

# UNESCO Committee

## TOPIC A:



## The question of mobilizing scientific knowledge to promote sustainability

### I. Introduction:

This research paper will cover the topic of mobilizing scientific knowledge to promote sustainability. Involved and affected countries and groups, conflicts and issues caused by relevant resolutions, and current situations will all be taken into consideration when researching all of the possible solutions for this issue. This paper will therefore aim to define the issue, the causes and examples involved, and all the possible resolutions.

### II. Definitions of Some Key Terms:

Mobilization: “the act of organizing or preparing something, such as a group of people, for a purpose” (*Cambridge*). In the context of scientific knowledge, it refers to the process of adapting knowledge towards research uptake and informed decision-making (*Toronto*).

2030 Sustainable Development Goals: The 2030 Agenda for Sustainable Development was created by the United Nations in 2015 and established the plan to achieve “peace and prosperity for people and the planet, now and into the future”. To fulfill this, there are 17 Sustainable Development Goals (SDGs) that make up its core and cover all global aspects in urgent need of development, including ending poverty, improving health and education, reducing inequalities, accelerating economic growth, tackling climate change, and preserving our natural environment. The agenda relies on global partnership which is why collaboration among all member countries is key in achieving the goals (*United*).

Sustainability: The “ability to maintain or support a process continuously over time”, mainly to preserve natural/physical resources so that they can remain available for a longer period. (*Mollenkamp*)

### **III. Background Information:**

The mobilization of scientific knowledge to promote sustainability worldwide is an imperative response to the escalating environmental challenges confronting our planet. As the global community faces issues such as climate change, biodiversity loss, and resource depletion, leveraging scientific expertise becomes paramount for informed decision-making and the development of effective solutions. Scientists play a pivotal role in advancing our understanding of ecological systems, identifying sustainable practices, and creating innovative technologies. Furthermore, the scientific method is of vital importance in that it decreases uncertainties, accelerates innovation, and identifies crucial tipping points. The UN Global Sustainable Development Report of 2023, appropriately called “Times of Crisis, Time of Change: Science for Accelerating Transformations to Sustainable Development” recognizes the urgent need to accelerate progress towards the Sustainable Development Goals and states that the “implementation of the 2030 Agenda requires active mobilization of political leadership and ambition for science-based transformations” (*Independent*). Since the last UN report came out in 2019, global challenges have multiplied and intensified and many areas of the SDGs have had little to no progress due to the various crises that we have been subject to in the past few years, including pandemics, the cost-of-living crisis, environmental disasters, economic distress, and conflicts. Bridging the gap between scientific knowledge and practical application is essential for addressing sustainability comprehensively. This involves not only generating new knowledge through research but also disseminating and applying existing insights on a global scale. In today’s world, it is becoming increasingly difficult to produce unbiased, peer-reviewed information, particularly on certain social media platforms that are a hub for fake news. The collaboration between scientists, policymakers, industry stakeholders, and the public is also crucial to translating scientific findings into actionable strategies that promote environmental stewardship and foster a more sustainable and resilient future for the planet. Finally, correcting the global imbalance in research and development is imperative to allow low- and middle-income countries to access the means to fund scientific activity that will be able to address and solve context-specific issues.

### **IV. UN Treaties/Historical Events:**

The UN’s “High Seas Treaty”, was drafted on March 4 and signed on the 20th of September, 2023, in New York City, United States. Also known as the Accord on “Biodiversity Beyond National Jurisdiction”, it was signed with the idea of further managing most of the world’s land and volume of oceans, to fight environmental demeaning, climate change, and the loss of oceanic biodiversity. The EU has had a massive impact on the promotion of this treaty, consistently pleading to sustain what the agreement hopes to achieve. The treaty aims to form marine-protected areas in Marine Areas Beyond National Jurisdiction, also known as the high seas. This area—which covers most of the Earth’s ocean’s volume—is essentially ocean space that

is not under any direct government control, and establishing these boundaries will prevent human-caused issues, such as pollution, from affecting them (*Simmonds*). Additionally, the treaty aims to effectively manage 30% of the world's land and sea by 2030, establish a fair trading monetary system between marine genetic resources, and even transfer marine technology to developing countries (*European Commission*).

The UNCLOS, or the United Nations Convention on the Law of the Sea, first entered into force on November 16, 1994, in Montego Bay, Jamaica. The treaty demonstrates a clear intention to manage all ocean volume, as well as its resources and uses, as well as offering protection for the marine environment. It also focuses on the research on the ocean's seabed and its subsoil, all beyond national boundaries (*UNCLOS*). It also promotes peaceful use of the ocean and controls the usage of marine resources. Despite its intentions, the treaty has been criticized for impacting the economies of some countries negatively, and even some of its goals are increasingly challenging to accomplish, mainly because not all UN members have signed the treaty (*Curtis*).

The Paris Agreement was initially brought up at the UN Climate Change Conference in the French capital back in December 2015 and entered into force in November of 2016. The treaty aims to undo the effects of global warming, specifically by keeping the increase of the world's average temperature under 2 degrees Celsius. This agreement is a significant one as it is the first accord to bring most countries together and sign it. A few examples of nations that didn't sign it are Iran, Libya, and Yemen. The agreement functions on a continuous cycle when every country must submit a report of their contribution (known as Nationally Determined Contributions, or NDCs) towards fighting climate change. Every NDC submitted must demonstrate a higher willingness to remove climate change than the previous one, to see change within the end of the century. All of this is based on economic and social adaptation to fight these issues, which relies on the highest quality of science available. The agreement also invites countries to submit Long-Term Low Greenhouse Gas Emission Development Strategies (LT-LEDS). These ideas provide the context for countries' NDCs into much-needed context regarding their countries, such as their long-term planning and development priorities. Since the treaty was brought into force, many more major cities/nations have started aiming towards carbon-neutral targets in their power and transport sectors (*United Nations Climate Change*).

## **V. Main Issues:**

Climate change is essentially a shift in the world's typical climate patterns, regarding temperature and weather. Climate change has been ongoing for decades, however after the start of the Industrial Revolution in the 18th-19th centuries, irregular climate shifts have been slowly growing globally, due heavily to the initiation of burning fossil fuels for energy. Other human activities that have helped develop climate change include the ignition of gasoline in cars, combusting coal to warm a building, cutting down vast amounts of trees, and many more

ongoing projects and activities that help release carbon dioxide, methane, and other harmful gasses into the atmosphere. In a more scientific sense, the release of these two gasses and many others that are equally as harmful, trap the heat all around the world's atmosphere, causing a rise in the world's average temperature. Since the start of the Industrial Revolution, the world's average temperature has risen by around 1° Celsius. Global warming, in response, causes many other issues around the world, such as the melting of immense icebergs, wildfires, extreme droughts/floods, and more (*United Nations*).

Oceanic pollution essentially consists of discarding physical waste (plastic, glass...) and chemicals ending up in the ocean. Physical waste that ends up in the ocean is mainly caused by human influence, such as littering, when people leave their plastic bags and glass bottles anywhere in a public area, especially in large bodies of water. As objects such as these cannot be broken down easily, marine life tends to attempt to eat or interact with these objects, causing many fish to die every year. Oceanic chemical pollution happens when human activities such as spraying fertilizer on crops or even oil leaks, eventually lead into the ocean, which not only directly affects marine life and ecosystems that come in contact with it, but also leads to what is known as algal blooms. Algal blooms refer to the drastic increase of algae in water, which can be very harmful to the ocean's life. Not only does chemical and physical waste pollution affect oceanic life, but also human life, as the fish that we eat, have a big chance of containing microscopic bits of plastic in them, as well as the residue of pesticides that fishermen spray with to preserve them. Oceanic pollution also has a big effect on our economy, including tourism and the healthcare system (*National Geographic*).

## **VI. Possible Solutions:**

Climate change and pollution workers/activists are helping implement their ideas and share their messages to help others understand how they, too, can undo the effects of it. In 2015, the UN released its list of 17 Sustainable Development Goals as a call to secure sustainability in the world, both ecologically and economically. Some of these goals include securing pure and clean water for people, acting out to fight the effects of climate change, helping marine life by protecting it from pollution, and stopping deforestation projects to help forests and tree-related ecosystems thrive. Agreements discussed before, such as the Paris Agreement aim to stop climate change by reducing the emissions of greenhouse gasses, and one popular method to continue with this is by switching energy sources to more sustainable ones, including solar and wind power, and keeping the use of coal and natural gas to a minimum. Focusing more on pollution, many organizations including The Ocean Cleanup are devoted to removing as many pieces of garbage as possible from marine habitats. TOC in particular has managed to remove around 200,000 kilograms of trash from the Great Pacific Garbage Patch, a heavily polluted volume of water in the Pacific Ocean (*The Ocean Cleanup*).

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