission for Latin America and the Caribbean (ECLAC) – Water and Environment
  ECLAC works to promote equitable long-term economic growth and effective financial resource allocation to support development and equality in the region. The commission focuses on integral human development with a rights-based approach, addressing issues like education, health, and social protection.
- World Bank – Water Resources in Latin America
  The document emphasizes the impact of climate change, including droughts and floods, on water availability and quality. Water scarcity and variability have significant economic consequences, affecting agriculture, livestock, and livelihoods. The call highlights inspiring community efforts, such as those in Colombia, to promote peace, inclusivity, sustainability, and resilience
- Inter-American Development Bank (IDB) – Environmental Sustainability
  The ESPF includes ten Environmental and Social Performance Standards (ESPS) that reflect the IDB's commitment to minimizing risks and negative impacts on people and the environment.The framework includes provisions for human rights, labor, community health, and safety, with explicit considerations for vulnerable groups such as Indigenous Peoples, people of African descent, and people with disabilities.
- Pan American Health Organization (PAHO) – Water, Sanitation, and Health
  PAHO engages in technical cooperation with its member countries to fight communicable and noncommunicable diseases and their causes, strengthen health systems, and respond to emergencies and disasters.
- Mercosur Environmental Protocol
  The article discusses the evolving landscape of international politics and the challenges it presents for the field of International Relations (IR). It highlights the significant contributions of Latin American, particularly Brazilian, scholars to global academic debates and emphasizes the importance of interdisciplinary approaches in understanding international politics
- UN Water – Global Water Quality Alliance

The alliance focuses on collecting and analyzing reliable data to understand water quality issues and develop effective solutions. There is a special emphasis on involving local communities and younger generations in water quality assessment and action

- Inter-American Association of Sanitary and Environmental Engineering (AIDIS)

  AIDIS aims to advance public health and environmental sanitation through scientific and technological contributions.The association works with other international organizations to address public health and environmental challenges in the region.

- Water and Sanitation Program (WSP) by the World Bank

  The report details the WSP's efforts to improve access to water and sanitation services, particularly for the poor and vulnerable populations.Highlights include scaling up rural sanitation and hygiene, creating sustainable services through domestic private sector participation, and supporting water supply and sanitation sector reforms.

X. Works Cited

"Addressing Marine Plastics in Latin America and the Caribbean." *World Bank*, World Bank Group, 13 Feb. 2024, www.worldbank.org/en/region/lac/brief/addressing-marine-plastics-in-latin-america-and-the-caribbean.

Barraza, Jose. "Jose Barraza." *Center for Climate and Resilience Research CR2*, 22 May 2024, www.cr2.cl/eng/water-crisis-in-chile-are-we-close-to-day-zero/.

"Definition of Agriculture." *CT.Gov*, portal.ct.gov/doag/commissioner/commissioner/definition-of-agriculture. Accessed 10 Nov. 2024.

Langrand, Michelle. "Colombia's Looming Water Crisis." *Geneva Solutions*, 12 Mar. 2021, genevasolutions.news/climate-environment/colombia-s-looming-water-crisis.

"Pesticide." *Encyclopædia Britannica*, Encyclopædia Britannica, inc., 5 Nov. 2024, www.britannica.com/technology/pesticide.

Rodrigues, Meghie. "Urbanization, Agriculture, and Mining Threaten Brazilian Rivers." *Eos*, 6 Dec. 2021, eos.org/articles/urbanization-agriculture-and-mining-threaten-brazilian-rivers.

"Sustainable Development." *Encyclopædia Britannica*, Encyclopædia Britannica, inc., 16 Oct. 2024, www.britannica.com/topic/sustainable-development.

Water Problems in Latin America, www.worldwatercouncil.org/fileadmin/wwc/News/WWC_News/water_problems_22.03.04.pdf. Accessed 10 Nov. 2024.

"'You Can't Even Wash Your Hands': Is a Global Industrial Hub Responsible for the Destruction of Mexico's Atoyac River?" *The Guardian*, Guardian News and Media, 31 Oct. 2024, www.theguardian.com/global-development/2024/oct/31/you-cant-even-wash-your-hands-is-a-global-industrial-hub-responsible-for-the-destruction-of-mexicos-atoyac-river#:~:text=The%20Upper%20Atoyac%20basin%20is,and%2C%20above%20all%2C%20factories.