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United Nations Environment Assembly Background Guide 2023

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NATIONAL MODEL UNITED NATIONS

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Dear Delegates,

Welcome to the 2023 National Model United Nations Conference in Washington, DC (NMUN•DC)! We are pleased to introduce you to our committee, the United Nations Environment Assembly (UNEA). This year's staff is: Director Kenny Nguyen and Assistant Director Nicole Kach. Kenny graduated with a double degree in Political Science & Communications from the University of Colorado and is currently enrolled in a Masters of Public Administration at the University of Colorado Denver. He is also an Executive Assistant to Colorado's Lieutenant Governor. Nicole is a senior at the University of Massachusetts: Dartmouth with a major in Political Science and minors in communications and sustainability, with a passion for international affairs and the United Nations.

The topics under discussion for UNEA are:

1. Building Tools for Resilience to Protect the World's Oceans
2. Addressing Policy Implications of Warming Permafrost

The United Nations Environment Assembly (UNEA) is the main governing body of the United Nations Environment Program (UNEP). UNEA is mandated to ensure the active participation of all relevant stakeholders in the governance of UNEP and to promote a strong science-policy interface. Once called "the world's parliament on the environment," UNEA has a unique role in global environmental governance. The meeting is high level and universal—the only forum for stakeholders from all countries to discuss the environmental challenges we face. It is also a coordinator. It oversees the work of UNEP during the Rio+20 negotiations, with the objective of strengthening and upgrading. UNEA has become a central body for identifying, prioritizing, and coordinating global responses to environmental issues.

This Background Guide serves as an introduction to the topics for this committee. However, it is not intended to replace individual research. We encourage you to conduct additional research, explore your Member State's policies in-depth, and examine the policies of other Member States to improve your ability to negotiate and reach consensus. In preparation for the conference, each delegation will use their research to draft and submit a [position paper](#). Guidelines are available in the [NMUN Position Paper Guide](#).

The [NMUN website](#) has many additional resources, including two that are essential both in preparation for the conference and as a resource during the conference. They are:

1. The [NMUN Delegate Preparation Guide](#), which explains each step in the delegate process, from pre-Conference research to the committee debate and resolution drafting processes. Please take note of the information on plagiarism, and the prohibition on pre-written working papers and resolutions. Delegates should not discuss the topics or agenda with other members of their committee until the first committee session.
2. The [NMUN Rules of Procedure](#), which includes the long and short form of the rules as well as an explanatory narrative and example script of the flow of procedure.

In addition, please review the mandatory [NMUN Conduct Expectations](#) on the NMUN website. They include the conference dress code and other expectations of all attendees. We want to emphasize that any instances of sexual harassment or discrimination based on race, gender, sexual orientation, national origin, religion, age, or disability will not be tolerated. If you have any questions concerning your preparation for the committee or the conference itself, please contact the Under-Secretary-General Christopher Duggan at usgchris.dc@nmun.org or Secretary-General Ana Williamson at secgen.dc@nmun.org.

We wish you all the best in your preparations and look forward to seeing you at the conference!

Sincerely,
Kenny Van Nguyen, Director
Nicole Kach, Assistant Director



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Committee Overview

Introduction

The United Nations Environment Assembly (UNEA) is the primary governing body of the United Nations Environment Programme (UNEP) and is the international community's highest-level decision-making body on environmental matters.¹ In partnership with other United Nations (UN) institutions, it outlines the international environmental agenda and sets priorities for the international community.² Although its resolutions are not binding, UNEA plays a critical role in bringing together relevant actors within the international community to address global environmental issues and shape future environmental governance.³

Mandate, Functions, and Powers

Twenty years after the adoption of the *Rio Declaration on Environment and Development* (1992), the United Nations Conference on Sustainable Development called for the strengthening and upgrading of UNEP so that it could better execute its mandate.⁴ UNEA was created in 2012 as the successor to UNEP's Governing Council.⁵ Whereas the Governing Council was composed of 58 Member States and sat within UNEP.⁶ Whilst the following list is not exhaustive, the mandate of UNEA can be summarized as:

- **UNEA will generally:** set broad priorities for global environmental policy; identify emerging themes in environmental governance; develop international environment law and begin negotiations on environmental treaties; define the work and priorities of UNEP; create ad-hoc committees and subsidiary bodies to implement specific environmental objectives when necessary.⁷
- **UNEA will not generally:** engage in operational projects; complete negotiations on environmental treaties, but rather identifying emerging issues and agreeing next steps amongst Member States to create the architecture for future environmental governance.⁸

Delegates should recognize the distinction between UNEA and UNEP. UNEA is the primary governing body and priority-setting mechanism of UNEP; it does not operationalize these priorities itself.⁹ In contrast, UNEP undertakes programs, projects, awareness campaigns, and provides support to national governments to achieve environmental obligations.¹⁰

Governance, Structure, and Membership

In 2013, UNEA became the designated policy-making body of UNEP, superseding the original 58-member Governing Council.¹¹ UNEA has universal membership, meaning that all 193 UN Member States are represented in the Assembly.¹² UNEA meets every two years to set priorities for global environmental

¹ United Nations Environment Assembly. *About the United Nations Environment Assembly*. 2022.

² Ibid.

³ United Nations Environment Programme. *Q&A: UN Environment Assembly*. 2022.

⁴ United Nations, General Assembly. *The Future We Want (A/RES/66/288)*. 2012. p. 18.

⁵ United Nations Environment Assembly. *About the United Nations Environment Assembly*. 2022.

⁶ Ibid.; Governing Council of the United Nations Environment Programme. *Proceedings of the Governing Council at its Nineteenth Session (UNEP/GC.19/34)*. 1997.

⁷ United Nations Environment Programme. *What you need to know about the UN Environment Assembly*. 2022.

⁸ International Institute for Sustainable Development. *The United Nations Environment Assembly's Role as a Governance Architect*. 2022.; United Nations Environment Programme. *What you need to know about the UN Environment Assembly*. 2022.

⁹ United Nations, Office of the Secretary-General's Envoy on Youth. *UNEP: United Nations Environment Programme*. n.d.

¹⁰ Ibid.

¹¹ United Nations, General Assembly. *Institutional and financial arrangements for international environmental cooperation (A/RES/2997(XXVII))*. 1972.

¹² United Nations Environment Assembly. *About the United Nations Environment Assembly*. 2022.

policy, discuss developments for environmental legislation, and assist in the implementation of the *2030 Agenda for Sustainable Development* (2015).¹³

Consisting of ten Ministers for a term of two years on geographical rotations, the Bureau is responsible for the general conduct of business of UNEA.¹⁴ The Committee of Permanent Representatives (CPR) was first established as a subsidiary inter-sessional organ to UNEA and meets at least four times a year.¹⁵ The CPR was then strengthened by Governing Council decision 27/2, and now contributes to the preparation of the UNEA agenda as well as holding an advisory role in policy matters, and monitoring the implementation of decisions.¹⁶ The CPR also holds discussion on key issues, promotes the inclusion of non-resident members of the Committee, and performs other tasks given by UNEA.¹⁷ The CPR consists of all accredited Permanent Representatives to UNEP and is led by a five-member bureau that is elected for two years.¹⁸

UNEA on its own does not have a specific budget, but instead makes several budgetary decisions for the UNEP.¹⁹ UNEP relies on three main financial sources to facilitate its agenda: earmarked funds, the Environment Fund, and the UN Regular Budget.²⁰ Earmarked funds, also known as earmarked contributions, are funds appropriated for specific projects, themes, or countries.²¹ These funds aim to expand and/or replicate the results of UN Environment's work in more countries and with more partners.²² The Environment Fund aids in maintaining the capacity, balance, and efficiency needed for UNEP to function.²³ The UN Regular Budget supports the functions of the Secretariat and its respective governing bodies, as well as the coordination of UNEP with the UN system and cooperation with global scientific communities.²⁴ In order to assist in the action plan of UNEP, UNEA approved an appropriation for the Environment Fund of \$200 million for the years 2022-2025.²⁵ In addition, the budget allocated funding of \$200,000 for program initiatives for 2022-2023 with \$164,000 of that being for UNEP's program of work.²⁶ Earmarked contributions and the Environment Fund are comprised of voluntary contributions, hence 95% of UNEP's income is received on a voluntary basis from Member States.²⁷

¹³ United Nations Environment Assembly. *About the United Nations Environment Assembly*. 2022.

¹⁴ Ibid.

¹⁵ United Nations Environment Programme. *Committee of Permanent Representatives*. n.d.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ United Nations Environment Programme. *How is UNEP funded*. n.d.

²⁰ Ibid.

²¹ United Nations Environment Programme. *Earmarked Contributions*. n.d.; United Nations Environment Programme. *How is UNEP funded*. n.d.

²² United Nations Environment Programme. *Earmarked Contributions*. n.d.; United Nations Environment Programme. *How is UNEP funded*. n.d.

²³ Ibid.

²⁴ Ibid.

²⁵ United Nations Environment Assembly. *Medium-term strategy for the period 2022–2025 and programme of work and budget for the biennium 2022–2023 (UNEP/EA.5/L.3)*. 2021. p. 2.

²⁶ Ibid.

²⁷ United Nations Environment Programme. *How is UNEP funded*. n.d.



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International Institute for Sustainable Development. *The United Nations Environment Assembly's Role as a Governance Architect*. 2022. Retrieved 27 February 2023 from: <https://www.iisd.org/articles/unea-governance>

This article succinctly articulates UNEA's role as the central forum for environmental governance in the international community. It provides clear detail on the responsibilities of a norm-setting body such as UNEA, including how it serves as a catalyst for other bodies (including UNEP) and how it identifies emerging themes in the field. Delegates should utilize this source as an approachable introduction to the opportunities and limits of UNEA's mandate and how it coordinates with other organizations.

United Nations Environment Assembly. *Medium-term strategy for the period 2022–2025 and programme of work and budget for the biennium 2022–2023 (UNEP/EA.5/L.3)*. 2022. Retrieved 27 February 2023 from: <https://undocs.org/en/UNEP/EA.5/L.3>

Adopted at the fifth session of UNEA, this resolution outlines the medium-term strategy for the period 2022-2025 and budget for 2022-2023. The programme of work for 2022-2023 is also defined in the document, which includes allocation of funds towards addressing issues such as climate action, environmental governance, chemicals and pollution action, and science policy. This resource also highlights the role of the Executive Director in the implementation of the programme of work and budget of the UNEP. Delegates will find this source useful in understanding more about UNEA's current priorities and how funds are allocated with respect to addressing environmental issues.

United Nations Environment Programme. *What you need to know about the United Nations Environment Assembly*. 2022. Retrieved 27 February 2023 from: <https://www.unep.org/news-and-stories/story/what-you-need-know-about-un-environment-assembly>

This web page provides a general overview of UNEA's responsibilities and why the organization's work is important. Although brief, the information provided on this page summarizes the work that was achieved at the first half of the fifth session of the UNEA and includes an explanation on why the second half of the fifth session is important. Delegates should begin with this resource to understand what the UNEA is and why its work matters.

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United Nations Environment Programme. *How is UNEP funded*. n.d. Retrieved 27 February 2023 from: <https://www.unep.org/about-un-environment/funding-and-partnerships/funding-facts>

United Nations Environment Programme. *Q&A: UN Environment Assembly*. 2022. Retrieved 27 February 2023 from: <https://www.unep.org/news-and-stories/story/qa-un-environment-assembly>

United Nations Environment Programme. *What you need to know about the United Nations Environment Assembly*. 2022. Retrieved 27 February 2023 from: <https://www.unep.org/news-and-stories/story/what-you-need-know-about-un-environment-assembly>

United Nations, General Assembly. *Institutional and financial arrangements for international environmental cooperation (A/RES/2997(XXVII))*. 1972. Retrieved 27 February 2023 from: [https://undocs.org/en/A/RES/2997\(XXVII\)](https://undocs.org/en/A/RES/2997(XXVII))

United Nations, General Assembly. *The Future We Want (A/RES/66/288)*. 2012. Retrieved 27 February 2023 from: <http://undocs.org/en/A/RES/66/288>

United Nations, Office of the Secretary-General's Envoy on Youth. *UNEP: United Nations Environment Programme*. n.d. Retrieved 27 February 2023 from: <https://www.un.org/youthenvoy/2013/08/unep-united-nations-environment-programme/>

1. Building Tools for Resilience to Protect the World's Oceans

Introduction

Oceans play an integral role in the lives of millions of individuals, providing over 3 billion people food and economic security.²⁸ Covering 70% of the globe and absorbing 25% of all carbon dioxide, oceans are one of the largest ways to combat climate change as the globe's largest carbon sink.²⁹ Over 800 marine species are impacted by the effects of maritime pollution.³⁰ Additionally, about half of all Small Island Developing States (SIDS) gross domestic product (GDP) depend on the ocean for tourism.³¹ Overcoming the impacts of climate change and maritime pollution is essential for the health and future security of the world's oceans.³² The largest causes of maritime pollution comes from dumping, tourism waste, recreational usages, and industrial activities causing severe harm to the ocean's ecosystems.³³ Plastic and maritime pollution has long-lasting impacts on the marine ecosystems, leading to biodiversity and habitat loss, a rise of microplastic and toxic pollutants, and detrimental economic impacts.³⁴

According to the United Nations Office for Disaster Risk Reduction (UNDRR), resiliency focuses on a society's ability to rapidly adapt, transform, and recover after the impacts of a hazard.³⁵ Marine plastic pollution is one of the top threats to ocean resiliency, with an estimated 8 million tons of plastic waste entering the world's oceans annually.³⁶ Less than 10% of all plastics are recycled, with millions of tons of plastic being burned and dumped.³⁷ Plastics and Microplastics break down and contaminate the water, causing major ecosystem risks.³⁸ Only 27 Member States have policy initiatives to combat single-use plastic products, which leaves for global plastic elimination to be challenging and ineffective, which continues to be harmful for marine ecosystems.³⁹ Furthermore, threats such as ocean acidification, which raises the water's pH levels, impact all communities and marine life.⁴⁰ These threats are massive, as they are decimating coral reef habitats and fish populations which both serve as a critical source of food and economic support.⁴¹ In order to reverse these trends, a push for blue economies are needed as they stimulate job creation as well as preserving the ocean.⁴² To protect the safety and security of the oceans for future generations, blue economic initiatives such as renewable energy, fishing regulations and the decarbonization of ports are needed to help protect and use the ocean sustainably.⁴³

²⁸ United Nations, Economic and Social Council. *Progress towards the Sustainable Development Goals: Report of the Secretary-General (E/2021/58)*. 2021. p. 21.

²⁹ United Nations, Department of Global Communications. *About the 2022 UN Ocean Conference*. n.d.

³⁰ United Nations Environment Programme. *Addressing marine plastics: A systemic approach, Recommendations for action*. 2019. p.31.

³¹ Kituyi. *Why a sustainable blue recovery is needed*. 2020.

³² United Nations Environment Programme. *Enabling Sustainable, resilient and inclusive blue economies*. n.d.

³³ United Nations Environment Programme. *Marine litter: the issue*. n.d.

³⁴ Ibid.

³⁵ United Nations Office for Disaster Risk Reduction. *Resilience*. n.d.

³⁶ United Nations Environment Programme. *Why do oceans and seas matter*. n.d.

³⁷ United Nations Environment Programme. *From Pollution to Solution: A Global Assessment of Marine Litter and Plastic Pollution*. 2021. p.16.

³⁸ Ibid., p.15.

³⁹ United Nations Environment Programme. *Addressing marine plastics: A systemic approach, Recommendations for action*. 2019. p. 32.

⁴⁰ United Nations, Economic and Social Council. *Progress towards the Sustainable Development Goals: Report of the Secretary-General (E/2022/55)*. 2022. p. 20.; United Nations Educational, Scientific and Cultural Organization. *Ocean Acidification*. n.d.

⁴¹ United Nations, Economic and Social Council. *Progress towards the Sustainable Development Goals: Report of the Secretary-General (E/2022/55)*. 2022. p. 20; United Nations Environment Programme. *Why protecting coral reefs matters*. n.d.

⁴² Wellenstein. *The blue economy is worth \$2.5 trillion a year. But what is it?*. World Economic Forum. 2022.

⁴³ United Nations Environment Programme. *Enabling Sustainable, resilient and inclusive blue economies*. n.d.; European Union. *Sustainable Blue Economy*. n.d.

International and Regional Framework

One of the first initiatives addressing oceanic health is the *United Nations Convention on the Laws of the Sea* in 1982.⁴⁴ This framework implemented regulations to prevent maritime pollution and water protections, which is integral for safeguarding the ocean for future generations.⁴⁵ The United Nations Conference on the Human Environment in 1972 was one of the first international efforts prioritizing the environment.⁴⁶ *The Stockholm Declaration* (1972), recognized concerns over the environment.⁴⁷ *The Stockholm Declaration* provided 109 recommendations for environmental programs, including the formation of the United Nations Environment Programme (UNEP).⁴⁸ *The Stockholm Declaration* has been the blueprint for the future of the globe environmentally, with the United Nations Conference on Environment and Development (UNCED).⁴⁹

The *Rio Declaration* (1992) focused on the concept of sustainable development for all Member States and the economic impact of actions on the environment including environmental degradation and economic growth.⁵⁰ The *Rio Declaration* further discussed marine degradation along with action plans on maritime conservation and sustainability.⁵¹ *The Paris Agreement* (2015) was a critical turning point in international cooperation on climate change by being a legally binding treaty to keep temperatures below 1.5 C to reverse climate effects.⁵² With oceanic health in danger from rising water temperatures, *The Paris Agreement* (2015) is essential towards protecting the world's oceans from climate change.⁵³

In 2015, the General Assembly adopted resolution 70/1, "Transforming our World: the 2030 Agenda for Sustainable Development."⁵⁴ The landmark document supplied the *2030 Agenda for Sustainable Development* (2030 Agenda) and the subsequent 17 Sustainable Development Goals (SDGs), aiming to work towards sustainable international cooperation.⁵⁵ Goal 13 (climate action) addresses combatting impacts made by climate change.⁵⁶ Goal 14 (life below water) targets protecting the world's oceans and reducing maritime pollution and addressing sustainability measures.⁵⁷ Within SDG 14, the goal has targets for 2030, such as target 14.2, (protect and restore ecosystems), Target 14.4 (sustainable fishing), and Target 14.7, (increase the economic benefits from sustainable use of marine resources).⁵⁸ Achieving these targets and goal of SDG 14 will make the planet more sustainable and to cooperate towards the 2030 Agenda.⁵⁹

In recent years, the United Nations Environmental Assembly (UNEA), has adopted notable resolutions towards ocean health and sustainability.⁶⁰ One key resolution from UNEA-5.2, resolution 5/14, "End Plastic Pollution: towards an internationally legally binding instrument, focuses on the dangers of plastic

⁴⁴ United Nations Conference on the Law of the Sea. *United Nations Convention on the Law of the Sea*. 1982.

⁴⁵ *Ibid.*, p.102

⁴⁶ United Nations, Department of Global Communications. *United Nations Conference on the Human Environment, 5-16 June 1972, Stockholm, Background*. n.d.

⁴⁷ *Ibid.*

⁴⁸ *Ibid.*

⁴⁹ United Nations, Department of Global Communications. *United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3-14 June 1992, Background*. n.d.

⁵⁰ United Nations Conference on Environment and Development. *Agenda 21*.1992.

⁵¹ *Ibid.*

⁵² United Nations Convention on Climate Change. *The Paris Agreement*. n.d.

⁵³ United Nations Educational, Scientific and Cultural Organization. *Ocean Acidification*. n.d.; United Nations Convention on Climate Change. *The Paris Agreement*. n.d.

⁵⁴ United Nations, General Assembly. *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*. 2015.

⁵⁵ *Ibid.*

⁵⁶ *Ibid.*

⁵⁷ *Ibid.*

⁵⁸ Global Goals. *Life Below Water*. n.d.

⁵⁹ *Ibid.*

⁶⁰ United Nations Environment Assembly. *Fifth session of the United Nations environment assembly*. n.d.

pollution on maritime sustainability and health.⁶¹ Additionally, resolution 5/14, “End plastic pollution: towards an international legally binding instrument,” creates a long-term solution on removing plastic and protecting the world’s oceans.⁶² This resolution creates an intergovernmental panel to discuss and report best methods on combatting plastic pollution.⁶³ Additionally, this resolution focuses on oceanic health and promoting oceanic longevity through promoting different sustainability measures.⁶⁴ Work towards this resolution has been met with the establishment of the International Negotiating Committee (INC) with the first meeting have taken in place in Uruguay, and will continue until December 2024.⁶⁵ The outcome of the meetings with INC will result in the legally binding document on plastic.⁶⁶ Outcomes from INC-1 focused on engaging and retaining support from various stakeholders and for Member States to create individual National Action Plans (NAPs) to help address these plastic elimination goals.⁶⁷ The UN Oceans conference in 2022 highlighted the importance of immediate action and attention to the state of the world’s oceans, with renewed commitment towards scientific research and work towards blue economies with the *Lisbon Declaration (2022)*.⁶⁸ The *Lisbon Declaration* focuses on blue economic practices to preserve oceanic health with a focus on a heightened role of women and girls in the economy.⁶⁹

Role of the International System

UNEA serves as the governing body in creating policies on the environment and the future of climate security.⁷⁰ During the UNEA-5.2 conference in March 2022, several key resolutions were passed towards ocean protection and resiliency.⁷¹ Resolution 5/5, “Nature-Based Solutions for Supporting Sustainable Development,” recognizes the need for nature-based solutions in protecting the environment from the impacts from climate change.⁷² The resolution highlights the economic and climate benefits of nature-based solutions and the work they provide towards the 2030 Sustainable Development Goals.⁷³ UNEP, under the governance of UNEA, has addressed environmental and climate concerns and sustainability efforts.⁷⁴ In 2021, UNEP published the report *For people and planet: the UNEP strategy for 2022-2025*.⁷⁵ The report points toward shortfalls within climate policy, biodiversity, and nature pollution to create sustainable action plans.⁷⁶ Proposed solutions include ocean detoxification through cleaner transportation processes.⁷⁷ The initiative made by UNEP and with the collaboration of the International Council on Clean Transportation (ICCT), the United States and Canada focuses on limiting diesel, particulate matter, and black carbon, with the program starting in Indonesia with the hope to spread to other ports globally.⁷⁸ The *United Nations Framework Convention on Climate Change (UNFCCC)* addressed the state of the world’s oceans in the Sharm el Sheikh Implementation Plan.⁷⁹ This recommended for Member State action based

⁶¹ United Nations Environment Assembly. *End plastic pollution: towards an internationally legally binding instrument (UNEP/EA.5/Res.14)*. 2022.

⁶² United Nations Environment Assembly. *End plastic pollution: towards an internationally legally binding instrument (UNEP/EA.5/Res.14)*. 2022.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Smieja. *What’s up with the global plastics treaty?*. World Economic Forum. 2022.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ United Nations, Department of Global Communications, *Dire state of ocean’s health met with tide of pledges at UN ocean conference, as Lisbon Declaration launches new chapter for ocean action*.

⁶⁹ United Nations Environment Programme. *A new declaration to help save our oceans*. 2022.

⁷⁰ United Nations Environment Assembly. *The United Nations Environment Assembly*. n.d.

⁷¹ Geneva Environment Network. *Towards UNEA-5.2*. 2022.

⁷² United Nations Environment Assembly. *Nature-Based Solutions for Supporting Sustainable Development (UNEP/EA.5/Res.5)*. 2022.

⁷³ Ibid.

⁷⁴ United Nations Environment Programme. *About UN Environment Programme*. n.d.

⁷⁵ United Nations Environment Programme. *For people and planet: the UNEP strategy for 2022-2025*. 2021.

⁷⁶ Ibid., p. 2.

⁷⁷ Ibid., p. 21.

⁷⁸ United Nations Environment Programme. *Why does global clean ports matter?*. n.d.

⁷⁹ United Nations Framework Convention on Climate Change. *Sharm el-Sheikh Implementation Plan*. 2022. p. 8.

off of their goals for the world's oceans and bi-annual facilitation of meeting and an informal summary report.⁸⁰

The United Nations Development Programme (UNDP) serves as a United Nations (UN) agency with a focus on global sustainable development, and actively works towards addressing the target goals for SDG 14 such as the development of the blue economy, with \$1 billion dollars spent towards reviving dead zones and sustainable fisheries.⁸¹ UNDP also serves as one of the founding members of Global Fund for Coral Reefs (GFCR), a \$625 million dollar program with a large focuses on several SDG 14 targets, such as investment in the blue economy, habitat and ecosystem conservation, and increasing socio-economic benefits from sustainable resources.⁸² UNDP also works with Small Island Developing States (SIDS) to help implement blue economy practices.⁸³

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) is a UN body focused on providing data science oriented towards sustainable development and provides policy recommendations towards global health.⁸⁴ UNESCO plays a major role in coordinating efforts for the United Nations Decade of Ocean Science for Sustainable Development (2021-2030) looks towards science for ocean health and security by 2030.⁸⁵ The United Nations Decade of Ocean Science for Sustainable Development is hosting the Our Ocean Conference in March 2023 to discuss resource sustainability and awareness.⁸⁶ The conference adjourned with member-states putting \$20 billion dollars towards oceanic health, and the creation of the Blue Carbon Action Partnership (BCAP), which allows for global blue carbon projects like mangrove and seagrass restoration.⁸⁷

Measures for protecting the world's oceans have been seen on the regional level by the Nordic Council, where they have focused on strengthening research on natural carbon sinks and expanding knowledge on the effects of ocean acidification and the impact on indigenous communities.⁸⁸ The report *Science in Brief: OMAI Addressing Acidification* from the Nordic Council calls for monitoring stations for gradual acidification and to measure inorganic carbon systems to identify carbon dioxide levels.⁸⁹ Regional efforts have been made in Africa as well, with the Priority Ocean Decades initiative revolving around technology, mangrove restoration, and blue carbon initiatives, and identifying gaps in fisheries.⁹⁰

Nature as a Tool for Resilience

The world's oceans capture up to 90% of generated heat coming from greenhouse gas emissions.⁹¹ While serving as a natural sink, an increased rate of carbon dioxide absorption alters the pH level of the seawater, negatively affecting all marine ecosystems.⁹² This process, known as

⁸⁰ Ibid.

⁸¹ United Nations Development Programme. *Our Mission, our goals, our mandate*. n.d.; United Nations Development Programme. *The ocean and the blue economy are fundamental to addressing the triple planetary crisis-says UNDP*. n.d.

⁸² Ibid.; The Global Goals. *Life Below Water*. n.d.

⁸³ United Nations Development Programme. *The ocean and the blue economy are fundamental to addressing the triple planetary crisis-says UNDP*. n.d.

⁸⁴ United Nations Educational, Scientific and Cultural Organization. *Data*. n.d.; United Nations Decade of Ocean Science for Sustainable Development 2021-2030. *Vision and Mission*. n.d.

⁸⁵ United Nations Decade of Ocean Science for Sustainable Development 2021-2030. *Vision and Mission*. n.d.

⁸⁶ United Nations Decade of Ocean Science for Sustainable Development 2021-2030. *Our Ocean Conference 2023*. n.d.

⁸⁷ Friends of Ocean Action. *New Initiative To Help Government And Business Navigate Untapped 'Blue Carbon' And Restore Coastal Ecosystems*. 2023; Our Ocean Conference. *Our Ocean Conference- Commitments Roundup*. 2023.

⁸⁸ Nordic Co-Cooperation. *Nordic Ministerial Declaration on Oceans and Climate*. 2019.

⁸⁹ Nordic Council of Ministers. *Science in Brief: OMAI Assessing Acidification*. 2021. p. 16.

⁹⁰ United Nations Decade of Ocean Science and Development 2021-2030. *Ocean Decade Africa Roadmap*. 2022. p. 19-20.

⁹¹ United Nations, Department of Global Communications. *About the 2022 UN Ocean Conference*. n.d.

⁹² United Nations Educational, Scientific and Cultural Organization. *Ocean Acidification*. n.d.

ocean acidification, has increased by 26% since 1850.⁹³ Ocean acidification impacts all areas of marine life, as it changes ecosystems, prevents biodiversity, and inhibits economic growth via transportation, tourism, and fisheries.⁹⁴ Ocean Acidification creates dead zones, which are regions in the ocean where marine life cannot survive from the low oxygen levels.⁹⁵ They have doubled since 2008, leaving 90% of marine plants facing extinction.⁹⁶

Mangroves

Found in over 123 states and covering 15.2 million hectares worldwide, mangroves play a major role in reversing the impacts of climate change.⁹⁷ Mangroves serve as a carbon sink, storing 1000 tons carbon in the soils and biomass per hectare.⁹⁸ Mangrove soils are high in salinity and release lower levels of carbon.⁹⁹ Additionally, mangroves provide coastal protection, improved water quality, and are vital to the global economy with its lumber and fisheries.¹⁰⁰ Mangroves have disappeared by 67% in the last 100 years, with their territory cleared for farms and buildings.¹⁰¹ However, there have been increased efforts to increase mangrove habitats by 20% by 2030.¹⁰² UNEP provides restoration guidelines through the *Mangrove Ecosystem Restoration for the Western Indian Ocean Region*.¹⁰³ This guideline gives member-states steps to follow on how to increase mangrove ecosystems.¹⁰⁴ Major restoration efforts are taking place, such as Senegal's plantation of 79 million mangrove trees that protect the shoreline, which promotes marine biodiversity, and remove carbon dioxide from the atmosphere.¹⁰⁵ UNEA calls for further collaboration and to follow best practices and approaches for nature based solutions and to continue with current solution initiatives.¹⁰⁶

Coral Reefs

Coral Reefs are another major ecosystem impacted by ocean degradation, and temperature rise.¹⁰⁷ Coral reefs cover less than 0.1% of the ocean, provide homes to 32% of marine species and produce \$2.7 trillion dollars annually.¹⁰⁸ Increasing water temperatures are one of the largest threats to coral reef security, with 90% of all coral reefs disappearing by 2050 if the 1.5 degree Celsius temperature is maintained.¹⁰⁹ UNEP has pushed for initiatives to help coral reef growth such as campaigns like *Glowing Glowing Gone*, which calls for net-zero emissions by 2050 and more protection measures.¹¹⁰ Further efforts are being made during the United Nations Decade of Ocean Science for Sustainable Development

⁹³ Ibid.

⁹⁴ United Nations Educational, Scientific and Cultural Organization. *Ocean Acidification*. n.d.

⁹⁵ McKenna. *Dead zones in our oceans have increased dramatically since 1950*. World Economic Forum. 2018; United Nations, Department of Global Communications. *Ocean benefits increasingly undermined by human activity, UN assessment reveals*. 2021.

⁹⁶ McKenna. *Dead zones in our oceans have increased dramatically since 1950*. World Economic Forum. 2018; United Nations, Department of Global Communications. *Ocean benefits increasingly undermined by human activity, UN assessment reveals*. 2021.

⁹⁷ United Nations Environment Programme. *Why Protecting & restoring blue carbon ecosystem matters*. n.d.

⁹⁸ Ibid.

⁹⁹ United Nations Environment Programme. *The Importance of Mangroves to People: A Call to Action*. 2014. p. 56.

¹⁰⁰ United Nations Environment Programme. *Why Protecting & restoring blue carbon ecosystem matters*. n.d.; United Nations Environment Programme. *The Importance of Mangroves to People: A Call to Action*. 2014. p. 60.

¹⁰¹ United Nations, Department of Economic and Social Affairs, Sustainable Development. *Taking Action to Increase Mangrove Habitat 20% by 2030*. n.d.; United Nations Environment Programme. *Six things you can do to bring back mangroves*. 2021.

¹⁰² United Nations, Department of Economic and Social Affairs, Sustainable Development. *Taking Action to Increase Mangrove Habitat 20% by 2030*. n.d.

¹⁰³ United Nations Environment Programme. *Six things you can do to bring back mangroves*. 2021.

¹⁰⁴ United Nations Environment Programme. *Guidelines on Mangrove Ecosystem Restoration for the Western Indian Ocean region*. 2020.

¹⁰⁵ Fleming. *Senegal is planting millions of mangrove trees to fight deforestation*. World Economic Forum. 2019.

¹⁰⁶ United Nations Environment Assembly. *Nature-Based Solutions for Supporting Sustainable Development (UNEP/EA.5/Res.5)*. 2022.

¹⁰⁷ United Nations Environment Programme. *Why protecting coral reefs matters*. n.d.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ United Nations Environment Programme. *Life Below Water*. n.d.

(2021-2030), with a research-oriented focus from UNESCO on how to prevent coral loss.¹¹¹ Regionally, the National Oceanic and Atmospheric Administration (NOAA) focuses on planting coral nurseries, with 40,000 corals planted within the Caribbean.¹¹² NOAA has played an instrumental role at the UN Oceans Conference with hosting sessions on reef restoration and how it connects to the UN Decade for Ocean Science.¹¹³ NOAA has also worked created the Coral Research and Development Accelerator Platform (CORDAP) along with the collaboration with other stakeholders to help champion solutions for coral habitats.¹¹⁴

UNEA has already called for solutions to help address these topics at the UNEA-4 conference with resolution 4/13, “Sustainable Coral Reefs Management, and resolution 4/12 Sustainable Management for global health of mangroves”.¹¹⁵ The resolution called for collaboration between UNEP, Member-States and the International Coral Reef Initiative to invest and promote coral reef initiatives along with monitoring reef ecosystems, along with managing and promoting conservation for mangrove forests.¹¹⁶ In the recently published report from UNEP in 2023, *Decade of Mangrove Forest Change: What does it mean for the people and the climate?* restoration efforts must include the knowledge of local populations to better protect these valuable ecosystems and cooperation from regional and national government systems.¹¹⁷ *The Bali Agenda for Resilience* from the 2022 Global Platform for Disaster Risk Reduction emphasizes to achieve the goals on the 2030 Agenda, partnerships and planning between the private sector and local governments, with an emphasis on nature-based solutions for society.¹¹⁸ UNEA further calls for solutions in increasing coordination of environmental health and protections.¹¹⁹

Blue Economic Practices and Sustainable Seafood

The ocean plays a vital role in the global economy, at an estimated annual 3 trillion dollars.¹²⁰ The ocean supports over 3 billion people for basic needs and is a transportation method of 80% of all traded goods.¹²¹ The GDP of SIDS depend on the ocean for tourism along with seafood, with fisheries making 30% to 50% of their revenue.¹²² SIDS and are extremely vulnerable to maritime degradation and often face adverse challenges and struggle for economic security and development from their reliance on the ocean.¹²³ Oceans are essential towards their economic development, but are deteriorating from the high level of human activities.¹²⁴ Blue economies sustainability use the ocean for political and economic growth.¹²⁵ In 2020, 178 million tons of seafood was produced globally.¹²⁶ Reliance on fisheries and

¹¹¹ United Nations, Department of Global Communications. *UN Ocean Conference ends with call for greater global commitment to address dire state of the ocean*. n.d.

¹¹² National Oceanic and Atmospheric Administration. *Restoring Coral Reefs*. 2021.

¹¹³ National Oceanic and Atmospheric Administration, Coral Reef Conservation Program. *Incredible recognition by world leaders on the imperative for coral conservation and recovery*. n.d.

¹¹⁴ Ibid.

¹¹⁵ United Nations Environment Assembly. *Sustainable Coral Reefs Management (UNEP/EA.4/Res.13)*. 2019; United Nations Environment Assembly. *Sustainable Management for Global Health of Mangroves (UNEP/EA.4/Res.12)*. 2019.

¹¹⁶ United Nations Environment Assembly. *Sustainable Coral Reefs Management (UNEP/EA.4/Res.13)*. 2019; United Nations Environment Assembly. *Sustainable Management for Global Health of Mangroves (UNEP/EA.4/Res.12)*. 2019.

¹¹⁷ United Nations Environment Programme. *Decades of Mangrove Forest Change: What does it mean for nature, people and the climate?*. 2023. p.44.

¹¹⁸ Global Platform for Disaster Risk Reduction. *Co-Chair’s Summary Bali Agenda for Resilience*. 2022.

¹¹⁹ United Nations Environment Assembly. *Biodiversity and health (UNEP/EA.5/Res.6)*. 2022.

¹²⁰ Kituyi. *Why a sustainable blue recovery is needed*. 2020.

¹²¹ Ibid.

¹²² Ibid.

¹²³ World Bank. *The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries*. 2017. p. 1.

¹²⁴ Kituyi. *Why a sustainable blue recovery is needed*. 2020.

¹²⁵ World Bank. *The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries*. 2017. p. ix, 12.

¹²⁶ Food and Agriculture Organization of the United Nations. *The State of World Fisheries And Aquaculture 2022: Towards Blue Transformation*. n.d.

seafood is only expected to grow, with a 15% growth in 2030, but allows for overfishing, which made up 34.5% of the 2019 fish catch.¹²⁷ Illegal, unreported, and unregulated fishing (IUU) is another threat to oceanic sustainability, with 11 to 26 million tons of fish are illegally harvested every year, bringing in 10 to 23 billion dollars.¹²⁸

Several blue economy initiatives have a high focus on sustainable fishing practices.¹²⁹ The 'Blue Transformation' initiative from the Food and Agriculture Organization (FAO) focuses on three key areas: sustainable aquaculture, effective management and upgraded food chains.¹³⁰ In the report *The State Of World Fisheries and Aquaculture*, (SOFIA) discusses net-size to avoid underage fish and fishing based and backed by ecosystem models.¹³¹ UNEP has collaborated with the FAO, the World Bank and other stakeholders for the "Global sustainable fisheries management and biodiversity conservation in the Areas Beyond Nations Jurisdiction Program (ABNJ Program), which is referred to as Common Oceans.¹³² Areas Beyond Nations Jurisdiction (ABNJ) are locations within the ocean that exceed controlled regions by Member States, which makes tracking sustainable fishing in these locations difficult.¹³³ The Common Oceans initiative focuses sustainable fisheries in deep sea locations and fleets of tuna to help preserve these important ecosystems and promote sustainable use of the oceans.¹³⁴

Regional efforts have been made to help implement sustainable fisheries, blue economies, and to eliminate IUUs.¹³⁵ The European Union has created the initiative BlueInvest, with a focus on sustainable technology and expanding on finances for blue economies.¹³⁶ Some of the priority initiatives for the Oceans Decade in Africa tackle gaps in monitoring IUUs, along with the initiative a Digital Twin for Africa, which is a database with information involving fisheries, and blue economic practices for energy, mining, and using knowledge from indigenous populations to strengthen the oceans.¹³⁷ The United Nations Economic Commission for Europe (UNECE) and the United Nations Center for Trade Facilitation and eBusiness (UN/CEFACT) promotes the Fisheries Language for Universal Exchange (FLUX).¹³⁸ This program allows for key monitoring of fisheries, allowing for data collection on location, catch size, date, and species, allowing for scientific data on fishery management.¹³⁹ FLUX tackles overfishing and illegal fishery methods and focuses on SDG 14.¹⁴⁰

To address implementing blue economic practices and sustainable fisheries requires collaboration between UNEA and different UN Agencies and stakeholders, as seen with the Joint Plan of Action.¹⁴¹ The plan of action was drafted in collaboration with several UN agencies, including FAO, UNEP, and the United Nations Conference on Trade and Development (UNCTAD), addressing target goals of SDG 14 involving food security and economic trade.¹⁴² The document outlines three goals, which include bringing awareness for sustainable seafood, strengthening frameworks for sustainable seafood, and trade

¹²⁷ Ibid.; Food and Agriculture Organization. *The Status of Fishery Resources*. n.d.

¹²⁸ United Nations, Department of Global Communications. *International Day for the Fight against Illegal, Unreported, and Unregulated Fishing 5 June*. n.d.

¹²⁹ Food and Agriculture Organization of the United Nations. *Towards Blue Transformation- A vision for transforming aquatic food systems*. n.d.

¹³⁰ Ibid.

¹³¹ Food and Agriculture Organization of the United Nations. *State of World Fisheries and Aquaculture*. 2014. p. 137.

¹³² Ibid. p. 91.

¹³³ Ibid.

¹³⁴ Ibid.

¹³⁵ United Nations Department of Economic and Social Affairs. *Promoting Standards for sustainable fisheries management and traceability of fish product on a global scale*. n.d.

¹³⁶ European Union. *Sustainable Blue Economy*. n.d.

¹³⁷ United Nations Decade of Ocean Science and Development 2021-2030. *Ocean Decade Africa Roadmap*. 2022 p. 19-20.

¹³⁸ United Nations Department of Economic and Social Affairs. *Promoting Standards for sustainable fisheries management and traceability of fish product on a global scale*. n.d.

¹³⁹ Ibid.

¹⁴⁰ Ibid.

¹⁴¹ United Nations Environment Programme. *Inter Agency Joint Plan of Action for achieving the trade related targets of SDG 14*. 2019.

¹⁴² Ibid.

reforms, with a timeframe for these goals between 2020 through 2025.¹⁴³ UNEA calls for further action to be taken in implementing guidelines for sustainable economies and investment for environmental infrastructure.¹⁴⁴

Conclusion

Oceans are critical to the survival of our planet, but are presently threatened by climate change, development, and human operations putting its biodiversity and health in extreme decline.¹⁴⁵ However, and increased action and scientific measures research need to be taken in order to have a positive outlook for the future of our planetary health.¹⁴⁶ Implementing mangrove forests and coral reef habitats to remove carbon emissions increase biodiversity, are integral towards blue economy initiatives.¹⁴⁷ Applying blue economic practices such as sustainable fishing through ship and haul tracking is important to prevent species loss and ecosystem health.¹⁴⁸

Future Research

Delegates should consider some of the following questions when doing research: How has UNEA addressed matters dealing with the world's oceans and resiliency? In what ways can the Sustainable Development goals be incorporated with increasing mangrove and coral growth? What is the role of nature in resilience when it comes to the world's oceans? How can UNEA discuss solutions on implementing a blue economy, but find still target and access the Member States that need the most assistance? What are some other policies that can be driven towards fish sustainability?

Annotated Bibliography

Food and Agriculture Organization of the United Nations. *The State of World Fisheries and Aquaculture*. 2014. Retrieved 27 April 2023 from: <https://www.fao.org/family-farming/detail/en/c/286731/>

This report published by the Food and Agriculture Organization focuses on the role of sustainable fisheries in the ecosystem. Implementing sustainable fisheries is the largest way to prevent biodiversity and species loss, along with finding methods of transforming into the blue economy. Delegates will find this valuable source in researching possible solutions towards sustainable fishery practices.

United Nations Environment Programme. *The Importance of Mangroves to People: A Call to Action*. 2014. Retrieved 14 February 2023 from: <https://www.unep.org/sw/node/10645>

This report published by UNEP assesses the importance and roles of mangroves in the ecosystem. Mangroves are integral to protecting the world's oceans from toxins from shore, providing a barrier to protect beaches, promoting marine biodiversity, and their role as a major carbon sink. Delegates will find this valuable source in researching the benefits of mangroves and other ways that Member States have implemented them.

United Nations Environment Programme. *Addressing marine plastics: A systemic approach, Recommendations for action*. 2019. Retrieved 14 February 2023 from: <https://www.unep.org/resources/report/addressing-marine-plastics-systemic-approach-recommendations-actions>

This report calls upon one of the key resolutions made at UNEA 5.2, with the development of an internationally legally binding framework for plastic elimination. Delegates will find this source

¹⁴³ Ibid.

¹⁴⁴ United Nations Environment Assembly. *Sustainable and Resilient Infrastructure*. (UNEP/EA.5/Res.9). 2022.

¹⁴⁵ United Nations Environment Programme. *Enabling Sustainable, resilient and inclusive blue economies*. n.d.

¹⁴⁶ United Nations, Department of Global Communications. *Dire state of ocean's health met with tide of pledges at UN ocean conference, as Lisbon Declaration launches new chapter for ocean action*. n.d.

¹⁴⁷ National Oceanic and Atmospheric Administration. *Restoring Coral Reefs*. 2021; United Nations Environment Programme. *Why Protecting & restoring blue carbon ecosystem matters*. n.d.

¹⁴⁸ Food and Agriculture Organization of the United Nations. *State of World Fisheries and Aquaculture*. 2014. p. 137.

useful as plastic pollution is relevant to ocean conservation and protection. Delegates can use this report to find and reference sustainable solutions to help eliminate plastic and microplastics in the ocean and promote maritime sustainability.

United Nations Environment Programme. *For people and planet: the UNEP strategy for 2022-2025*. 2021. Retrieved 10 February 2023 from:

<https://wedocs.unep.org/bitstream/handle/20.500.11822/35875/K2100501-e.pdf>

This report from UNEP outlines the midterm strategy report. This report looks for the causes and tackles the leading causes of climate change. Delegates will find this resource helpful as the Medium-Term Strategy focuses on pollution and waste with climate change. In addition, the Delegates can reference this report to see current recommendations for promoting biodiversity and removing pollution from the world's oceans.

World Bank. *The Potential of the Blue Economy: Increasing Long-term Benefits of the Sustainable Use of Marine Resources for Small Island Developing States and Coastal Least Developed Countries*. 2017.

Retrieved 14 February 2023 from:

<https://openknowledge.worldbank.org/bitstream/handle/10986/26843/115545.pdf?sequence=1&isAllowed=y>

This World Bank Department of Economic and Social Affairs report discusses the blue economy model and the varying implementation methods. Blue economies are integral in developing resilient tools for ocean protection and sustainability. Delegates will find this source useful as it targets working with Small Island Developing States. This report outlines major facets of the blue economy and can understand the best implemented and sustainable practices.

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2. Addressing Policy Implications of Warming Permafrost

*“The scientific evidence is unequivocal: climate change is a threat to human wellbeing and the health of the planet. Any further delay in concerted global action will miss a brief and rapidly closing window to secure a livable future”.*¹⁴⁹

Introduction

The United Nations Environmental Assembly (UNEA), through the United Nations Environmental Programme (UNEP), has extensively researched the effects of warming climates affecting the globe.¹⁵⁰ According to UNEP, permafrost is defined as “soil or rock remaining at or below zero degrees Celsius for at least two consecutive years,” and includes the contents of the ground before it was frozen such as bedrock, gravel, silt, and organic matter.¹⁵¹ Permafrost covers approximately 24% of exposed land in the Northern Hemisphere and is critical to the climate of the planet, as it contains large amounts of frozen organic matter.¹⁵² 3.6 million people living in polar regions are already impacted by thawing permafrost.¹⁵³ As the degradation of permafrost continues, the people living within these regions experience the buckling and cracking of roads, foundations of homes becoming compromised, and a rapidly changing landscape.¹⁵⁴ Additionally, approximately 35 million people live in permafrost zones throughout the world.¹⁵⁵ Should these compounds be released into the atmosphere further damage could occur through increasing global temperatures, exacerbating those most vulnerable.¹⁵⁶ Permafrost distribution is controlled by air temperature and to an extent by variables such as snow depth, vegetation, orientation to the sun, and soil properties.¹⁵⁷ The majority of current permafrost was formed in the last Ice Age and can extend to depths of more than 700 meters in the Northern Hemisphere and Arctic.¹⁵⁸ Snow is a common and most effective insulator and regulates the effect of air temperature in permafrost.¹⁵⁹ Global temperatures have increased by an average 2 degrees Fahrenheit since the 19th century as the ever growing population increases by release heat and trapping gases into the atmosphere through the burning of coal, oil, destroying of forests, polluting oceans, and releasing other fossil fuels.¹⁶⁰ Over the course of the past thirty years, permafrost temperatures have risen at a rate faster than that of the air temperature in the Arctic, rising in a range of 1.5 to 2.5 degrees Celsius within that thirty year timeframe.¹⁶¹

Climate change projections indicate irreversible substantial permafrost loss and degradation by 2100.¹⁶² These effects would cause widespread change to local hydrology and increase frequency of erosion and fire disturbances across the globe.¹⁶³ Currently, thawing permafrost of the frozen layer in the Northern Hemisphere is responsible for massive sinkholes, forming or draining lakes, causing collapsing seashores and creating fire damage in its regions.¹⁶⁴ The formation of lakes, will increase wetlands in continuous permafrost zones and further decrease in discontinuous permafrost zones shrinkage that will further erode critical habitats.¹⁶⁵ Permafrost degradation is any increase in active layer thickness, melting of ground ice, thinning of the permafrost, or decrease in the areal extent of permafrost over time, which is

¹⁴⁹ Intergovernmental Panel on Climate Change. *IPCC Sixth Assessment Report*. 2022.

¹⁵⁰ United Nations Environment Assembly. *About the United Nations Environmental Assembly*. 2023.

¹⁵¹ United Nations Environment Programme. *Policy implications of warming permafrost*. 2012. p. 5.

¹⁵² Ibid.

¹⁵³ Ibid.

¹⁵⁴ Bykova. *Permafrost Thaw in a Warming World: The Arctic Institute’s Permafrost Series Fall-Winter 2020*. 2020.

¹⁵⁵ Denchak. *Permafrost: Everything You Need to Know*. 2018.

¹⁵⁶ United Nations Environment Programme. *Policy implications of warming permafrost*. 2012. p. 5.

¹⁵⁷ Ibid., p.3.

¹⁵⁸ Ibid.

¹⁵⁹ Ibid.

¹⁶⁰ Plumer et al. *Climate Change Is Harming the Planet Faster Than We Can Adapt, U.N. Warns*. 2020.

¹⁶¹ Bykova. *Permafrost Thaw in a Warming World: The Arctic Institute’s Permafrost Series Fall-Winter 2020*. 2020.

¹⁶² Intergovernmental Panel on Climate Change. *Long-term Climate Change: Projections, Commitments and Irreversibility*. p.12.

¹⁶³ United Nations Environment Programme. *Policy implications of warming permafrost*. 2012. p. 23.

¹⁶⁴ Ibid.

¹⁶⁵ Ibid.

caused by thermal erosion of the permafrost thaw.¹⁶⁶ The result of loss of permafrost will lead to rising sea levels that will affect ecosystems and communities within coastal regions.¹⁶⁷

International and Regional Framework

The United Nations Conference on Human Environment in 1972 established the *United Nations Conference on the Human Environment* (Stockholm Declaration), which established the doctrine that Member States need to begin to implement policies that protect the environment and to begin sustainable practices.¹⁶⁸ In 1982, the United Nations Convention of the Law of the Sea was established and formed to create an international framework for all international activities within maritime oceans and seas.¹⁶⁹ The UNCLOS Convention established international cooperation between Member States for sustainable development and trade.¹⁷⁰ Formed in 1992, the Earth Summit was established via multiple frameworks to address climate change and to mitigate the efforts of humans on the environment through sustainable development on human development.¹⁷¹ Additional frameworks following the Earth Summit include the *Kyoto Protocol to the United Nations Framework Convention on Climate Change* (Kyoto Protocol) (1997) and the *Paris Agreement* in 2015.¹⁷² The initial *Kyoto Protocol* was seen as too limited to reduce carbon dioxide and other emissions while the new *Paris Agreement* was a recognized international effort to ratify a treaty that focused on the social and economic impact of climate change through the Sustainable Development Goals (SDGs).¹⁷³ The *Paris Agreement* has been a foundational document for reducing the effects of climate change and to reduce emissions of fossil fuels to net zero emissions by 2050.¹⁷⁴ Member States pledged to stay below a 1.5 degrees Celsius increase and to reduce human emissions by roughly 50% by 2030, based on Member States nationally determined contributions.¹⁷⁵ Additionally, the *Copenhagen Climate Agreement* was established in 2010 with a goal to begin limiting warming to 2 degrees Celsius and reducing global emissions by at least 50% by 2050.¹⁷⁶

The Conference of Parties (COP) met at their 15th meeting in December 2022 with the goal to address biodiversity.¹⁷⁷ COP15 proposed an ultimate goal of a ratifiable treaty to focus on biodiversity and its varying ecosystems such as arctic and tundra climates.¹⁷⁸ In 2022, the international community convened under the Conference of Parties to the *United Nations Framework Convention on Climate Change* (UNFCCC) for its twenty-seventh meeting in Sharm El Sheikh, Egypt.¹⁷⁹ COP27 delivered several agreements to limit the global temperature rise to 1.5 degrees Celsius above pre-industrial levels and focused on adapting capacity building within Member States.¹⁸⁰

The fifth meeting of UNEA (UNEA-5) was held from 28 February to 2 March 2022 with the overall theme of “Strengthening Actions for Nature to Achieve the Sustainable Development Goals.”¹⁸¹ The session highlighted the pivotal role of nature within social, economic, and environmentally sustainable development.¹⁸² Additionally, Member States had the opportunity to share best practices for sustainability

¹⁶⁶ Ibid., p. 30.

¹⁶⁷ Intergovernmental Panel on Climate Change. *IPCC Sixth Assessment Report*. 2022.

¹⁶⁸ United Nations Environment Programme. *Declaration of the United Nations Conference on the Human Environment*. 1972.

¹⁶⁹ United Nations Conference on the Law of the Sea. *United Nations Convention on the Law of the Sea*. 1982.

¹⁷⁰ Ibid.

¹⁷¹ United Nations, General Assembly. 2030 Agenda for Sustainable Development. 2023.

¹⁷² Ibid.

¹⁷³ Center for Climate and Energy Solutions. *A Copenhagen Climate Agreement*. 2010.

¹⁷⁴ Intergovernmental Panel on Climate Change. *IPCC Sixth Assessment Report*. 2022. p. 40.

¹⁷⁵ Ibid.

¹⁷⁶ Center for Climate and Energy Solutions. *A Copenhagen Climate Agreement*. 2010.

¹⁷⁷ United Nations Environment Programme. *UN Biodiversity Conference (COP 15)*. n.d.

¹⁷⁸ Ibid.

¹⁷⁹ Nilsen. *As countries convene at climate summit in Egypt, reports show the world is wildly off track. Here's what to watch at COP27*. 2022.

¹⁸⁰ Ibid.

¹⁸¹ United Nations Environment Programme. *The United Nations Environment Assembly*. n.d.; United Nations Environment Assembly. *Fifth Session of the United Nations Environment Assembly (UNEA-5)*. n.d.

¹⁸² Ibid.

and the session allowed for governments to build on multilateral environmental efforts to protect and restore the natural world on which their economies and societies depend.¹⁸³

Role of the International System

The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report was released in 2022 with support from the UN on impacts, adaptation, and vulnerability.¹⁸⁴ The IPCC report warned that if average warming passes 1.5 degrees Celsius, even with Member States efforts to adapt or address climate change, the effects of climate change would be irreversible.¹⁸⁵ To this effect, the long-term goal of the *Paris Agreement* is to keep the rise in mean global temperatures well below two degrees Celsius and to limit the increase to 1.5 degrees Celsius.¹⁸⁶ In an attempt to address climate change, UNFCCC focuses on limiting production, causing further damage to the climate, and advocating for sustainable economic development.¹⁸⁷ Additionally, sustainable economic development connects stabilizing greenhouse or fossil fuels usage in order to reduce the efforts of climate change.¹⁸⁸

UNEA first began adopting resolutions in UNEP/EA1/10 which established decisions to cover a large range of global environmental issues during its first meeting, including illegal wildlife trade, chemicals, and waste, a UN system comprehensive strategy, the science-policy interface, marine litter, air quality, ecosystem-based adaptation, and alternative approaches to the green economy.¹⁸⁹ Upon the completion of UNEA-1, the Ministerial function of the High-Level Segment of UNEA implemented the SDGs through the *2030 Agenda for Sustainable Development* (2030 Agenda) which included sustainable consumption and production.¹⁹⁰ The most recent UNEA meeting, UNEA 5.1, convened on 22 and 23 February 2021 under the overarching theme “Strengthening Actions for Nature to Achieve the Sustainable Development Goals.”¹⁹¹ UNEA 5.1 adopted several actions including the urgent need for action to protect the planet, a sustainable recovery from the COVID-19 pandemic, and to make further progress on multilateral frameworks such as the UNFCCC, *Paris Agreement*, and the *Convention on Biological Diversity* (CBD) (1992), and to begin negotiations for a Post-2020 global biodiversity framework through the *United Nations Convention to Combat Desertification* (1996).¹⁹²

UNEA’s mandate is to set priorities for global environmental policies and develop international environmental law through the use of its ministerial declaration with the High-level Political Forum on Sustainable Development (HLPF) and resolutions.¹⁹³ UNEP and HLPF highlighted the implementation of the 2030 Agenda and the SDGs as a priority for the international community and Member States in combating climate change.¹⁹⁴ On the topic of thawing permafrost, SDG 13 (Climate action), SDG 14 (Life below water), and SDG 15 (Life on land) connects to thawing permafrost as it presents variables of environmental impact.¹⁹⁵ SDG 14 for example, is mainly focused on safeguarding life underwater and restoring clean, healthy, resilient, and productive oceans by strengthening efforts of the international community to manage oceans, seas, lakes, and rivers.¹⁹⁶ This is done by supporting coastal ecosystems while acting to prevent pollution at the sea level through ocean rise, ocean warming, and ocean acidification as permafrost create oceans.¹⁹⁷ SDG 15 touches on the overall efforts of global attempts to

¹⁸³ Ibid.

¹⁸⁴ Intergovernmental Panel on Climate Change. *(IPCC) Sixth Assessment Report*. 2022.

¹⁸⁵ Ibid.

¹⁸⁶ Ibid., p .40.

¹⁸⁷ United Nations Framework Convention on Climate Change. *What is the United Nations Framework Convention on Climate Change?*. n.d.

¹⁸⁸ Ibid.

¹⁸⁹ United Nations Environment Programme. *Resolutions of UNEA-1*. n.d.

¹⁹⁰ Ibid.

¹⁹¹ United Nations Environment Assembly. *Fifth Session of the United Nations Environment Assembly (UNEA-5)*. n.d.

¹⁹² Ibid.

¹⁹³ Ibid.

¹⁹⁴ United Nations, General Assembly. *2030 Agenda for Sustainable Development*. 2015.

¹⁹⁵ Ibid.

¹⁹⁶ Ibid.

¹⁹⁷ Ibid.

achieving social and economic maintenance to life on land.¹⁹⁸ This means that thawing permafrost must address challenges such as biodiversity loss, climate change, land degradation, food, security, disaster risks, urban development, water availability, and poverty eradication, as well as well as social and sustainable economic development, human health, and an extensive range of ecosystem services.¹⁹⁹

Under UNEA-5, the assembly established provisions to enhance the means of implementation for sustainability including capacity-building, technology, and promoting global partnerships to North-South.²⁰⁰ Additionally, UNEA-5 advocated for triangular cooperation to support developing Member States with the implementation of national environmental policies in order to complement their national efforts in the pursuit of the 2030 Agenda and the *Addis Ababa Action Agenda* (2015) of the Third International Conference on Financing for Development.²⁰¹ Significant efforts from UNEA-5 also included sustainable and innovative financing opportunities and mechanisms to unlock new capital for sustainable investments and upscaling business models with a focus on small and medium sized enterprises in Member States.²⁰² Youth leaders that attended UNEA-5 advocated for negotiations on an international and legally binding instrument on plastics, as included in UNEP’s “Synthesis Report” (Making Peace with Nature).²⁰³ This framework under the collaboration of UNEP, European Union, and the United Nations Industrial Development Organization (UNIDO), and partnering Member States to launch the Global Alliance on Circular Economy and Resource Efficiency (GACERE).²⁰⁴ Taking place in 2022, UNEA-5.2 focused on the remaining substantive matters to the agenda through the Ministerial Declaration and theme of “Strengthening Actions for Nature to Achieve the Sustainable Development Goals”.²⁰⁵

Permafrost and Rising Sea Levels

The IPCC Sixth Assessment report found that climate change affected by permafrost thaws would cause ecological threats such as wildfires, heat waves, and rising sea levels.²⁰⁶ Rising sea levels by thawing permafrost would cause the displacement of people from their homes and jeopardize food and water supplies.²⁰⁷ An example of this has been island nations within the Indo-Pacific region such as Kiribati and Fiji where entire towns and communities are being moved further inland as villages face rising sea level threats around them.²⁰⁸ Research has shown that displaced people in these venerable communities would face physical and mental health challenges, society would have increasing incidents of food and waterborne illness, and face further significant impacts from other natural disasters.²⁰⁹ As oceans rise, coastal communities and indigenous groups will likely need to relocate further inland while Member States will need to fund additional development.²¹⁰ These communities are facing ground erosion and coastal settlements are facing landslides and increasing storm surges from natural disasters such as tropical cyclones as ice wedges through permafrost layers.²¹¹ In its 2012 Policy Implications of Warming Permafrost, UNEP and IPCC recommended that world leaders pursue several strategies in the threat of rising ocean levels.²¹² Suggestions by the IPCC include improvements on infrastructure with basic services like healthcare, roads, electricity, and water for poor and rural coastal communities that would make them more resilient against climate shocks of thawing permafrost.²¹³ The cost of preserving coastal

¹⁹⁸ Ibid.

¹⁹⁹ United Nations, General Assembly. *2030 Agenda for Sustainable Development*. 2015.

²⁰⁰ United Nations Environment Assembly. *Fifth Session of the United Nations Environment Assembly (UNEA-5)*. n.d.

²⁰¹ United Nations Environment Programme. *The United Nations Environment Assembly*. 2023.

²⁰² Ibid.

²⁰³ United Nations Environment Assembly. *Fifth Session of the United Nations Environment Assembly (UNEA-5)*. n.d.

²⁰⁴ Ibid.

²⁰⁵ United Nations Environment Programme. *The Resumed Session Of UNEA-5 (UNEA-5.2)*. 2023.

²⁰⁶ Intergovernmental Panel on Climate Change. *(IPCC) Sixth Assessment Report*. 2022. p. 15.

²⁰⁷ United Nations, Department of Global Communications. *If you’re not thinking about climate impacts of thawing permafrost, (here’s why) you should be*. 2022.

²⁰⁸ Ibid.

²⁰⁹ Ibid.

²¹⁰ Ibid.

²¹¹ Ibid.

²¹² United Nations Environment Programme. *Policy implications of warming permafrost*. 2012. p. 3.

²¹³ Ibid.

communities against rising seas could exceed what many nations can afford as typically these climate changes result in massive costs.²¹⁴

SDG 14 and SDG 15 directly correspond to rising sea levels.²¹⁵ UNEA emphasizes SDG 14 efforts to enhance the mainstreaming of protection of coastal and marine ecosystems in policies that are affected by threats caused by increased marine life who are affected by thawing permafrost.²¹⁶ SDG 14 and 15 call upon Member States to prioritize global coordination, cooperation, and governance to take immediate actions toward long-term elimination of plastic and fossil fuels in order to protect marine environments and ecosystems.²¹⁷ Nature-based solutions will significantly contribute to climate actions that will prevent further warming of permafrost and include long-term effects that will reduce the rapid rise of greenhouse gas emissions.²¹⁸ The concept of nature-based solutions is the ability to work with and enhance nature to help address societal challenges and is rapidly gaining traction around the world.²¹⁹ UNEA believes that the reduction of fossil fuels will allow for protection of permafrost, adaptation, resilience, and mitigation to continued climate change and its impacts.²²⁰ The release of carbon dioxide (CO₂) emissions will create precipitation which then will increase clashes of temperatures in the Arctic; because warmer air holds more water, clashes occur against cold air in the Arctic during the winters.²²¹

Measures to Address Warming Permafrost

In 2012, the IPCC advocated for three major proposals: Commission a Special Report on Permafrost Emissions, Create National Permafrost Monitoring Networks, and the Plan for Adaptation.²²² These IPCC assessment reviews have provided six reports on the effects of CO₂ and methane emissions from thawing permafrost which would further support climate change policy negotiations.²²³ UNEA and IPCC targets for greenhouse gas emissions were based on climate projections of industrial output in accordance with CO₂ emissions.²²⁴ The original request for a treaty was based on setting the global target warming of 2 degrees Celsius above pre-industrial temperatures by 2100.²²⁵ At UNEA-5, Member States urged for climate change action in the form of a fair green recovery in the aftermath of the post COVID-19 world.²²⁶ The green recovery as defined would be that Member States advocated for a change in economic systems to align with climate neutrality, the preservation of ecosystems and biodiversity, to fight against pollution, and the promotion of nature-based solutions such as sustainable food systems and advocating for a more circular economy.²²⁷ The integration of scientific findings will be crucial to addressing permafrost and already the Shared Socioeconomic and Representative Concentration Pathways (SSP/RCP) framework has allowed the scientific community to address warming temperatures and carbon emissions.²²⁸

The original proposal for the IPCC's National Permafrost Monitoring Networks were tasked to monitor permafrost globally and having Member States establish sites within their borders to cover and monitor permafrost thaws.²²⁹ This proposal was to be applied to countries with permafrost in the northern Arctic

²¹⁴ Hunt. *Belching lakes, mystery craters, 'zombie fires': How the climate crisis is transforming the Arctic permafrost*. The New York Times. 2022.

²¹⁵ United Nations, General Assembly. *2030 Agenda for Sustainable Development*. 2015.

²¹⁶ Ibid.

²¹⁷ Ibid.

²¹⁸ United Nations Environment Programme. *Policy implications of warming permafrost*, 2012, p. 3.

²¹⁹ University of Oxford. *Rewilding the Arctic could stop permafrost thaw and reduce climate change risks*. 2020.

²²⁰ United Nations Environment Programme. *Policy implications of warming permafrost*. 2012. p. 3.

²²¹ Ibid., p. 9.

²²² Ibid., p. 30.

²²³ United Nations Environment Assembly. *Fifth Session of the United Nations Environment Assembly (UNEA-5)*. n.d.

²²⁴ United Nations Environment Programme. *Policy implications of warming permafrost*, 2012, p. 30.

²²⁵ Ibid., p. 30.

²²⁶ United Nations Environment Assembly. *Fifth Session of the United Nations Environment Assembly (UNEA-5)*. n.d.

²²⁷ Ibid.

²²⁸ Bronen et al. *Incorporating permafrost into climate mitigation and adaptation policy*. 2012.

²²⁹ United Nations Environment Programme. *Policy implications of warming permafrost*. 2012. p. 3.

Circle, particularly those with the most being in Russia, Canada, China, and the United States.²³⁰ The IPCC Plan for Adaptation proposed that Member States with the most permafrost presence develop plans and evaluate the potential risks of damage and cost of permafrost degradation to critical infrastructure affecting populations near or based in the Arctic or Northern Hemisphere.²³¹ However, many of these Member States do not have such plans with issues regarding capacity building and will require Member States policymakers to quantify the costs and risks associated with permafrost degradation and erosion of its ecosystems.²³² As temperatures rise, Member States must address these issues and will likely need coalition building and establish efforts in preparing or mitigating the efforts of climate change.²³³

Conclusion

The effects of warming permafrost will result in significant environmental, social, and economical effects for millions across the Northern Hemisphere and the Arctic.²³⁴ Climate change and rising sea levels are in conjunction with the UN assessing a continued thawing Permafrost.²³⁵ UNEA and IPCC efforts include frameworks designed to coincide with the SDGs.²³⁶ Member States and the global community are constantly updating their efforts to engage on reduction of fossil fuels.²³⁷ With the arctic warming twice as faster than the global average, food security, migration and displacement of communities will rise as thawing permafrost will effect not just the Arctic but to all Member States.²³⁸

Further Research

Delegates should consider the following questions when conducting their research: How is UNEA engaging with warming permafrost? How can UNEA address and engage with Member States to create more sustainable practices? How can UNEA and UNEP protect permafrost regions while advocating for sustainable economies and practices? What can be improved or expanded upon within existing UN and international frameworks to address warming permafrost? What role do the SDGs play in warming permafrost, particularly when it comes to issues of rising sea levels? What are the policy implications of warming permafrost, and are there strategies and measures in place designed to address the complex issues associated with warming permafrost?

Annotated Bibliography

Denchak. *Permafrost: Everything You Need to Know*. 2018. Retrieved 19 March 2023 from: <https://www.nrdc.org/stories/permafrost-everything-you-need-know>

Published in 2018, this guide provides core definitions to permafrost and other materials and is intended to inform readers on the environmental implications of permafrost. Denchak outlines the necessity and environmental impact of permafrost alongside how it changes to it impact the global climate. Delegates will find this document useful in understanding past, current, and future impacts of thawing permafrost and its relationship to the environment.

²³⁰ United Nations Environment Programme. *Policy implications of warming permafrost*. 2012. p. 35.

²³¹ Ibid.

²³² Ibid.

²³³ Ibid.

²³⁴ United Nations, Department of Global Communications. *Thawing of permafrost to be a 'major factor' in global warming, warns UN Report*. 2012.

²³⁵ United Nations, Department of Global Communications. *If you're not thinking about climate impacts of thawing permafrost, (here's why) you should be*. 2022.

²³⁶ Ibid.

²³⁷ Ibid.

²³⁸ Ibid.

Intergovernmental Panel on Climate Change. *IPCC Sixth Assessment Report 2022*. 2022. Retrieved 10 February 2023 from: <https://www.ipcc.ch/report/ar6/wg2/>

This report from the IPCC explicitly highlights data and trends from the current effects of climate change. This report shows the extreme disparities in the rising sea levels and explains the impact of the rising oceans on oceanic ecosystems. Delegates can use this document to understand how the IPCC and its research impacts climate change and the environment.

Bronen et al. *Incorporating permafrost into climate mitigation and adaptation policy*. 2012. Retrieved 10 February 2023 from: <https://iopscience.iop.org/article/10.1088/1748-9326/ac8c5a/pdf>

This report provides critical information on incorporating permafrost into climate mitigation and adaptation policy. Delegates will find invaluable resources and information on the processes of the national and international systems. Additionally, the report provides case studies and essential data on carbon and emissions leading to the decline of permafrost.

United Nations Environment Programme. *Policy Implications of Warming Permafrost*. 2012. Retrieved 10 February 2023 from: <https://wedocs.unep.org/bitstream/handle/20.500.11822/8533/-Policy%20implications%20of%20warming%20permafrost-2012permafrost.pdf?sequence=3&isAllowed=1>

This document provides the definitions on Permafrost and establishes UNEP's initial concerns on warming permafrost. Additionally, it provides a clear definition and makes policy recommendations that have been the cornerstone of the topic. Delegates should use this document to review proposals and the initial discussions on Warming Permafrost.

United Nations Framework Convention on Climate Change. *What is the United Nations Framework Convention on Climate Change?* n.d. Retrieved 19 March 2023 from: <https://unfccc.int/process-and-meetings/what-is-the-united-nations-framework-convention-on-climate-change>

The UNFCCC serves as one of the main initiatives by the United Nations regarding climate change and often collaborates with UNEA. Its mission and capacity closely align with the work of the UN system and its framework is important to understanding the topic on permafrost. Delegates will find this website resourceful with understanding the topic and the UN system between climate change and Member States impact on the environment.

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