**Forum:** Environmental Commission

**Issue:** Sustainable use of international waters

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**Position:** Head Chair

**Introduction**

The sustainable use of international waters is crucial to not only the development of nations on an international scale and market but also imperative for the survival of ours and hundreds of thousands of other species. The responsible use of this resource is essential to a sustainable future and the livelihoods of billions. Water is a finite resource that will only become sustainable if we take immediate measures and manage it vigorously. Our oceans contain over 200,000 marine species, hold a market value of coastal resources and industries including the energy and agricultural sectors worth $3 trillion per year (5% of global GDP), absorb a striking 30% of carbon dioxide emissions and employ over 200 million people worldwide. Our oceans are vital and yet face constant massive destruction and deterioration that gradually kills the sea’s ecosystems causing the death of marine biodiversity. Some of the most significant and deteriorative actions are the pollution of the ocean, overfishing, and haunting of marine species and ocean acidification destroying the natural minerals that multiple organisms need to survive. Handling this irreplaceable resource would mean to meet the demand of the present without compromising the future of our planet.

However, over 2.3 billion people currently live without access to sanitary water. Despite the fact that there is still much to be resolved, there are methodologies and approaches that can and have been taken. For example, the United Nations Development Programme Global Environmental Finance (UNDP-GEF) has developed strategic planning that has been proven to be highly effective at tackling the issue such the Transboundary Diagnostic Analysis/Strategic Action Programme process which seeks to prioritize ocean and water issues. Since 1991, the UNDP-GEF has aided over 100 countries that share the most relevant water ecosystems and continues to advance at sustaining the world’s most significant shared/transboundary waters.

**Definition of Key terms**

**Sustainable**

Can be maintained over an extended period of time.

**Marine biodiversity**

The richness of species contained within the world’s oceans or a specific marine environment.

**Maritime boundaries**

The rights of a country over the resources of the sea adjunct to their land of that country or state. These usually extend to 22.2 km from the shore.

**Open sea**

The area of the ocean that is outside of coastal borders and is not within the rights of any exclusive country.

**Acidification of oceans**

Major changes in the pH levels of the ocean causing it to lose necessary minerals for the creation of shell skeletons amongst other marine functions. Lower pH values signify higher levels of acidity while a higher pH value signifies higher levels of alkalinity. These values range from 1-14, a neutral pH level is considered to be a 7 and anything below 3 is considered highly acidic.

**Overfishing**

The fishing of a fish species that cannot replenish with the speed at which it is consumed. Over an extended period of time, this can gravely affect the biodiversity of our seas and destroy the natural food chain hence killing ecosystems.

**Shared/transboundary water bodies**

Lakes, rivers or large water bodies that are shared amongst at least two countries and support the livelihood of multiple people globally, regardless of their country and effect on the global GDP.

**Food security**

Food security is defined commonly as when people can access safe and nutritious food at all given times regardless of their physical, social and economic background.

**Gillnets**

Nets which are hung vertically off of fishing boats in order to efficiently trap large amounts of fish.

**Background information**

**Effects on developing nations, the international market, and global GDP**

***Implications for water scarcity and urbanization***

There is a massive lack of sanitary water in many developing countries. This poses a major health hazard: more than 5 million people die annually because of issues related to unsanitary water and 2 million of these deaths are caused due to diarrhea. In the long-term, this becomes a significant financial strain on a country’s economy. Investing in Water Supply Sanitation and Hygiene (WASH) has been proven to be financially beneficial in the long-term in addition to its apparent benefits to health. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), the return on investment is approximately $5 to $28 per USD or an annual return of over $53 billion. Long-term implementation of WASH would lead to a decline in health-related issues and death rates.

***Effects on agriculture and food security***

Irrigation systems are highly inefficient and propose all sorts of problems: only 35% of water is used efficiently, but because of the increase of demand of water in domestic use, the supply for agriculture will be diminished in the forthcoming years making it impossible for us to continue with such inefficient and slow methods of irrigation, which is why we must find a sustainable and affordable replacement for our practices. As the global population continues to increase, the demand for food is reaching a culminating point in which supply cannot please demand, thereby compromising food security. Every day, 25,000 people die daily of starvation and 21,000 more die from malnutrition or food insecurity. For this reason, food must be produced at a faster and more efficient rate, which cannot be done without introducing more technological advances to currently dated irrigation systems in order to avoid water wastage and maximize food production without compromising its quality. This is especially relevant for Middle Income Countries (MICs) and Low Income Countries (LICs) as they are the most affected by food insecurity and suffer more human losses from starvation, malnutrition and other related issues.

**Effects of climate change and the production of oxygen**

There are multiple factors that affect the rising temperatures of our planet, the most significant of which being greenhouse gas emissions and the burning of fossil fuels, both the result of human action. According to NASA, in the past million years the earth’s temperature rose by approximately 4-7 degrees celsius, but in the past century, given that the industrial revolution started the era of the burning of fossil fuels and mass production, the temperature has escalated by 0.7 degrees. This means that it is rising ten times faster than it should be for the organic reparation of icebergs and faster than ever before. These changes of temperature will not only overflow our oceans causing massive floods in cities surrounded by the sea or rivers, but the fauna and flora found in our oceans will be compromised, our corals will not survive these significant temperature changes, mass coral bleaching and infections and diseases will become considerably more common. Our oceans constantly absorb carbon dioxide which affects calcium and mineral concentration and, due to, our emissions and harming our ocean’s ecosystems, we have already lost over one-quarter of our coral reefs in the past 30 years alone. Although this may not appear to be significant for our species, the truth is that our corals are vital to our survival. Coral reefs cover less than 0.3% of our planet but they produce the majority of our oxygen. Continuing to kill and eradicate them further would result in the loss of not only the shelter of countless species but also one of our main sources of oxygen.

**Implications of overfishing, coral mining, acidification, and marine destruction**

***Overfishing and coral mining***

Overfishing is the most malevolent threat to our world’s coral reefs. It is estimated that 55% of our ocean’s coral reefs are threatened by destructive or unsustainable overfishing, and in continents such as Asia, this alarming percentage increases to a bewildering 95%. With a growing global population, we see a clear increased demand for seafood products, but just as fishing methods have become more efficient at creating profit and meeting this demand, they have also become more destructive and harmful., Savage fishing methods such as the use of cyanide that inevitably kills coral reefs or the use of explosives near coral reefs, ravage coral tissue and colonies and at times, especially near shallow ends where the coral tissue is most vulnerable, these irresponsible fishing methods can permanently destroy large sections of reef which can never be recovered. Another example of a fishing methods that damage coral reefs is the use of gillnets which bash the ocean floor or unwittingly capture other species and pieces of corals. Even abandoned or discarded nets left in the ocean continue what’s called “ghost fishing” meaning that they will continue to trap fish species and dislodged corals due to currents and wave action.

***Implications of ocean acidification***

Man-made pollution, such as the overwhelming mass of plastic that suffocates, traps and starves fish, overfishing and ocean acidification are rapidly annihilating our marine ecosystems. Ocean acidification is caused by an over absorption of carbon dioxide which results in chemical reactions that lower that lower seawater’s pH level. This causes the loss of precious minerals that are required for the construction of skeletons and shells of a large number of marine species., According to the Pacific Marine Environmental Laboratory (PEML), since the beginning of the industrial revolution our oceans’ pH level has lowered by 0.1, which represents an increase in acidification of 30%. It is estimated that at the rate with which we produce greenhouse gases, our ocean’s acidity levels will increase by up to 150% by the end of this century. This drastic change will endanger the thousands of marine species that depend on the sea water’s minerals for their survival, and by doing so break the natural food chain of several ecosystems. We must take immediate action to prevent this prediction from happening.

***Maritime boundaries and the open sea***

Maritime boundaries have been a matter of conflict between countries since the laws of the sea were established and the sea’s resources began to be exploited. Countries that are adjacent to one another still disagree and dispute over the borders and rights over resources located near their coastal limits. A larger issue is the exploitation of what is known as international waters or open sea as some countries choose to take advantage to exploit, overfish, pollute and disrupt the sea life without consequence as it is not considered owned by any country. This allows countries, organizations and individuals to damage the oceans senselessly without facing legal repercussions.

**Major Countries and organizations involved:**

**United Nations Development Programme Global Environmental Finance**

The United Nations Development Programme Global Environmental Finance (UNDP-GEF) has a portfolio that contains four signature programs which aid large marine ecosystems, transboundary lakes, and the management of coastal areas and their resources. The portfolio has helped over 100 countries and attributed over $750 million in grants to sustainable efforts. The UNDP-GEF is interested in management and a sustainable future.

**Libya**

Libya is currently facing tremendous political conflict which has caused a shortage of food and sanitary water in the country. Unfortunately, this is the case with most countries facing extreme political turmoil, such as Yemen, as the government does not have the resources to properly care for its people.

**Western Sahara**

The Western Sahara hosts thousands of refugees, mostly Sahrawis, as their land is considered disputed territory. Sahrawi refugees often suffer from water shortages due to their long-lasting struggle for control with Morocco. This ongoing struggle is unlikely to end soon as the land in question contains natural resources that either group would want to exploit.

**Djibouti**

Djibouti has previously denied aid from the United Nations Children’s Fund (UNICEF) and the United Nations High Commission for Refugees (UNHCR). The country’s strategic location for both military placement and as a refugee corridor have made the country’s water supply historically important. The country’s weak infrastructure usually leaves millions of people without proper access to sanitary water.

**One Drop Foundation**

The One Drop Foundation has been actively helping to supply and save water since 2007. Among their various projects and achievements, there includes supporting maternal and newborn child health, providing sanitary water to 200,000 targeted populations and improving the living conditions of 1.6 million people based in 13 different countries. One drop obtains their funding by hosting fundraising events and partnering with other organizations as well as online initiatives.

**Pacific Institute**

The Pacific Institute is the global leader in analyzing international water issues, researching water conservation, and investigating the use of water in agriculture, food production and energy. Every two years they publish “The World’s Water” which is a detailed report of the state of issues concerning the Earth’s water.

**World Water Council**

The world water council is an international organization whose main focus is on the promotion of awareness of and taking acting toward water conservation. They attend and host multiple events in order to strengthen the international water community and emphasize the importance of these issues.

**Project WET**

Project WET is based on educating the youth given that they are often unaware of the magnitude of water-related issues. Through interactive materials with the help of educators and teachers, they help students understand water concepts such as water sustainability and water-saving relevance. They believe that teaching youth is teaching and preparing future generations that will create the most change.

**Timeline of Events**

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| **Date**  | **Description of Event**  |
| October 1991 | The GEF is established |
| 16 November 1994 | The UN Convention on the Laws of the Sea is signed by 60 member states |
| November 1965 | The UNDP is formed |
| 2007 | The One Drop Foundation commences operations |

**Relevant UN Treaties and Events**

* United Nations Convention on the Law of the Sea, 10 December 1982
* International Decade (2018–2028) for Action – Water for Sustainable Development, 7 February 2017 **(A/RES/71/222)**
* Interstate distribution of water resources of transboundary watercourses and their rational use with due regard to water quality aspects, 28 October 2003 **(MP.WAT/2003/8)**

**Previous Attempts to Solve the Issue**

**Oceans and the law of the sea 2017, and the UNCLOS (convention)**

Working towards establishing the laws for the freedom of ocean usage, navigation rights, establishing territorial sea boundaries and exclusive economic exploitation zones while protecting marine biodiversity for the common wellbeing of humankind. This approach is often discussed and debated but it appears to be one of the most effective attempts if agreed upon and executed effectively.

**International decade for action 2005-2015 “Water for life”**

Water is key to food security in developing nations and is directly linked with the reliability and sustainability of sanitary water used for food production and public consumption. For this and other reasons, in 2005, the UN Human Rights Council declared access to sanitation and clean drinking water a human right, a huge step forward to solve the issue.

**The European commission EU coastal and marine policy**

The European Union (EU) has adopted two different approaches to solve the issue, first in the 2002 *“*[*Recommendation on Integrated Coastal Zone Management*](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32002H0413)*”* and second in the 2008 *“Marine strategy framework directive”* in relation to the protection of European coasts and seas. This resulted from the 2005 European task force realizing that their previous approaches required renewing.

**Possible solutions**

The issue of sustainable use of international waters is broad and therefore proposes multiple solutions that, if followed through, could potentially salvage our oceans and our planet without compromising countries’ economies or creating conflict between nations.

A possible solution could be to create a n international agreement similar to the Paris agreement which 197 countries have signed and act upon, with a focus on oceans. This agreement should include the economic effects of the issue in developing countries, state maritime borders and boundaries and efforts to protect and preserve marine life. This can also apply to the open sea to guarantee that countries will not exploit the natural resources of the ocean unpunished.

Another approach to solving the issue would be to sanction those organizations and countries that violate the law by contaminating and misusing their territorial water due to their action’s local and global effects. The prohibition of overfishing for commercial or touristic purposes could also be effective, although some countries’ tourism depends heavily on this. An alternative would have to be found so that the biodiversity of our oceans can be maintained and our coral reefs that provide the adequate living conditions for thousands of hundreds of species are preserved.

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