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UNITED NATIONS ENVIRONMENT ASSEMBLY

BACKGROUND GUIDE 2018

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Dear Delegates,

Welcome to the 2018 National Model United Nations New York Conference (NMUN•NY)! We are pleased to welcome you to the United Nations Environmental Assembly (UNEA). This year's staff are: Directors Adrian Hassler (Conference A) and Maxwell Lacey (Conference B), and Assistant Directors Gabriell Caceres (Conference A) and Jasym Mireles Venegas (Conference B). Adrian holds a Master's in Global Development from the University of Copenhagen and currently works as an Adviser on Human Rights and Development at the Danish Institute for Human Rights. Max studied Politics & International Relations at Royal Holloway, University of London and now works as an International Student Recruitment & Partnerships Manager at the University of London. Gabriell completed her B.A. Degree in International Criminal Justice from John Jay College of Criminal Justice in Spring of 2017. Jasym is currently studying a bachelor's degree in Business Administration at The University of Texas, McCombs School of Business.

The topics under discussion for United Nations Environmental Assembly are:

1. Conservation and Restoration of Ecosystems in Urban Areas
2. Empowering Youth for Sustainable Development
3. The Impact of Pollution on Marine Life

As the governing council of the UN Environment Programme, the UN Environment Assembly is the world's highest-level decision-making entity on matters concerning the environment. Membership of the Environment Assembly has been universal following a 2012 decision by the General Assembly, with Member States meeting biennially to provide leadership and establish priorities for environmental protection, foster intergovernmental collaboration, and build partnerships with civil society, the academic community, the private sector and other stakeholders. Delegates of the Environment Assembly will be tasked to develop effective solutions to realize the environmental dimension of the 2030 Agenda for Sustainable Development.

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 explore your Member State's policies in depth and use the Annotated Bibliography and Bibliography to further your knowledge on these topics. In preparation for the Conference, each delegation will submit a Position Paper by 11:59 p.m. (Eastern) on 1 March 2018 in accordance with the guidelines in the *NMUN Position Paper Guide*.

Two resources, to download from the NMUN website, that serve as essential instruments in preparing for the Conference and as a reference during committee sessions are the:

1. *NMUN Delegate Preparation Guide* - 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 start discussion on the topics with other members of their committee until the first committee session.
2. *NMUN Rules of Procedure* - include 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-Secretaries-General for the Development Department, Moritz Müller (Conference A) and Maximilian Jungmann (Conference B), at usg.development@nmun.org.

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

Conference A
Adrian Hassley, Director
Gabriell Caceres, Assistant Director

Conference B
Maxwell Lacey, Director
Jasym Mireles Venegas, Assistant Director

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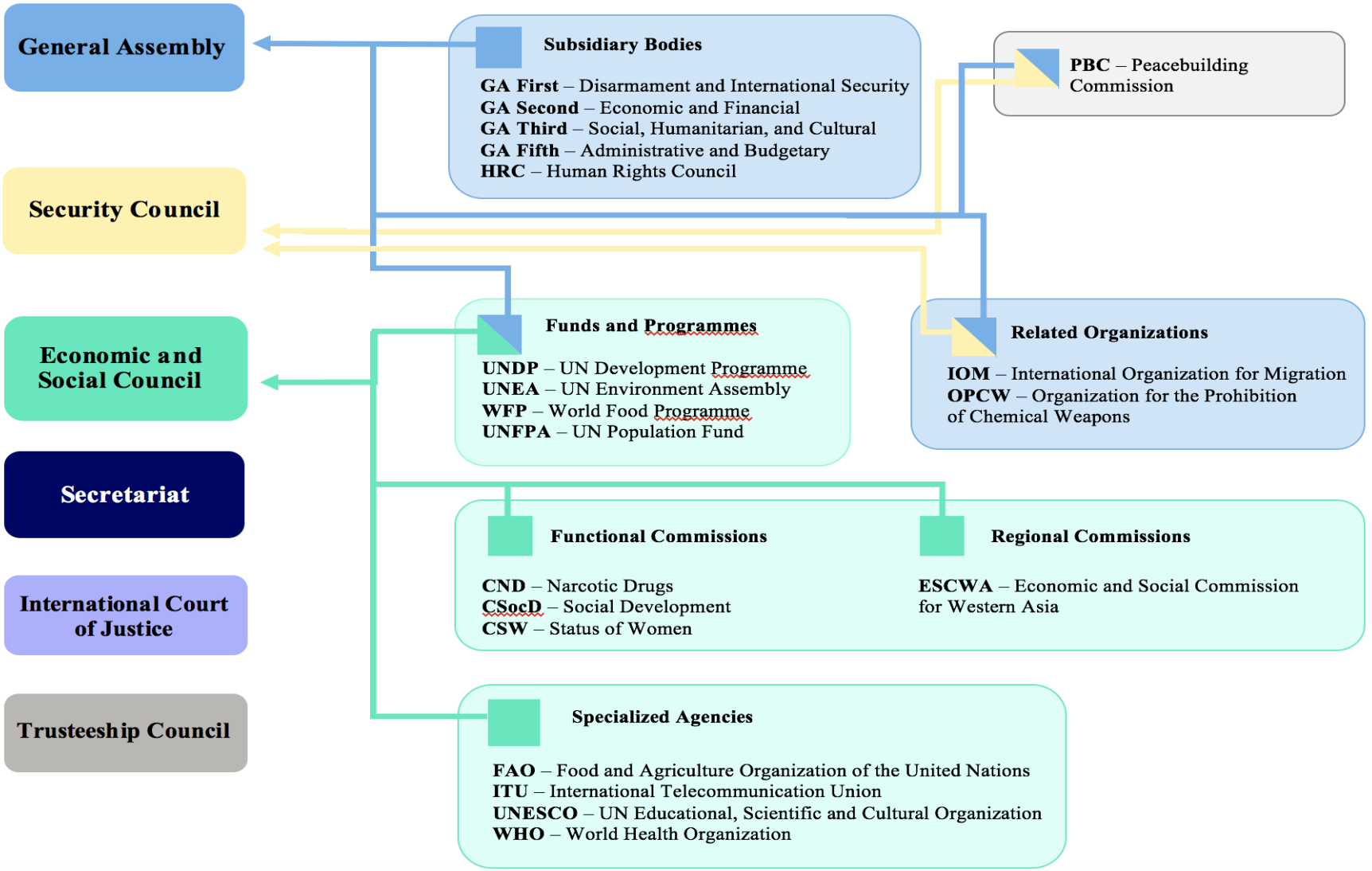
United Nations System at NMUN•NY

This diagram illustrates the UN system simulated at NMUN•NY and demonstrates the reportage and relationships between entities. Examine the diagram alongside the Committee Overview to gain a clear picture of the committee's position, purpose, and powers within the UN system.



Abbreviations

ABT	Aichi Biodiversity Target
ACCCRN	Asian Cities Climate Change Resilience Network
ADB	Asian Development Bank
CBD	*Convention on Biodiversity*
CCCI	Cities and Climate Change Initiative
COP	Conference of the Parties
COW	The Committee of the Whole
CRPP	City Resilience Profiling Programme
CSD	Commission on Sustainable Development
CSO	Civil society organization
DESD	Decade of Education for Sustainable Development
DSPD	Division for Social Policy and Development
EbA	Ecosystem-based adaptation approach
ECOSOC	Economic and Social Council
EETU	Environmental Education and Training Unit
EMG	Environment Management Group
EPR	Extended Producer Responsibility
ESD	Education for Sustainable Development
GEF	Global Environment Facility
GHG	Greenhouse gas
GI-REC	Global Initiative for Resource Efficient Cities
GOOS	Global Ocean Observing System
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities
GUPES	Global Universities Partnership on Environment for Sustainability
HAB	Harmful algal bloom
Habitat III	United Nations Conference on Housing and Sustainable Urban Development
HLPF	High-Level Political Forum on Sustainable Development
ICLEI	International Council for Local Environmental Initiatives
ICRAN	United Nations International Coral Reef Action Network
IMO	International Maritime Organization
IOC-UNESCO	Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IUCN	International Union for Conservation of Nature
London Convention	*Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*
MARLISCO	Marine Litter in European Seas: Social Awareness & Co-Responsibility
MARPOL Convention	*International Convention for the Prevention of Pollution from Ships*
MDG	Millennium Development Goals
MENA	Middle East and North Africa
MOOC	Massive Open Online Courses
NGO	Non-governmental organization
PAH	Polycyclic aromatic hydrocarbons
Rio+20	United Nations Conference on Sustainable Development
RSP	Regional Seas Programme
SDG	Sustainable Development Goal
SEEA	System for Environmental and Economic Accounts
SGA	Sub-Global Assessment Network
TEEB	The Economics of Ecosystems and Biodiversity

UDHR	*Universal Declaration of Human Rights*
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UNCED	United Nations Conference on Environment and Development
UNCLOS	*United Nations Convention on the Law of the Sea*
UNDP	United Nations Development Programme
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	*United Nations Framework Convention on Climate Change*
UN-Habitat	United Nations Human Settlements Programme
UNICEF	United Nations Children's Fund
WAVES	Wealth Accounting and the Valuation of Ecosystem Services
WHO	World Health Organization
WMO	World Meteorological Organization
WPAY	*World Programme of Action for Youth*
WYR	*World Youth Report*

Committee Overview

Introduction

The mission of the United Nations (UN) Environment Programme (UNEP) is to "provide leadership and encourage partnership in caring for the environment" towards environmentally friendly practices and policies in the UN system.[1] It is a program and fund of the United Nations (UN) that ensures international, regional, and local coordination for environmental issues, and it also ensures that various other UN entities take environmental impacts into account when executing their missions.[2] UNEP reports to the General Assembly and the Economic and Social Council (ECOSOC).[3]

The **United Nations Environment Assembly** (UNEA) is the governing body of the **United Nations Environment Programme** (UNEP), which is a program and fund of the United Nations that reports to the Economic and Social Council and the General Assembly.

UNEP was created at the recommendation of the 1972 UN Conference on Human Environment in Stockholm, Sweden.[4] Six months later, the General Assembly adopted resolution 2997 (XXVII) of 1972 on "Institutional and financial arrangements for international environmental cooperation," which established UNEP as the official body concerned with environmental issues within the UN.[5] Ever since, UNEP has played a significant role in coordinating environmental policy across various UN agencies.[6] UNEP helped in the planning and execution of the UN Conference on Environment and Development (UNCED) in 1992, which led to the adoption of the *Rio Declaration on Environment and Development* (1992) as well as *Agenda 21* (1992).[7] These landmark agreements provided further guidance and renewed support for UNEP's "catalytic role" in international cooperation on environmental protection.[8] UNCED marked a turning point for international collaboration to preserve biodiversity and the climate, with the *Convention on Biological Diversity* and the *UN Framework Convention on Climate Change* opened for signature at the summit and the *Convention to Combat Desertification* (1994) adopted in its aftermath.[9] While the three "Rio Conventions" are each administered by a secretariat of their own, UNEP played a key role in negotiating the conventions and was tasked with promoting their implementation through *Agenda 21*.[10] Twenty years after the adoption of the Rio Declaration, the UN Conference on Sustainable Development (Rio+20) called for the creation of the UN Environment Assembly (UNEA) to better execute the mandate of UNEP and place environmental issues in the same standing as health, security, and economics.[11]

To better promote environmentally friendly practices and the coordination of environmental affairs, the General Assembly adopted resolution 67/251 of 2013 on "Change of the designation of the Governing Council of the United Nations Environment Programme," which formally established UNEA.[12] Through its universal membership, UNEA aims to strengthen the role of UNEP in international affairs and increase the responsiveness and accountability of

[1] UNEP, *Who We Are: Overview.*
[2] New Zealand Ministry of Foreign Affairs and Trade, *United Nations Handbook 2017-18*, 2017, p. 256.
[3] Ibid., p. 257.
[4] United Nations Conference on the Human Environment, *Report of the United Nations Conference on the Human Environment (A/CONF.48/14/Rev.1). Chapter I: Declaration of the United Nations Conference on the Human Environment*, 1972.
[5] UN General Assembly, *Institutional and financial arrangements for international environmental co-operation (A/RES/2997(XXVII))*, 1972.
[6] New Zealand Ministry of Foreign Affairs and Trade, *United Nations Handbook 2017-18*, 2017, pp. 256-257.
[7] UNEP, *Four Decades of Environmental Leadership*.
[8] UNEP, *The First 40 Years: A Narrative by Stanley Johnson*, 2012, pp. 137-139.
[9] Convention on Biological Diversity, *The Rio Conventions*.
[10] UNEP, *The First 40 Years: A Narrative by Stanley Johnson*, 2012, pp. 155-156.
[11] UN General Assembly, *The Future We Want (A/RES/66/288)*, 2012, p. 18.
[12] UN General Assembly, *Change of the designation of the Governing Council of the United Nations Environment Programme (A/RES/67/251)*, 2013.

Member States in developing environmental policy.[13] UNEA has held two universal sessions since its creation.[14] The first session of UNEA was held in June 2014 and a total of 17 resolutions and two decisions were adopted.[15] The resolutions covered a wide range of topics, from marine plastic debris to environmental sustainability in the context of sustainable development and poverty eradication.[16] The second session of UNEA (UNEA 2) was held in May 2016 and focused on the environmental dimensions of the Sustainable Development Goals (SDGs).[17]

Governance, Structure, and Membership

Headed by the Executive Office of the Secretariat, UNEP is governed by UNEA as the main decision-making body as well as the Committee of Permanent Representatives, a subsidiary body of the Assembly.[18] UNEA replaced the former Governing Council of 58 members that was overseeing UNEP from its inception until 2013.[19] Comprised of all Member States, UNEA meets biennially to set the global environmental agenda and to discuss emerging challenges.[20] The UNEP Secretariat is responsible for supporting UNEA and consists of a rotating President, three Vice-Presidents, and a Rapporteur.[21] The Committee of Permanent Representatives, which meets at least four times a year, is a permanent subsidiary body of the Assembly that prepares its meetings, monitors the implementation of its decisions, and provides advice to UNEP between the sessions of UNEA.[22] It is composed of all accredited Permanent Representatives to UNEP and thereby represents an important link between the program and national governments.[23] In addition to the core funding it receives through the UN Regular Budget, UNEP collects financial contributions from Member States to implement its global and regional work through its Environment Fund.[24] Member States' financial contributions to the fund are based upon the Voluntary Indicative Scale of Contributions, which takes into account their respective economic and social situation.[25] Additional funds for project implementation are generated through Earmarked Contributions and the Global Environment Facility (GEF), which together account for 80% of UNEP's annual expenditures.

Aside from its headquarters in Nairobi, Kenya, UNEP has six regional offices throughout the world that undertake UNEP's projects on regional, sub-regional, and local levels.[26] Each office holds yearly Regional Consultation Meetings where representatives from various civil society organizations (CSOs) are invited to engage in an environmental policy dialogue.[27] The regional offices bring any concerns or ideas from these meetings to the next UNEA meeting for wider UNEP discussion and possible implementation.[28] The role of the regional offices was increased and enhanced to include the Regional Consultation Meetings and other projects in 2003, when the Governing Council approved decision 22/14 on the role of UNEP in strengthening regional activities.[29] This decision called for UNEP's regional offices to strengthen their partnerships with other UN agencies in their region,

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[13] UNEP, *About the UN Environmental Assembly*; UN General Assembly, *Report of the Governing Council of the United Nations Environment Programme on its twelfth special session and the implementation of section IV.C, entitled "Environmental pillar in the context of sustainable development", of the outcome document of the United Nations Conference on Sustainable Development (A/RES/67/213)*, 2012, p. 3.
[14] UNEP, *About the UN Environment Assembly*.
[15] UNEP, *Resolutions and decisions adopted by the United Nations Environment Assembly of the United Nations Environment Programme at its first session on 27 June 2014*, 2014.
[16] Ibid.
[17] UNEP, *The path towards UNEA 2*.
[18] UNEP, *Organizational Structure*.
[19] UN General Assembly, *Institutional and financial arrangements for international environmental co-operation (A/RES/2997(XXVII))*, 1972.
[20] UNEP, *About the UN Environment Assembly.*
[21] UN General Assembly, *Change of the designation of the Governing Council of the United Nations Environment Programme (A/67/784)*, 2013.
[22] UNEP, *Committee of Permanent Representatives: Overview.*
[23] Ibid.
[24] UNEP, *Funding for UN Environment: Overview of Funding.*
[25] UNEP, *Funding for UN Environment: Environment Fund.*
[26] UNEP, *Engaging in the Regions.*
[27] Ibid.
[28] Ibid.
[29] UNEP, *Report of the twenty-second session of the Governing Council/Global Ministerial Environment Forum*, 2003, p. 67.

create financial institutions to fund environmental causes, and establish or enhance partnerships with relevant local groups to strengthen UNEP's mission in each region.[30]

Mandate, Functions, and Powers

Upon the adoption of General Assembly resolution 2997 (XXVII) of 1972 on "Institutional and financial arrangements for international environmental cooperation," UNEP was established with a mandate to promote international and regional environmental cooperation; help in establishing environmental policy; highlight global and regional problems; facilitate the transfer of scientific knowledge; assist developing Member States in environmental matters; review reports of the Executive Director; and approve the annual program on the allocation of UNEP's main source of funding, the Environment Fund.[31] With the creation of UNEA as a governing body with universal membership pursuant to the Rio+20 conference, UNEP's mandate was most recently reaffirmed and responsiveness and accountability towards Member States in implementing this mandate was further strengthened.[32]

The first expansion of UNEP's mandate came after the 1992 Rio summit via *Agenda 21*, which outlined a list of priority areas for its future work and called for the program to gain "access to greater expertise and provision of adequate financial resources" as well as closer collaboration with the rest of the UN system to fulfil these new tasks.[33] However, the concurrent creation of the Commission on Sustainable Development (CSD) in New York threatened to sideline Nairobi-based UNEP in practice.[34] On the occasion of its 25th anniversary, the Governing Council of UNEP held an extensive discussion on the future role of the program that resulted in the adoption of the *Nairobi Declaration on the Role and Mandate of the United Nations Environment Programme* (1997).[35] With a view to the special session of the General Assembly later that year that was scheduled to review the implementation of *Agenda 21*, the declaration represented a call to governments and the UN system to acknowledge UNEP's leadership role.[36] The General Assembly endorsed the Nairobi Declaration and reaffirmed that "UNEP is to be the leading global environmental authority that sets the global environmental agenda."[37]

This assessment was further corroborated in the course of the UN reform agenda of Secretary-General Kofi Annan, who expressed his "full support" for strengthening UNEP's role as "the focal point for harmonization and coordination of environment-related activities."[38] In October 1998, per the guidance of the Secretary-General's Task Force on environment and human settlements, the General Assembly put forth a set of recommendations that would further modify UNEP's mandate.[39] As a result, the Executive Director of UNEP was placed in charge of a new committee called the Environment Management Group (EMG).[40] The key purpose of EMG is to coordinate and facilitate access to relevant information and findings concerning the environment and human settlements, in order to ensure the most efficient and cost-effective allocation of resources and information.[41]

Upon the adoption of the *Nairobi Declaration* at the 19th session of the UNEP Governing Council in 1997, UNEP realigned its core mandate to ensure a more modern and technological approach to environmental issues.[42] The new core mandate made UNEP responsible for using the best available scientific methods and evidence to analyze global environmental trends; utilizing early warning systems; furthering the development of international environmental law and policy; monitoring and fostering Member State compliance with existing international environmental norms; strengthening its role in coordinating UN environmental activities; serving as a link between the scientific

[30] UNEP, *Report of the twenty-second session of the Governing Council/Global Ministerial Environment Forum*, 2003, p. 67.
[31] UN General Assembly, *Institutional and financial arrangements for international environmental co-operation (A/RES/2997(XXVII))*, 1972.
[32] UN General Assembly, *The Future We Want (A/RES/66/288)*, 2012, p. 18.
[33] UNCED, *Agenda 21*, 1992, par. 38.21-38.23.
[34] UNEP, *The First 40 Years: A Narrative by Stanley Johnson*, 2012, pp. 137-141.
[35] UNEP Governing Council, *Proceedings of the Governing Council at its Nineteenth Session (UNEP/GC.19/34)*, pp. 52-56.
[36] UNEP, *The First 40 Years: A Narrative by Stanley Johnson*, 2012, p. 155.
[37] UN General Assembly, *Programme for the Further Implementation of Agenda 21 (A/RES/S-19/2)*, 1997, par. 123.
[38] UN General Assembly, *Renewing the United Nations: A Programme for Reform (A/51/950)*, p. 58.
[39] UN General Assembly, *Environment and human settlements: Report of the Secretary-General (A/53/463)*, 1998.
[40] Ibid.
[41] Ibid.
[42] UNEP Governing Council, *Proceedings of the Governing Council at its Nineteenth Session (UNEP/GC.19/34)*, pp. 52-56.

community and the UN; and providing key policy advice for UN bodies, governments, and other institutions.[43] In 2002, the *Johannesburg Declaration on Sustainable Development* called upon UNEP and its partners to cooperate more closely across sustainable development initiatives for the implementation of *Agenda 21*.[44]

Guided by the broader substantive priorities of UNEP, UNEA is tasked to make major strategic decisions for UNEP, provide political guidance for state and regional programs, and promote scientifically-based environmental policies.[45] UNEA has set a robust agenda for UNEP to address 12 specific thematic areas: coordinating the environmental dimension of the SDGs, implementing the *Paris Agreement*, promoting sustainable consumption and production, addressing food waste, safeguarding ecosystems, combating illegal trade in wildlife, advancing natural capital management, promoting biodiversity, monitoring and preserving air quality, protecting the environment in areas of conflict, preventing marine litter, and promoting waste management.[46] With the move towards universal membership, the vision for UNEA is to ensure better monitoring and foster of Member State compliance across the 12 thematic areas while creating an atmosphere for collaboration between Member States, UN entities, and CSOs.[47]

UNEP ensures the implementation of UNEA's agenda by promoting international cooperation on existing environmental policies, guiding the creation of new environmental policies, and using environmental awareness to help Member States and CSOs respond to environmental threats.[48] UNEP also monitors the state of the global environment on both an international and regional scale and shares that information with interested parties.[49] Under the direction of UNEA, UNEP works to develop international environmental law and ensure the proper use of environmental information and instruments.[50] To help achieve its mandate, UNEP has the ability to create task forces and subsidiaries to implement environmental policies.[51] However, the General Assembly or ECOSOC must approve any resolutions adopted by UNEP on environmental policy or creating new bodies.[52]

Recent Sessions and Current Priorities

With the adoption of the 2030 Agenda, the responsibility of UNEP has further moved towards realizing environmental protection as part of an integrated vision of sustainable development rather than within a silo of its own.[53] Concretely, UNEP assesses that 86 of the 169 targets contained in the 17 SDGs are concerned with environmental sustainability.[54] The paradigm change towards an integrated approach is reflected in the *Medium Term Strategy 2018-2021* that envisions UNEP to "provide an environmental lens through which to view, understand and advise on sustainable development."[55] UNEP's "Vision 2030" is thereby built on three factors, namely the benefits of sustainable natural resource use for sustainable development; the reduction of social and economic cost through improvements in environmental sustainability; and finally the increased benefits for marginalized populations as a consequence of integrating environmental considerations into development planning.[56] From an institutional standpoint, building new partnerships with civil society and increasing stakeholder participation was identified as a key requirement for UNEP to bring its working principles in line with the vision of the SDGs.[57]

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[43] New Zealand Ministry of Foreign Affairs and Trade, *United Nations Handbook 2017-18*, 2017.
[44] UN General Assembly, *Report of the World Summit on Sustainable Development (A/CONF.199/20)*, 2002.
[45] UNEP, *About the UN Environment Assembly*.
[46] Ibid.
[47] UN General Assembly, *The Future We Want (A/RES/66/288)*, 2012, pp. 17-18.
[48] UN CEB, *United Nations Environment Programme*.
[49] UNEP, *Programme Performance Report*, 2016, p. 57.
[50] Ibid., p. 32.
[51] UN CEB, *United Nations Environment Programme*.
[52] Ibid.
[53] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015; UNEA, *Delivering on the environmental dimensions of the 2030 Agenda: Information note of the Executive Director (UNEP/EA.2/INF/4)*, 2016.
[54] UNEA, *Delivering on the environmental dimensions of the 2030 Agenda: Information note of the Executive Director (UNEP/EA.2/INF/4)*, 2016, p. 1.
[55] UNEP, *Medium Term Strategy 2018-2021*, 2016, p. 2.
[56] Ibid., p. 12.
[57] UNEA, *Delivering on the environmental dimensions of the 2030 Agenda: Information note of the Executive Director (UNEP/EA.2/INF/4)*, 2016, par. 20.

UNEP currently operates under seven thematic priorities: climate change; resilience to disasters and conflicts; healthy and productive ecosystems; environmental governance; chemicals, waste and air quality; resource efficiency; and environment under review.[58] The *Medium Term Strategy 2018-2021* outlines long-term goals under each of the thematic areas that are operationalized in more detail in two biennial programs of work, following outcome maps that sketch out logical paths towards long-term goals.[59] Outcomes are thereby understood as the adoption or use of UNEP interventions by partners, observed as a change of behavior, attitude, condition, knowledge or skill.[60] This procedure marks a milestone on UNEP's path to adopt a more results-oriented planning approach that maintains focus on long-term outcome.[61] In response to increasing resource demands and changing demographics, the *Medium Term Strategy 2018-2021* focuses on improving utilization of natural resources that influence the social and economic dimensions of sustainable development.[62]

The past session of the Environmental Assembly, UNEA 2, was held on 23-27 May 2016 in Nairobi, Kenya, under the theme "Delivering on the Environmental Dimension of the *2030 Agenda for Sustainable Development*."[63] A total of 25 resolutions were adopted by the Assembly, ranging in coverage from administrative amendments and rules of procedure to substantive decisions on biodiversity and engaging with the *2030 Agenda for Sustainable Development*.[64] In order to increase the participation of private sector and civil society stakeholders in UNEA 2, an online policy forum was used for disseminating information and holding discussions on various topics of interest.[65] All adopted resolutions relate to one or more of the seven thematic priorities of UNEP and prepare for the implementation of the *Medium Term Strategy 2018-2021*.[66]

The upcoming UNEA 3 will be held from 4-6 December 2017 under the overarching topic of "Towards a Pollution-Free Planet."[67] The meeting will be preceded by a Global Major Groups and Stakeholders Forum and an Open-ended Meeting of the Committee of Permanent Representatives the week prior to UNEA.[68] UNEA 3 will adopt a Political Declaration on Pollution, building on a report prepared by the Executive Director.[69] In line with UNEP's overall orientation towards the paradigm of sustainable development, the report emphasizes the transformative potential of the SDGs to catalyze action against pollution and calls for greater coordination with key partners including the scientific community, civil society, and the private sector.[70]

Conclusion

UNEP is the UN's official program concerned with the environment. Its expertise and knowledge is crucial for the implementation of a variety of established programs within the UN and Member States' governments. The reform process that UNEP underwent throughout the 1990s consolidated the thematic leadership role of the program within the UN system. The recent creation of UNEA represented another key step to strengthen UNEP's mission to ensure that the work of all UN entities, Member States, and CSOs are environmentally sustainable and in line with international laws and norms concerning the environment. The creation of an environmental entity with universal membership that oversees the world's environmental policy agenda reflects the growing importance of environmental issues and allows for an integrated approach to environmental protection through the *2030 Agenda for Sustainable Development*.[71]

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[58] UNEP, *Medium Term Strategy 2018-2021, 2016.*
[59] Ibid., p. 18.
[60] Ibid., p. 20.
[61] Ibid., p. 18.
[62] Ibid., pp. 2-4.
[63] UNEP, *The path towards UNEA 2*.
[64] UNEP, *Resolutions and Documents for the second session of the UN Environment Assembly.*
[65] UNEP, *The path towards UNEA 2*.
[66] UNEP, *Resolutions and Documents for the second session of the UN Environment Assembly*.
[67] UNEP, *UN Environment Assembly*.
[68] Ibid.
[69] UNEP, *Towards a Pollution-Free Planet*, 2017.
[70] Ibid., pp. 33-37.
[71] UNEA, *Delivering on the environmental dimensions of the 2030 Agenda: Information note of the Executive Director (UNEP/EA.2/INF/4),* 2016.

Annotated Bibliography

United Nations Environment Assembly of the United Nations Environment Programme. (2016). *Delivering on the environmental dimensions of the 2030 Agenda: Information note of the Executive Director (UNEP/EA.2/INF/4).* Retrieved 3 September 2017 from: http://undocs.org/UNEP/EA.2/INF/4

In this information note delivered to the High-Level Segment of UNEA 2 (2016), UNEP's Executive Director outlines the strategic vision of the program for the implementation of the 2030 Agenda. According to UNEP's assessment, at least 86 of the 169 SDG targets are immediately concerned with environmental sustainability. The note presents a detailed overview of the links between UNEP's agenda and the SDGs and suggests a number of overarching principles and concrete measures to ensure that the program contribute to the success of the 2030 Agenda. Through this resource, delegates can acquire a better understanding of UNEP's role in the 2030 Agenda, including its institutional connections within the UN system.

United Nations Environment Programme. (n.d). *About the UN Environment Assembly* [Website]. Retrieved 1 September 2017 from: http://www.unep.org/environmentassembly/about-un-environment-assembly

This website provides a basic overview of UNEA and its role within the UNEP governance structure, including its history and mandate, and why its role within the broader UN system. This resource represents an entry point for delegates to begin their research on the committee, as it provides an overview of the body's functions as well as links to the documentation of past sessions and current thematic priorities of UNEA. It is also here that preparatory material for the upcoming session of UNEA is collected. This website should help delegates to easily distinguish between UNEP and UNEA and understand how they are connected to each other.

United Nations Environment Programme. (2012). *The First 40 Years: A Narrative by Stanley Johnson.* Retrieved 1 September 2017 from: http://staging.unep.org/pdf/40thbook.pdf

Published on the occasion of UNEP's 40th anniversary in 2012, this volume represents a narrative history of the program that provides the necessary historical context to understand the changes in mandate and thematic priorities that UNEP has seen over the past decades. The author draws on interviews with UNEP staff, including all previous Executive Directors, and numerous other key actors and observers to paint a detailed picture of UNEP's evolution. Delegates can use this resource to gain an understanding of the changing environment that UNEP and its mandate are situated in, including informal practices and considerations that are invaluable to understand UNEP's outlook and challenges today.

United Nations Environment Programme. (2016). *Medium Term Strategy 2018-2021*. Retrieved 18 July 2017 from: http://apps.unep.org/publications/index.php?option=com_pub&task=download&file=012120_en

This is the next Medium Term Strategy *for UNEP, which will take effect in 2018 when the current strategy expires. The document provides a situation analysis of the state of the environment across the seven priority areas of work, and briefly outlines what has been achieved through the previous strategy (more information is provided in the 2016 Programme Performance Report). This document is of particular importance for the delegates as it outlines the connection between UNEP's priority areas and the* 2030 Agenda for Sustainable Development *through the program's "Vision 2030."*

United Nations Environment Programme. (2017). *Towards a Pollution-Free Planet* [Advance Copy]. Retrieved 23 August 2017 from: http://wedocs.unep.org/bitstream/handle/20.500.11822/21213/Towards_a_pollution_free_planet_advance%20version.pdf

The Report of the Executive Director was prepared as a basis for the upcoming session of the Environmental Assembly (UNEA 3). It presents a scientific overview over the issue of pollution in its different facets, including air pollution, land and soil pollution, freshwater pollution and others. Moreover, it situates the issue of pollution within global frameworks such as the 2030 Agenda for Sustainable Development, identifying the challenges and opportunities to address pollution in their context. Finally, the report presents a number of transformative actions towards achieving the goal of a pollution- free planet, including adjustments of the economic and financial

system, deeper integration of environmental considerations into policymaking processes, and education for change.

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I. Conservation and Restoration of Ecosystems in Urban Areas

"By managing ecosystems for the services they provide to people, many of the world's poorest could find ways out of poverty and onto sustainable pathways towards prosperity."[72]

Introduction

Up to 54% of the global population was settled in urban areas in 2014, and this proportion is expected to increase to 60% before the United Nations (UN) Sustainable Development Goals (SDGs) will expire in 2030.[73] Urban population growth involves an expansion of human settlements, which consequently induces greater pressures on natural ecosystems humanity depends on for survival.[74] The term "ecosystem" designates dynamic systems of interacting animals, plants, and microbe communities and how they function in a non-living environment.[75] Green parks, wetlands, lakes, and ponds are examples of ecosystems found in urban areas.[76] Ecosystems produce services which benefit human life in urban areas such as food and water provision, air filtering, noise reduction, erosion and disease control, and more.[77] For example, in Chicago, 1600 tons of carbon dioxide and 64 tons of air pollutants are removed annually by park trees alone. [78] This represents an important contribution to ensuring healthy lives for all, as air pollution causes seven million premature deaths annually.[79] Hence, the degradation of ecosystems by increased urbanization poses a threat to the benefits and services rendered by ecosystems, and ultimately the quality of life in urban areas.[80] The UN Environment Programme (UNEP) has therefore been tasked to advance the conservation and restoration of ecosystems in urban areas in order to secure and improve the quality and sustainability of cities.[81]

In order to plan successful urban ecosystem management, it is of paramount importance to understand the monetary and non-monetary benefits of ecosystems, and the overall cost-benefit rate of interventions that aim to conserve or restore them.[82] However, policymakers and planners often lack guidance on how to incorporate information on the services gained from healthy ecosystems in urban planning.[83] With the support of partners such as the UN Development Programme (UNDP) and the Secretariat of the *Convention on Biodiversity* (CBD), UNEP therefore seeks to provide information, tools and resources for Member States and local governments to plan and implement conservation and restoration efforts.[84] UNEP assists countries to integrate natural capital into decision-making, promote short-term and long-term practices that recognize the contribution of healthy urban ecosystems and their protection, and encourage improvement in governments' environmental engagement and behavior.[85] By strengthening the capacity of decision-making entities to take into account ecosystem services, UNEP's work promotes the conservation and restoration of ecosystems in urban areas and works toward achieving the environmental dimension of the 17 SDGs.[86]

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[72] ESPA, *What if fighting poverty and protecting the planet were one and the same?*, p. 3.
[73] UN DESA, *World Urbanization Projects: Highlights*, 2014, p. 1; UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[74] Dearborn & Kark, *Motivations for Conserving Urban Biodiversity, 2010; UNEP, Integrating the Environment in Urban Planning and Management: Key Principles and Approaches for Cities in the 21st Century*, 2013.
[75] UNCED, *Convention on Biological Diversity*, 1992, p. 3.
[76] Dearborn & Kark, *Motivations for Conserving Urban Biodiversity*, 2010.
[77] Bolund & Hunhammar, *Ecosystem services in urban areas*, 1999, p. 295; ICLEI, *Viumbe hai: African Cities, Ecosystems, and Biodiversity*, p. 4.
[78] Nowak & Heisler, *Air Quality Effects of Urban Trees and Parks*, 2010, p. 4.
[79] Lode et al., *Clean Air or All by 2030? Air Quality in the 2030 Agenda and in International Law*, 2016.
[80] Ibid.
[81] UNEP, *Medium term strategy 2018-2021*, 2016, p. 2.
[82] Elmqvist et al., *Benefits of restoring ecosystem services in urban areas*, 2015.
[83] Ibid.
[84] UNEP, *Medium term strategy 2018-2021*, 2016.
[85] Ibid., p. 30.
[86] Ibid.

International and Regional Framework

Ecosystem conservation and restoration are an element of the broader notion of sustainable development, which seeks to reconcile the economic, social, and ecological dimensions of development for the benefit of present and future generations.[87] The role of ecosystem management is thereby to balance the desire to exploit natural resources for economic development with the need to preserve ecosystems for the valuable services they provide.[88] The importance of safeguarding natural ecosystems for the benefit of present and future generations was first recognized in the *Stockholm Declaration* of 1972.[89] At the 1992 UN Conference on Environment and Development (UNCED) that was held in Rio de Janeiro, Brazil, Member States adopted *Agenda 21* as a plan of action to achieve sustainable development.[90] Among other objectives, *Agenda 21* called for large-scale efforts to investigate the role of biodiversity for ecosystem health and to maintain healthy ecosystems on a global, national, and local level.[91] The Agenda also stressed the importance of involving stakeholder groups such as local authorities, non-governmental organizations (NGOs), and indigenous peoples in global environmental management due to their instrumental roles in the implementation of requisite strategies for sustainable development.[92] UNCED also adopted the CBD, a multilateral treaty that seeks to sustain and conserve biodiversity and to ensure that the benefits of ecosystem services are distributed fairly across the globe.[93]

In 2010, the Conference of the Parties (COP) to the *Convention on Biological Diversity* met in Nagoya, Japan, and designated 2011 to 2020 as the UN Decade on Biodiversity.[94] The COP, which is also responsible for supervising the implementation of the CBD, further adopted the *Strategic Plan for Biodiversity 2011-2020*.[95] This framework document includes 20 time-sensitive Aichi Biodiversity Targets (ABTs) to be implemented by the entire UN system and all other sustainable development stakeholders by 2020.[96] Like *Agenda 21*, the ABTs emphasizes the inclusion of stakeholders across society, and the importance of sharing benefits from ecosystem services, particularly with women, local communities, and the poor.[97] Since this framework was adopted, the UN Environment Assembly (UNEA) has underlined that Member States shall incorporate ABTs into their national policies.[98] In 2011, local governments most vulnerable to the impacts of climate change launched the *Durban Adaptation Charter* at the 17th COP to the *UN Framework Convention on Climate Change* (UNFCCC).[99] Over 950 local government signatories from 27 different Member States committed to prioritizing ecosystems as core urban infrastructures which protect humankind from the impacts of climate change worsened by ecosystem breakdown.[100] The *Durban Adaptation Charter* encourages decision-making to be based on ecosystem-based approaches, i.e. approaches aimed at maintaining or restoring ecosystem functions.[101]

Twenty years after UNCED, the 2012 UN Conference on Sustainable Development (Rio+20) firmly recognized the link between environmental protection and economic development.[102] The political outcome document acknowledges the crucial role of preserving ecosystems and ensuring their sustainable use to achieve the *The Future*

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[87] UN General Assembly, *Our Common Future (Brundtland Report) (A/42/427)*, 1987.
[88] McCartney et al., *Sustainable development and ecosystems services*, 2015.
[89] UN DPI, *UN Conference on Environment and Development (1992);* UN Conference on the Human Environment, *Declaration of the United Nations Conference on the Human Environment*, 1972.
[90] UNCED, *Agenda 21*, 1992.
[91] Ibid.
[92] Ibid.; UN DESA, *About Major Groups and Other Stakeholders.*
[93] UNCED, *Convention on Biological Diversity*, 1992.
[94] Ibid.; UNCED, *United Nations Decade on Biodiversity 2011-2020 (UNEP/CBD/COP/DEC/X/8)*, 2010.
[95] Conference of the Parties to the Convention on Biological Diversity, *The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets (UNEP/CBD/COP/DEC/X/2)*, 2010.
[96] Ibid.; Secretariat of the Convention on Biological Diversity, *Quick Guides for the Aichi Biodiversity Targets*.
[97] Conference of the Parties to the Convention on Biological Diversity, *The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets (UNEP/CBD/COP/DEC/X/2)*, 2010.
[98] UNEA, *Enhancing the work of the United Nations Environment Programme in facilitating cooperation, collaboration and synergies among biodiversity-related conventions (UNEP/EA.2/Res.17)*, 2016.
[99] Durban Adaptation Charter Secretariat, *About the Charter*.
[100] Ibid.
[101] Business and Biodiversity Offsets Programme, *Glossary*, 2012, p. 15.
[102] UN General Assembly, *The Future We Want (A/RES/66/288)*, 2012; UN DESA, *United Nations Conference on Sustainable Development, Rio+20*, 2012.

We Want.[103] In 2015, following an intense process of negotiation, Member States adopted the *2030 Agenda for Sustainable Development*, which outlines 17 SDGs with 169 ambitious targets towards a global sustainable development to be achieved by 2030.[104] The environmental dimension in decision-making is indispensable for the achievement of the SDGs, as many of these targets underscore valuing ecosystem services and ultimately concern environmental sustainability and development.[105] Goal 11 specifically addresses sustainable and resilient planning of urban areas and Goal 15 calls for the sustainable use of ecosystems to preserve life on land and end biodiversity loss.[106] By conserving and restoring biodiversity and ecosystem services, environmentally sustainable planning equally promotes the achievement of other SDGs, like Goals 3 and 6, which call for reducing the number of deaths caused by air pollution and universal access to safe drinking water for all, respectively.[107]

The importance of ecosystem conservation and protection for urban development has been further emphasized through the *New Urban Agenda*, the outcome document of the Third UN Conference on Housing and Sustainable Urban Development (Habitat III) (2016).[108] The Agenda underlines the key role of green spaces, including waterfront areas and parks, in fostering resilience of urban areas against disasters, and in reducing air, water, and soil pollution.[109] It contains various people-centered measures which cities at different levels of development can implement to protect their ecosystems, and in turn, create more jobs, enhance public health, and reduce energy costs, among other benefits.[110] The Agenda seeks to foster close collaboration between different levels of governments, as well as with civil society, in the policymaking and management processes of urban areas towards sustainable development.[111]

Role of the International System

UNEA has repeatedly emphasized the necessity for governments to collaborate to advance environmental sustainability in urban development.[112] In this spirit, UNEP and the UN offer a wide spectrum of initiatives to foster collaboration regarding the integration of national capital into decision-making, including the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the Economics of Ecosystems and Biodiversity (TEEB), the Wealth Accounting and the Valuation of Ecosystem Services (WAVES), the System for Environmental and Economic Accounts (SEEA), and the Sub-Global Assessment Network (SGA).[113] IPBES provides objective scientific assessments and methodologies on the benefits populations gain from ecosystems to assist policymakers across the globe.[114] For instance, IPBES' assessment on pollination around the globe cites information from approximately 3,000 scientific papers and from customary practices.[115] In a similar vein, TEEB's main goal is to evaluate and illuminate the benefits of ecosystems by highlighting the value of biodiversity, and help incorporate this value as a factor in decision-making.[116] In order to coordinate its work and avoid duplication, TEEB closely collaborates with IPBES and other partners and projects.[117] WAVES partners with global actors, including UN agencies, and local banks and ministries to account for natural capital worldwide and to mainstream natural resources knowledge in decision-making processes as well as national economic accounts.[118] In fact, natural capital represents up to 36% of the total wealth of developing countries.[119] The growing concern to incorporate natural

[103] UN General Assembly, *The Future We Want (A/RES/66/288)*, 2012; UN DESA, *United Nations Conference on Sustainable Development, Rio+20*, 2012.
[104] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[105] Ibid., p. 9.
[106] UN DESA, *Sustainable Development Goals*, 2015.
[107] Ibid.
[108] UN General Assembly, *New Urban Agenda (A/RES/71/256)*, 2016.
[109] Ibid., p. 4.
[110] Ibid., pp. 9, 15.
[111] UN General Assembly, *New Urban Agenda (A/RES/71/256)*, 2016.
[112] UNEP, *Medium term strategy 2018-2021*, 2016, p. 2.
[113] UNEP, *Medium term strategy 2018-2021*, 2016.
[114] Secretariat of IPBES, *About*.
[115] Ibid.
[116] The Economics of Ecosystems and Biodiversity, *About TEEB*.
[117] Ibid.
[118] WAVES, *About Us*.
[119] World Bank, *Natural Capital Accounting*, 2016.

capital accounting in sustainable planning led to the establishment of SEEA under the UN Statistical Commission.[120] In line with the goals of WAVES, the SEEA is developing a statistical framework capable of incorporating both environmental and economic data in order to guide policymaking and track sustainable development progress in an integrated way.[121] Finally, the SGA is a platform for ecosystem assessment practitioners at all levels (local, regional, national, and international) to develop e-learning tools and exchange knowledge and experiences of best practices.[122]

In the interest of conserving and restoring ecosystems in urban areas, UNEP promotes an ecosystem-based adaptation approach (EbA) in a number of initiatives funded by the Global Environment Facility (GEF).[123] The overarching goal of the EbA is to reduce cities' vulnerabilities to environmental threats, and to maximize services provided by ecosystems to urban populations.[124] EbA efforts are particularly invested in Southeast Asia and in Latin America in revegetation to mitigate the impacts of severe floods, for example by restoring degraded watersheds.[125] In 2014, UNEP encouraged Member States to allocate necessary resources to implement similar approaches and to share benefits gained from healthy ecosystems to the most vulnerable groups in particular.[126] Moreover, UNEP invited all cities to join the Global Initiative for Resource Efficient Cities (GI-REC), an initiative which aspires to provide large cities with research tools on resource efficiency and a network platform for decision-makers.[127]

The safeguarding and restoration of ecosystems in urban areas is supported by other UN agencies, such as the UN Human Settlements Programme (UN-Habitat).[128] For example, UNEP partners with UN-Habitat in different regions to target the environmental aspect of urban policy planning through various measures like eco-housing, where "green" materials and methods are used to build houses and infrastructure while preserving the environment.[129] Through the Greener Cities Partnership, UNEP and UN-Habitat are collaborating to integrate an urban perspective into environmental policy and vice versa.[130] The Greener Cities Partnership promotes tools development and information sharing to mainstream environmental consideration in decision-making for urban planning.[131] UN-Habitat offers numerous other programs and networks to provide tools and guidelines for sustainable urban development.[132] The City Resilience Profiling Programme (CRPP) and the UN-Habitat Cities and Climate Change Initiative (CCCI) are specifically oriented towards building resilient urban areas and implementing strategies that mitigate human impacts on climate change.[133] CCCI focuses on increasing developed and developing countries' capacities to implement affordable and innovative strategies that prepare cities for and treat hazards, while CRPP is similarly committed to enhancing resilience against landslides, flooding, and other hazards in various countries.[134]

Initiatives by local governments, the private sector, civil society, and other non-UN actors are equally important for the conservation and restoration of urban ecosystems.[135] For example, the International Council for Local Environmental Initiatives (ICLEI) is an association of several hundred cities, towns, and regions dedicated to environmentally sustainable urban development.[136] The ICLEI partners with the International Union for Conservation of Nature (IUCN) to coordinate the ICLEI Biodiversity Programme, a network platform that promotes the importance of urban biodiversity and involves local governments worldwide.[137] Similarly, the Asian Cities

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[120] UN DESA, *The System of Environmental-Economic Accounts (SEEA): Measurement Framework in Support of Sustainable Development and Green Economy Policy,* 2017.
[121] UN DPI et al., *System of Environmental-Economic Accounting 2012: Central Framework,* 2014, pp. III, V.
[122] SGAN, *About SGAN*.
[123] UNEP, *Urban solutions: Making cities strong, smart, sustainable,* 2016.
[124] Ibid.
[125] Ibid.
[126] UNEA, *Resolution 1/8: ecosystem-based adaptation: Report of the Executive Director (UNEP/EA.2/7),* 2016.
[127] UNEP, *Urban solutions: Making cities strong, smart, sustainable,* 2016.
[128] UN-Habitat, *Greener Cities Partnership (UN-Habitat and UN Environment).*
[129] UNEP, *Urban Environment Unit.*
[130] UN-Habitat, *Greener Cities Partnership (UN-Habitat and UN Environment).*
[131] Ibid.
[132] UN-Habitat, *UN-Habitat's strategic plan 2014-2019 and its seven focus areas*¸ 2012.
[133] UN-Habitat, *City Resilience Profiling Programme,* 2012; UN-Habitat, *Cities and Climate Change Initiative,* 2012.
[134] Ibid.; UN-Habitat, *Climate Change,* 2012.
[135] UN General Assembly, *New Urban Agenda (A/RES/71/256),* 2016; UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1),* 2015; UN-Habitat, *The New Urban Agenda,* 2016.
[136] ICLEI, *Who we are.*
[137] ICLEI, *The ICLEI Cities Biodiversity Center*.

Climate Change Resilience Network (ACCCRN), an association of local governments, offers resources such as a road map for local governments to achieve climate change resilience.[138] It recommended the local governments of Goa and Uttarakhand in India, for example, to regulate land use and develop resilient structures in ecosystems by planting mangroves to act as natural buffers against disasters.[139]

The Impacts of Ecosystems in Urban Areas

Just three percent of the Earth's surface consists of urban areas, yet half of humanity occupies these spaces, using about 60% to 80% of the world's energy.[140] Due to a widespread lack of local regulation in urban planning and rapid urban growth, urban ecosystems face degradation in the form of pollution of air, water, and soil caused by improper waste disposal; crop production; land disturbance; and other forms of ecosystem exploitation.[141] Cities also produce 70% of global greenhouse gas (GHG) emissions and waste, further contributing to ecosystem depletion.[142] On the other hand, healthy urban ecosystems provide services that benefit citizens and should therefore motivate ecosystem preservation.[143] These services are as diverse as the various sizes and biological composition of ecosystems, and all have a significant impact on urban areas.[144] For instance, urban trees and areas with soft ground and vegetation serve to mitigate noise, provide habitats to native species and various organisms, and reduce air pollution.[145] Research shows that an increase of 10% in tree canopy of the Manchester urban area could reduce ambient air temperature by three to four degrees Celsius and save energy invested in infrastructure air conditioning.[146] Other ecosystem services include carbon sequestration, sewage treatment, and disease control.[147] Conserving or restoring urban trees is thus valued as a highly cost-effective mechanism to reduce the impacts of rapid urbanization and climate change.[148]

Ecosystems equally provide food and water, protection from natural disasters, noise reduction, and non-material benefits such as for cultural purposes and spiritual and recreational solace.[149] However, when an ecosystem's biodiversity changes and their environment begins to break down, ecosystems not only lose their abilities to deliver services for human health and well-being, but may even become risk factors.[150] For example, unsustainable management of ecosystems has been associated with the continuity of viruses like malaria and even the emergences of new viruses like Ebola.[151] The World Health Organization (WHO) estimates that 23% of global deaths are due to environment degradation, and that this burden was largely shared by low-and middle-income countries.[152] Hence, taking measures to conserve and restore ecosystems contributes to promoting human health and the realization of SDG 3.[153] The positive impacts of healthy ecosystems in urban areas can be extended to other sustainable development objectives such as building sustainable cities and communities, which is inextricably connected to the alleviation of poverty and reduced inequalities.[154] However, an insufficient understanding of how ecosystems function and what services they extend to citizens poses a major challenge to adequate ecosystem management in local policymaking.[155]

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[138] ACCCRN, *About ACCCRN*, 2017.
[139] TERI & The Rockefeller Foundation, *State Level Engagement for Mainstreaming Urban Climate Resilience Policy, Goa and Uttarakhand*, 2016.
[140] UN-DESA, *Sustainable cities: Why they matter*, *2015*.
[141] UNEP, *Ecosystems for urban resilience*, 2016.
[142] UN-Habitat, *The New Urban Agenda*, 2016.
[143] Dearborn & Kark, *Motivations for Conserving Urban Biodiversity*, 2010.
[144] Elmqvist et al., *Benefits of restoring ecosystem services in urban areas*, 2015.
[145] Bolund & Hunhammar, *Ecosystem Services in Urban Areas*, 1999, p. 297.
[146] Elmqvist et al., *Benefits of restoring ecosystem services in urban areas*, 2015.
[147] Pataki et al., *Coupling biogeochemical cycles in urban environments: ecosystem services, green solutions, and misconceptions*, 2011.
[148] Dearborn & Kark, *Motivations for Conserving Urban Biodiversity*, 2010.
[149] Campbell, *Maintaining Functioning Urban Ecosystems Can Significantly Improve Health and Well-Being*, 2012.
[150] Ibid.
[151] Keesing et al., *Impacts of biodiversity on the emergence and transmission of infectious diseases*, 2010.
[152] WHO, *Preventing disease through healthy environments*, 2016.
[153] UN DESA, *Sustainable Development Goal 3*, 2015.
[154] UN DESA, *Sustainable cities: Why they matter*, 2015.
[155] Dearborn & Kark, *Motivations for Conserving Urban Biodiversity*, 2010.

Challenges for the Conservation and Restoration of Ecosystems in Urban Areas

An incomplete understanding of the services and benefits that ecosystems provide transfers to inappropriate protocol and measures in environmentally sustainable urban planning and management.[156] A report by the Asian Development Bank (ADB) points to a correlation between urbanization strategies that lack "green" policies and environmental breakdown.[157] For example, the effects of the floods that devastated parts of Thailand in 2011 were aggravated by unsustainable urban development.[158] About 750 cities in Asia that are known for fast-growing populations are equally vulnerable to coastal flooding.[159] The conservation and restoration of ecosystems such as forests could reduce damage caused by flooding and other natural disasters and serve to protect future cities against climate change.[160] While some ecosystem services like pollution removal and energy savings are quantifiable in biophysical units, ecosystems also provide services difficult to adequately assess or measure, like contributions to social cohesion and human well-being.[161] Science partners like the Stockholm Resilience Center have significantly improved accessible knowledge tools available for policymakers to include non-measurable benefits.[162] However, low accessibility to knowledge tools for local governments located in developing countries can harm their utilization in decision-making.[163] As a result, decision-makers regularly utilize methodologies which may not reflect the true value of natural capital and which provide inadequate estimates that instead underscore trade-off analyses.[164]

The *2030 Agenda for Sustainable Development* envisions the integration of the economic, ecological, and social dimensions of sustainability.[165] However, this is particularly challenging where urban lands are highly valuable and different stakeholders with contradicting objectives share their management.[166] The prospect of economic profits presents a motivation for investors to capitalize on land, and because regulating land is regarded as costly, short-term, lucrative investing often prevail over long-term strategic investing. [167] Therefore, while certain goods and services produced by ecosystems can be privately owned, ecosystems are common assets.[168] Urban areas must therefore have a "locally rooted, democratized culture of sustainability" that permits all stakeholders to be part of the planning and decision-making process for conservation and restoration efforts to succeed.[169] The Local Agenda 21 movement, which stems from *Agenda 21*, therefore encourages local implementation of sustainable development plans with greater participation and inclusivity.[170]

Approaches for the Conservation and Restoration of Ecosystems in Urban Areas

Member States have emphasized that in order to implement the SDGs, decision-making must consider environmental, social, and economic dimensions, as well as ensuring that no one is left behind.[171] UN-Habitat compiled an in-depth report that analyzed the greatest challenges posed by urbanization and its intergenerational impact from multiple dimensions.[172] The report emphasized the need for cities to generate solutions which foster the equal distribution of decision-making powers towards bridging socio-political barriers.[173] Member States have accordingly discussed the necessity not to leave anyone behind in decisions to conserve and restore ecosystems, including future generations.[174] Prioritizing vulnerable groups is therefore key for sustainable development; Member

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[156] Trzyna, *Urban Protected Areas: Profiles and best practice guidelines*, 2014.
[157] ADB, *Key Indicators for Asia and the Pacific*, 2012, pp. 15, 17.
[158] Ibid.
[159] Ibid.
[160] Ibid., p. 288.
[161] Elmqvist et al., *Benefits of restoring ecosystem services in urban areas*, 2015.
[162] Stockholm Resilience Centre, *About Us.*
[163] Dearborn & Kark, *Motivations for Conserving Urban Biodiversity*, 2010.
[164] Elmqvist et al., *Benefits of restoring ecosystem services in urban areas*, 2015.
[165] UN DESA, *Challenges and ways forward in the urban sector*, 2012.
[166] Dearborn & Kark, *Motivations for Conserving Urban Biodiversity*, 2010.
[167] UN DESA, *Challenges and ways forward in the urban sector*, 2012, pp. 8, 11.
[168] Costanza et al., *Changes in the global value of ecosystems*, 2014, p. 157.
[169] UN DESA, *Challenges and ways forward in the urban sector*, 2012.
[170] Ibid., p. 33.
[171] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[172] UN-Habitat, *State of the World's Cities 2008/9*, 2008.
[173] Ibid., p. 189.
[174] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2016.

States and governments can design urban development plans that permit and empower all actors to become equally involved in ecosystem maintenance.[175] In Chile, a group of entrepreneurs, with the help of university researchers and the private sector, provided community members, hospitals, and schools for vulnerable students with seeds, information, and practical courses to replant and restore declining Chilean palms.[176] This initiative helped raise social awareness about the effect of changes in land use and urbanization on the world's longest living palms; provided individuals with additional income; and allowed local actors from different levels of society to collaborate in the creation of a national policy protecting Chile's biodiversity and ecosystems.[177]

Moreover, it is important for the preservation of irreplaceable natural capital to take precedence over short-term socio-economic profits to guarantee a sustainable environment for current and future generations.[178] At the second UN Environment Assembly (UNEA 2) in 2016, the Committee of the Whole (COW), which consisted of ministerial-level participants and representatives from major groups and other stakeholders, adopted a resolution regarding the "Sustainable management of natural capital for sustainable development and poverty eradication."[179] The resolution encouraged Member States to manage natural capital, which comprises a significant proportion of national wealth in such a way that ecosystem conservation and restoration efforts add value to the country's environmental assets, and that fair and equitable management of these assets can further the good governance aspect of the sustainable agenda.[180] Such initiatives encourage protecting public goods and services provided by ecosystems and may incentivize private investors and stakeholders to prioritize long-term sustainability of urban ecosystems over short-term profits.[181]

EbA approaches also serve as a useful point of convergence between conservation and sustainable use of natural capital.[182] EbAs were designed to encourage ecosystem maintenance in alignment with the three objectives of the *Convention on Biological Diversity*: maintaining healthy biodiversity, fair and equitable distribution of ecosystem benefits and services, and recognizing humans as an essential component of ecosystems.[183] These three components were effectively utilized in UNEP's EbA flagship program in Fiji.[184] Due to unsustainable land use and coastal development, the Lami Town city of Fiji faces high vulnerability to coastal flooding, exacerbated by climate change.[185] While the traditional adaptation approach to build a sea wall along the coastline of Fiji would have cost $8.5 million, the EbA solution of replanting mangroves only cost $1.7 million and is better at preventing erosion and flooding.[186] Hence, the approach favored by UNEP and its partners provided greater benefit in conserving existing ecosystems and developing more resilience against climate change.[187] As urban populations continue to grow and exert increasing pressure on ecosystems, and new challenges emerge, cities must therefore consistently review and generate innovative strategies to conserve and restore urban ecosystems to the benefit of all.[188]

Conclusion

Healthy ecosystems provide beneficial goods and services and can contribute significantly to the achievement of development objectives, provided their benefits are streamlined with urban planning.[189] Since 1992, UNEP and its partners have therefore promoted the integration of ecosystem management into urban development.[190] However,

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[175] UN DESA, *Challenges and ways forward in the urban sector*, 2012, p. 40.
[176] UNDP, *Examples of Successful Conservation and Sustainable use of Biodiversity*, 2004.
[177] Ibid.
[178] UN-Habitat, *State of the World's Cities 2008/9*, 2008, p. 189.
[179] UNEP, *Sustainable management of natural capital for sustainable development and poverty eradication (UNEP/EA.2/Res.13)*, 2016.
[180] Ibid., p. 2.
[181] UN DESA, *Challenges and ways forward in the urban sector*, 2012, pp. 8, 11.
[182] UNEA, *Resolution 1/8: ecosystem-based adaptation: Report of the Executive Director (UNEP/EA.2/7)*, 2016.
[183] Business and Biodiversity Offsets Programme, *Glossary*, 2012, p. 15.
[184] Alverson, *Ecosystem-based Adaptation in vulnerable Urban Areas*.
[185] Ibid., p. 6.
[186] Ibid., p. 7.
[187] UNEA, *Resolution 1/8: ecosystem-based adaptation: Report of the Executive Director (UNEP/EA.2/7)*, 2016.
[188] UN DESA, *Challenges and ways forward in the urban sector*, 2012.
[189] Elmqvist et al., *Benefits of restoring ecosystem services in urban areas*, 2015.
[190] Secretariat of the Convention on Biological Diversity, *The Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets (UNEP/CBD/COP/DEC/X/2)*, 2010.

challenges, such as insufficient knowledge of benefits gained from ecosystems and an inadequate accounting of land degradation, prevent urban planners and policymakers from implementing appropriate ecosystem-based strategies.[191] Moreover, insufficient integration of all actors' needs prevent a universal achievement of sustainable development along all its dimensions.[192] Decision-making is therefore central to ensuring the needs of all groups, including vulnerable groups, and all dimensions of sustainable development are met.[193] As the leading global environmental authority, UNEP's task is to support all levels of governments to incorporate environmentally-considerate strategies in urban planning by improving knowledge tools and universalizing their accessibility to facilitate the conservation and restoration of ecosystems in urban spaces.

Further Research

Delegates should seek ways and means to further the conservation and restoration of urban ecosystems by asking the following questions: How can local governments encourage sustainable strategies for maximizing benefits gained by ecosystem services in urban areas? How might local governments strategically utilize social and economic indicators in urban planning for cities at different levels of development? How can all societal groups be more involved in decision-making before the 2030 Agenda expires? What existing mechanisms can be utilized to further the exchanges of information between the scientific community and urban planners at all levels of government? In what ways can regional and national governments support local governments to adequately implement ecosystem-based management decisions? Are there existing tools to incentivize governments and create a demand for effecting sustainable development policies and frameworks? What mechanisms might UNEP use to ensure that the sustainability of ecosystems is permanently rooted in environmental management policy?

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> *In line with the aims of* Agenda 21, *Member States in 1992 adopted the* Convention on Biological Diversity *to protect biodiversity. Recognizing biodiversity as a major driver of solutions to achieve global sustainable development, the Secretariat of the* Convention on Biological Diversity *has implemented several programs and initiatives in that perspective. The Secretariat declared 2011-2020 to be the Decade of Biodiversity and has established a series of action plans and road maps to preserve global biodiversity. Several strategies are particularly focusing on the expanding urbanization. By reading the strategic plan of the Secretariat of the* Convention on Biological Diversity, *delegates will acquire an overview of what actions are required to be taken by Member States and society in order that the goals of the Convention are met.*

Dearborn, D., & S. Kark. (2010). Motivations for Conserving Urban Biodiversity. *Conservation Biology*, 24 (2): 432-440. Retrieved 10 November 2017 from: http://onlinelibrary.wiley.com/doi/10.1111/j.1523-1739.2009.01328.x/full

> *Adequate actions and strategies are necessary to optimally benefit from ecosystem services in urban areas. The authors of this essay present seven possible motivations for the implementation of biodiversity conservation policies in urban management. They further illustrate the complexities involved in implementing these motivations, which in turn highlights the importance of precisely understanding and correctly framing objectives to be reached in restoration and conservation efforts of ecosystems in urban areas. Therefore, this document is particularly relevant for delegates to understand challenges that prevent communities from adequately utilizing their ecosystem areas.*

Elmqvist, T., et al. (2015). Benefits of restoring ecosystem services in urban areas. *Current Opinion in Environmental Sustainability*, 14: 101-108. Retrieved 10 November 2017 from: http://www.sciencedirect.com/science/article/pii/S1877343515000433

[191] Trzyna, *Urban Protected Areas: Profiles and best practice guidelines*, 2014.
[192] Ibid.; UN DESA, *Challenges and ways forward in the urban sector*, 2012.
[193] UN DESA, *Challenges and ways forward in the urban sector*, 2012.

In this document, the authors present benefits gained by communities of several urban areas through the restoration of ecosystems in urban areas. On one hand, they present monetary ecosystem services that can be measured. These include, for instance, pollution removal and energy reduction. On another hand, they highlight the challenges faced to measure non-monetary ecosystem services. For example, green spaces have previously been associated with longevity and stress reduction. These ecosystem services can hardly be measured by scientific instruments and require therefore new techniques to calculate their benefits. This document is valuable for delegates as adequate techniques to measure benefits gained from ecosystem services is a major obstacle to optimally addressing ecosystems in urban areas.

Local Governments for Sustainability, et al. (n.d.). *Viumbe hai: African Cities, Ecosystems, and Biodiversity* [Brochure]. Retrieved 20 August 2017 from: http://staging.unep.org/urban_environment/PDFs/biodiversity-brochure.pdf

This publication contains six case studies on ecosystem conservation and restoration efforts across a number of urban areas in Africa. Each case study notes the effects of unsustainable urban development on a specific urban area and the type of biodiversity and ecosystem at-risk. It outlines innovative efforts pioneered by different members of the community, as well as remaining challenges cities continue to face in conserving and restoring ecosystems. Furthermore, the case studies illustrate the practical need to coordinate ecosystem conservation and restoration efforts at the local, regional, and global levels. Delegates can use this brochure to gauge the role and impact of different societal actors in ecosystem management, and to be inspired by creative, hands-on solutions to ecosystem challenges in urban areas.

Secretariat of the Convention on Biological Diversity. (n.d.). *Quick Guides for the Aichi Biodiversity Targets* [Website]. Retrieved 23 August 2017 from: https://www.cbd.int/nbsap/training/quick-guides/

In light of the Decade for the Biodiversity 2011-2020, Members of the Convention on Biological Diversity *have adopted a series of environmental sustainability goals. The 20 ABTs specifically focus on addressing the identification and the removal of biodiversity loss causes, the implementation of ecosystem safeguarding and restoration initiatives, the dissemination of benefits gained from healthy ecosystems to all, and capacity-building in environmental sustainability. The website contains links to further detailed information of the 20 different targets. Delegates can best utilize this source as a guide on ways and means to implement strategies that measure biodiversity loss, for example, and other social and economic indicators of biodiversity and ecosystem health.*

Trzyna, T., et al. (2014). *Urban Protected Areas: Profiles and best practice guidelines*. Best Practice Protected Area Guidelines Series No. 22. Gland, Switzerland: International Union for Conservation of Nature. Retrieved 10 November 2017 from: https://portals.iucn.org/library/sites/library/files/documents/PAG-022.pdf

In this guide, delegates are introduced to the challenges faced by local governments to share potential benefits gained from their ecosystems by their community. In this document, delegates will find a list of strategies adopted around the globe by local governments to connect stakeholders to the benefits of ecosystem services. The appropriate distribution of these benefits is a key factor in ensuring natural capital is effectively used, protected, and maintained. The document concludes with a collection of lessons learned from past strategies that are valuable for delegates in their research.

United Nations, Department of Economic and Social Affairs. (2017). *The System of Environmental-Economic Accounts (SEEA): Measurement Framework in Support of Sustainable Development and Green Economy Policy*. [Brochure]. Retrieved 1 August 2017 from: https://unstats.un.org/unsd/envaccounting/Brochure.pdf

A major obstacle for decision-makers to adopt ecosystem-based approaches is the exclusion of natural capital in trade-offs analyses. The System of Environmental-Economic Accounts (SEEA) was developed from raising concerns of decision-makers over negative impacts of land degradation. This brochure can serve as a starting point for delegates to understand how and why ecosystems are valued through learning about various indicators and methodologies used to measure and monitor ecosystem health and sustainability. The brochure also provides practical

examples of how different countries have utilized SEEA in their environmental planning and policies.

United Nations Environment Programme. (2013). *Integrating the Environment in Urban Planning and Management: Key Principles and Approaches for Cities in the 21st Century* [Report]. Retrieved 20 October 2017 from: https://wedocs.unep.org/rest/bitstreams/14367/retrieve

This report takes notice of the significance of urbanization in the 21st century and the environmental challenges that have emerged from urban development. According to this publication, cities play a prominent role in addressing global environmental issues and achieving sustainable urban development. UNEP analyzed approaches of different actors, including UN and non-UN entities, as well as the strategies implemented by various urban cities, to measure their impact on ecosystem safeguarding. Delegates can use this report to understand different components of urban planning in relation to ecosystem conservation and restoration, and to draw inspiration from countries which mainstreamed sustainable practices into their environmental policies.

United Nations Environment Programme. (2016). *Medium Term Strategy 2018-2021*. Retrieved 12 August 2017 from: https://wedocs.unep.org/rest/bitstreams/11369/retrieve

In 2016, UNEP adopted a medium-term strategy for the period of 2018 to 2021. In this source, delegates will be introduced to the key activities undertaken by UNEP to achieve environmental sustainability. The strategy specifically underlines the necessity of healthy ecosystems to achieve the 17 SDGS and emphasizes the importance of adopting natural capital accounting in decision-making. Several of UNEP's priority areas are relevant for ecosystems restoration and conservations; these areas include healthy and productive ecosystems and resilience to disasters and conflicts. By reading this document, delegates will gain a clearer overview of UNEP's plan of actions to support all actors to be environmentally sustainable.

World Bank Group. (2016). *Natural Capital Accounting* [Website]. Retrieved 15 August 2017 from: http://www.worldbank.org/en/topic/environment/brief/environmental-economics-natural-capital-accounting

Natural capital accounting is often a complex representation for policymakers. The World Bank Group leads worldwide partnerships to support sustainable initiatives, and this website offers to delegates a representation of natural capital in global wealth. It also presents the World Bank Group's strategy to support integration of natural capital in decision-making and demonstrate results in different countries. For example, the World Bank partnered with programs like the Millennium Ecosystem Assessment to help provide scientific knowledge of ecosystems and their impact on the quality of human life for decision-makers and relevant stakeholders. In addition to providing financial support for such projects, the World Bank also invests in formulating reports regarding ecosystem change and more. Delegates can use this source to better understand the different components of identifying the reality and challenges of ecosystems, and how support from multiple bodies, including the World Bank, are important in the quest towards a sustainable future.

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II. Empowering Youth for Sustainable Development

Introduction

Made up of more than 1.8 billion individuals, the current population of young people is the largest at any time in history, and with access to the proper skills and knowledge, their potential to bring about economic, social, and political progress as leaders of the 21st century is immensely promising.[194] In a 2015 global survey from the United Nations (UN) Development Programme (UNDP), over 7 million young participants ranked receiving a good education, improving job opportunities, and promoting honest governance as the three key elements for the continued prosperity of the world.[195] However, youth are sometimes deprived of one of the basic rights of the *Universal Declaration of Human Rights* (UDHR) (1948): the right to participation.[196] The adoption of the *2030 Agenda for Sustainable Development* (2015) offers a pathway to enhancing youth involvement in all social, economic, and political areas.[197] It is therefore imperative for youth to be fully immersed in the implementation of the 17 UN Sustainable Development Goals (SDGs) if the SDGs are to be successfully achieved.[198]

Because socio-cultural, demographic, economic, and financial factors vary across the planet, the definition of the word "youth" can often be different across regions, organizations, and Member States.[199] The UN Human Settlements Programme (UN-Habitat) states that "youth" are those between the ages of 15 and 32, while other entities, such as the UN Children's Fund (UNICEF) describe "adolescents" as those between ages 10 and 19, and "young people" as those between 10 and 24 years of age.[200] Noting that a universal definition of "youth" was necessary for statistical purposes, the UN established, during preparations for the International Youth Year (1985), that "youth" are those between the ages of 15 and 24; this classification does not take precedence over those of other entities, but rather it provides UN guidelines for tracking and reporting on youth development.[201]

Sustainable development is commonly expressed as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[202] Echoing this idea, the 2030 Agenda places a renewed focus on sustainable development by incorporating over 86 targets that specifically highlight action-based sustainability initiatives.[203] To achieve prosperity, it is necessary to create an equitable world where all individuals, regardless of age, may be empowered and live on a healthy planet.[204] To date, 75 million young people are unemployed, 600 million live in states with a history of conflict, and nearly all youth are located in areas where they are denied, or restricted, from having a voice in governmental and public arenas.[205] Including youth in sustainable development is therefore essential, creating a dual benefit to society by improving the livelihoods of millions of growing children while simultaneously empowering them to shape the world around them.[206] As the population of youth grows, the global community must invest in the future of youth not only to safeguard the rights of youth, but also to create a force for social transformation, political change, and environmental protection.[207]

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[194] UNFPA, *The Power of 1.8 Billion: Adolescents, Youth and the Transformation of the Future: UNFPA State of World Population 2014*, 2014, p. 4.
[195] UNDP, *MY World Analytics*, 2015.
[196] UN-Habitat & UN DESA, *Youth Participation*, 2013, p. 1.
[197] Dutch UN Youth Representatives, *Engaging youth in the implementation of the SDGs*, 2016, p. 3.
[198] Ibid.
[199] UN DESA DSPD, *Definitions of Youth*, 2012.
[200] Ibid.
[201] UN DESA DSPD, *Frequently asked questions*.
[202] Emas, *The Concept of Sustainable Development: Definition and Defining Principles*, 2015, p. 1.
[203] UNEA, *A contribution to the global follow-up and review in the 2016 High Level Political Forum (HLPF) on the work of the United Nations Environment Programme*, 2016, p. 1.
[204] UNFPA, *The Power of 1.8 Billion: Adolescents, Youth and the Transformation of the Future: UNFPA State of World Population 2014*, 2014, p. 87.
[205] UNDP, *Youth Strategy 2014-2017: Empowered Youth, Sustainable Future*, 2014, p. 5.
[206] UN ESCAP, *UN and SDGs, A Handbook for Youth*, 2017.
[207] Ibid., p. 31.

International and Regional Framework

As early as 1948, framework on youth was introduced through Articles 25 and 26 of the UDHR, which outlined the rights of children to "special care," "assistance," and "education" as their parents deemed fit.[208] The distinction between children and youth, however, was not made clear until 1965 with the adoption of the *Declaration on the Promotion Among Youth of the Ideals of Peace, Mutual Respect, and Understanding Between Peoples*.[209] Principle I of this document clearly distinguished youth as a unique group of individuals with the potential to contribute positively to the world by firmly upholding the UN principles of justice, freedom, respect, peace, liberty, international solidarity, and humanity.[210] Twenty years after this declaration, the UN General Assembly recognized 1985 as the International Youth Year.[211] As such, 1985 marked the first time youth were placed as key stakeholders in the area of international development.[212]

In 1992, Member States met at the UN Conference on Environment and Development (Rio Conference) to discuss pressing environmental concerns.[213] The outcome document, *Agenda 21* (1992), identified the environment, society, and the global economy as being interdependent areas of sustainable development.[214] Moreover, Chapter 25 of *Agenda 21* urged the international community to involve youth "in the protection of the environment and the promotion of economic and social development."[215] In a further effort to channel the international community's attention towards the empowerment of youth, the UN Department of Economic and Social Affairs (DESA) introduced the *World Programme of Action for Youth* (WPAY) in 1995.[216] WPAY provided economic, environmental, and societal recommendations for stakeholders to facilitate youth's access to opportunities that allow them to have "constructive participation in society."[217] Notably, WPAY's Environment Priority Area, which deals with the environment, marked the first time sustainable development was discussed as a priority issue for youth and youth organizations, thereby setting the precedent that youth and sustainable development are intertwined.[218]

Moving forward, the UN General Assembly, via resolution 55/2 of 2000, adopted the *Millennium Declaration* as the first holistic development agenda, and soon after the international community initiated eight Millennium Development Goals (MDGs) targeting issues such as poverty, environmental sustainability, and education.[219] MDGs 1, 2, 3, 7, and 8 highlighted ways to help or involve youth in the implementation process of this agenda.[220] In 2010, the UN recognized the importance of collaborating with youth for sustainable development, especially to meet the MDGs, and thus the period from August 2010 to August 2011 was named the "International Year of Youth: Dialogue and Mutual Understanding."[221] Throughout this year, Member States, governments, and other stakeholders were encouraged to review their youth programs, continue supporting the WPAY, and celebrate young people's contributions to development.[222] Two years later, Member States again convened in Rio at the UN Conference on Sustainable Development (Rio+20), where a new vision for sustainable development was established in the outcome document *The Future We Want* (2012).[223] Paragraphs 50, 148, and 152 of *The Future We Want* detail commitments to empowering youth through participation, employment, and capacity-building.[224] In preparation for the implementation of the current development agenda, the 2030 Agenda, global leaders met in 2014 at the UN Educational, Scientific and Cultural Organization (UNESCO) World Conference on Education for Sustainable

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[208] UN General Assembly, *Universal Declaration of Human Rights (A/RES/217 A (III))*, 1948.
[209] UN General Assembly, *Declaration on the Promotion Among Youth of the Ideals of Peace, Mutual Respect and Understanding Between Peoples (A/RES/2037 (XX))*, 1965.
[210] Ibid.
[211] UN DESA, *World Programme of Action for Youth*, 2010, p. 3.
[212] Ibid.
[213] UNCED, *Agenda 21*, 1992.
[214] UN ESCAP, *UN and SDGs, A Handbook for Youth*, 2017, p. 12.
[215] UNCED, *Agenda 21*, 1992, p. 275.
[216] UN DESA, *World Programme of Action for Youth*, 2010, p. 4.
[217] Ibid.
[218] Ibid., p. 19.
[219] UN General Assembly, *United Nations Millennium Declaration (A/RES/55/2)*, 2000.
[220] Ibid.
[221] UN DPI, *International Year of Youth*, 2010.
[222] Ibid.
[223] Ibid.; UN General Assembly, *The Future We Want (A/RES/66/288)*, 2012.
[224] UN General Assembly, *The Future We Want (A/RES/66/288)*, 2012.

Development (ESD) held in Aichi-Nagoya, Japan, and adopted the *Aichi-Nagoya Declaration on ESD,* stressing the need to involve and respect youth as key stakeholders in the full implementation of ESD.[225] The *Aichi-Nagoya Declaration* stands apart from previous documents because it places a strong emphasis on education for sustainable development as a means to ensure environmental, societal, and economic progress for current and future generations.[226] This same year, governments, UN agencies, and other development partners assembled at the World Conference on Youth 2014 in Sri Lanka to discuss youth priorities.[227] This was the first time youth representatives sat alongside Member States to devise a comprehensive plan on how best to enhance youth empowerment.[228] The outcome document of the World Conference on Youth was the *Colombo Declaration on Youth* (2014), which covers a wide array of action-oriented topics, such as development led by youth, "realizing equal access to quality education," and "full employment and entrepreneurship."[229] In 2015 at the World Education Forum in Incheon, Republic of Korea, the *Education 2030: Incheon Declaration and Framework for Action* identified challenges to educating youth for sustainable development, including gender disparity in education, poor quality education, and a lack of involvement of youth in social areas.[230]

The 2030 Agenda and the SDGs build on previous work laid out by the UN, and contain a significant focus on the inclusion of youth as equal stakeholders.[231] Furthermore, SDGs 4, 8, and 13 place a concrete emphasis on youth empowerment and environmental concerns.[232] SDG 4, "ensuring inclusive education and life-long learning," outlines the necessity to ensure all youth attain the knowledge required to promote sustainable development.[233] Likewise, SDG 8, which addresses "promoting inclusive economic growth and productive employment," highlights that the inclusion of youth and the protection of the environment are interrelated with the world's economic growth.[234] Crucial to the UN Environment Assembly's (UNEA) work, SDG 13, on the necessity to "take action to combat climate change," re-emphasizes the vital role of education as it relates to climate change mitigation.[235] Overall, the 2030 Agenda's theme of inclusion emphasizes that youth are equal and important partners for sustainable development.[236]

Role of the International System

As the governing council for the UN Environment Programme (UNEP), UNEA plays a unique role in discussing the future of sustainability in relation to youth.[237] With the assistance of over 800 universities globally, UNEP initiated the Global Universities Partnership on Environment for Sustainability (GUPES), which aims to empower youth by incorporating sustainability concerns into teaching, community engagement, and student participation.[238] While the objectives of GUPES are ambitious, UNEA recognizes that it plays an imperative function in preparing young people for potential climate change impacts.[239] In addition to GUPES, UNEP is committed to including youth in discussions about the environment, and as such, "children & youth" are recognized as one of UNEP's Major Groups & Stakeholders, with 16 accredited youth organizations working closely with UNEP to further youth's presence in

[225] UNESCO, *Aichi-Nagoya Declaration on Education for Sustainable Development*, 2014, p. 1.
[226] Ibid.
[227] World Conference on Youth 2014, *Colombo Declaration on Youth: 'Mainstreaming Youth in the Post-2015 Development Agenda,'* 2014.
[228] Ibid.
[229] Ibid.
[230] UNESCO, *Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Education*, 2016.
[231] UNDP et al., *#Generation2030: Torchbearers for the SDGs*, 2015, p. 2.
[232] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[233] Ibid., p. 17.
[234] Ibid., p. 19
[235] Ibid., p. 23.
[236] UN DPI, *Success of 2030 Agenda Depends on Empowering Young People, Speakers Tell Social Development Commission, Stressing Perils of Exclusionary Economic Growth*, 2017.
[237] UNEP, *UNEA 2: Delivering on the Environmental Dimension of the 2030 Agenda for Sustainable Development*, 2017.
[238] UNEP, *Global Universities Partnership on Environment for Sustainability.*
[239] Ibid.

the environment.[240] As a major stakeholder, youth can directly influence environmental matters by working with UNEP at the intergovernmental level, by sharing insight about pressing environmental concerns.[241]

In 2016, UNEP released its *2018-2021 Medium Term Strategy* that outlined the role that the organization will play in achieving the SDGs.[242] Notably, this strategy outlines that UNEP is willing to make their environmental efforts open to all, and that UNEP is increasingly committed to "creating and strengthening spaces for conversation with and among youth and millennials."[243] In its *10-Year Framework of Programmes on Sustainable Lifestyles and Education*, UNEP states that humanity's present-day ecological footprint is "about one and half times the Earth's total capacity to provide…resources to humanity."[244] To aid in combating these detrimental environmental effects, the program emphasizes sustainable development approaches that start at local levels, singling out youth as primary agents of change.[245] In 2003, the Governing Council of UNEP, the predecessor of UNEA, adopted the *Tunza Youth Strategy* as its primary initiative for involving youth in sustainable environmental practices.[246] The strategy's goal was to engage youth in the work of the committee through environmental conservation activities, thus giving youth exposure to what it means to be an environmentally-conscious citizen.[247]

UNEP recognizes that progress in any area, including in the integration of youth for sustainable development, is unlikely to occur unless synergetic partnerships with other organizations are fostered.[248] As such, UNEP acknowledges the importance of advancements made by other UN organs concerning sustainable development.[249] Highlighting its commitment to sustainable development and education, the UN General Assembly adopted resolution 57/254 of 2003, which declared the period from 2005 to 2014 the Decade of Education for Sustainable Development (DESD).[250] Having been selected to lead the DESD, UNESCO committed itself to "catalys[ing] new partnerships" with youth, thereby giving youth recognition as valuable participants in the DESD.[251] As the DESD was nearing its final years, UN-Habitat published a working paper titled *Young People, Participation, and Sustainable Development in an Urbanizing World*, through which it outlined key topics, such as "youth and sustainable development" and "young people and political participation."[252] In 2003, the UN Department of Economic and Social Affairs, Division for Social Policy and Development began the biennial publication of *The World Youth Report* (WYR), and since then it has become a flagship publication on youth issues.[253] Specifically, the WYR of 2005 states that youth empowerment is to be taken seriously, and that with the right guidance, youth can be an important force in fixing complex issues, inter alia the achievement of sustainable development.[254] The 2010 WYR report on Youth and Climate Change is particularly relevant to UNEA's mandate, as it presents climate change as a major threat while detailing the role youth can play in mitigating climate change.[255]

In January 2013, then Secretary-General Ban Ki-moon created the Office of the Secretary-General's Envoy on Youth, demonstrating a renewed obligation to the equal integration of youth at all levels.[256] The Envoy's priorities are guided by the WPAY and focus on participation, advocacy, partnership, and harmonization, all with respect to youth empowerment.[257] The Envoy fosters youth empowerment to achieve the SDGs by facilitating youth's

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[240] UNEP, *Children and Youth.*
[241] UNEP, *About Major Groups & Stakeholders.*
[242] UNEP, *Medium Term Strategy 2018-2021,* 2016.
[243] Ibid.
[244] UNEP, *The 10YFP Programme on Sustainable Lifestyles and Education*, 2014.
[245] Ibid.
[246] UNEP, *Children and Youth.*
[247] UN DESA DSPD, *World Youth Report 2005: Young People Today, and in 2015*, 2005, p. 82.
[248] UNEP, *Medium Term Strategy 2018-2021,* 2016, p. 13.
[249] Ibid., p. 16.
[250] UN General Assembly, *United Nations Decade of Education for Sustainable Development (A/RES/57/254)*, 2003.
[251] UNESCO, *United Nations Decade of Education for Sustainable Development (2005-2014): International Implementation Scheme*, 2005, p. 15.
[252] UN-Habitat, *Young people, participation, and sustainable development in an urbanizing world*, 2012, p. 5.
[253] UN DESA DSPD, *The World Youth Report on Youth Civic Engagement*, 2016, p. 6.
[254] UN DESA DSPD, *World Youth Report 2005: Young People Today, and in 2015*, 2005, p. 62.
[255] Ibid., p. 62.
[256] UN DPI, *Envoy's Workplan*.
[257] Ibid.

representation in government, economy, and society.[258] Within the field of education, UNEP began its Environmental Education and Training Unit (EETU) in 2014, dedicated to promoting environmentally ethical behavior with the goal of creating engaged, sustainable citizens and ecologically-sustainable societies.[259] With the concept of inclusion in mind, the UN Economic and Social Council (ECOSOC) convened the 2016 Youth Forum, where representatives highlighted that in order for youth to take action to make the SDGs a reality, priority areas such as youth education on sustainable development, youth empowerment, and youth employment and entrepreneurship needed to be established.[260] This same year, UNESCO and UNEP created the *Youth X-change: Green Skills and Lifestyles Guidebook*, a comprehensive guide that fills in the gap between youth's knowledge about the green economy and their ability to make sustainable development and green jobs attainable.[261] The guidebook does this by focusing on the idea that "a green economy needs green skills to work;" thus, it presents the green economy as an attainable goal for youth that can be achieved through realistically promoting green entrepreneurship, environmental innovation, sustainable livelihoods, and sustainable partnerships.[262]

Aside from UNEP's work on this topic, other bodies, including the High-Level Political Forum on Sustainable Development (HLPF), UNESCO, civil society organizations (CSOs), and the private sector, have contributed and continue to contribute to ensuring that youth are involved in sustainable development.[263] For example, the Action Initiative for Youth and Women on SDGs was created to incorporate women, youth, and young girls into the achievement of the SDGs; in the last two years, this initiative, led by multiple partners, has empowered over 300 young people and has had a direct impact on the lives of about 20,000 women and youth.[264] Similarly, civil society, composed of groups such as business and industry, governments, non-governmental organizations (NGOs), the scientific and technological communities, and women, serve multiple roles when it comes to implementing UNEP's programs on youth.[265] This multifaceted role allows CSOs to provide technical, economic, and legal expertise; serve as intermediaries between UNEP and local communities; foster regional and international accountability; raise awareness that engages the public in an informative, unbiased manner; and create new generations of responsible and empowered children and youth.[266]

Education for Youth Empowerment

UNEP emphasizes that the first step to building a greener future for all is to improve the quality and accessibility of education for youth.[267] Doing so allows young people to become informed members of society and consequently allows them to develop a concrete understanding of the importance, relevance, and applicability of sustainability- and environmentally-conscious development.[268] However, over 100 million youth do not have a basic understanding of reading, grammar, writing, and other literacy skills, while over 60 million children do not attend school.[269] Providing youth with equitable education not only reduces these disparities and challenges, but also prepares young people to rise to overcome barriers facing them and their natural environment.[270]

In some regions, education may be "poorly adapted to the cultural and linguistic contexts of particular groups."[271] Translating this to environmental education, poor quality education reinforces inequality and reduces youth participation in sustainable development.[272] Conversely, high-quality information about sustainability and green development allows learners to make considerate choices about their lifestyles, and empowers youth not only to live

[258] UN DPI, *Envoy's Workplan.*
[259] UNEP, *About Education and Training.*
[260] UNESCO, *Youth Taking Action to Implement the 2030 Agenda Informal Summary*, 2016, p. 1.
[261] UNESCO & UNEP, *YouthXchange: Green Skills and Lifestyles Guidebook*, 2016, p. 4.
[262] Ibid.
[263] UN ESCAP, *UN and SDGs, A Handbook for Youth*, 2017.
[264] UN DESA, *Action Initiative for Youth and Women on SDGs.*
[265] UNEP, *Major Groups.*
[266] Ibid.
[267] UNESCO & UNEP, *YouthXchange: Green Skills and Lifestyles Guidebook*, 2016, p. 4.
[268] Ibid.
[269] UNESCO, *Youth and Education*, p. 1.
[270] UNESCO & UNEP, *YouthXchange: Green Skills and Lifestyles Guidebook*, 2016, p. 4.
[271] UNESCO, *Youth and Education*, p. 39.
[272] UN ESCAP, *UN and SDGs, A Handbook for Youth*, 2017.

sustainably, but also to promote the benefits of a green and sustainable world.[273] Education empowers youth to teach and mentor others, and collaborate to find ways to develop sustainably.[274]

Moreover, incorporating environmental education through non-traditional means, such as through technical or vocational training, non-formal education and training, and general policy activities, allows youth to become empowered for life-long learning for sustainable development because it presents an integrated approach to educating youth both inside and outside schools.[275] For example, the Green School Campaign 2012 educated and empowered young Nepali students by teaching them how to adopt green, sustainable lifestyles and by allowing them to plant trees around more than 200 schools.[276] By teaching and encouraging youth to plant trees, this initiative provided youth with training focused on developing both educational and technical skills.[277]

In light of developing multi-purpose skills, UNEP's EETU helps develop activities that promote innovative, responsive environmental education aimed at: promoting efficient decision-making with respect to sustainable development; creating new eco-friendly behavior by encouraging sustainable lifestyles; and incorporating sustainable development into the education systems of Member States.[278] The EETU serves a unique role for UNEP because it ensures that UNEP's objectives are implemented in locally relevant ways that allow teachers and youth to undergo training on how to live sustainably and how to spread sustainability.[279] Another notable initiative begun by the EETU was its offering of Massive Open Online Courses (MOOCs) on topics such as Disasters and Ecosystems: Resilience in a Changing Climate.[280] MOOCs, which can be accessed online by any user with a connection to the internet, allow UNEP to efficiently spread knowledge across borders, educate interested youth, and raise awareness about pressing environmental matters.[281] This initiative empowers youth because it allows them to become equipped with the information needed to address sustainable development in real-world scenarios.[282]

Youth Unemployment and the Green Economy

High rates of underemployment and unemployment have a serious detrimental effect on young people's economic, social, and civic engagement, because it impedes them from achieving their full rights as human beings.[283] Even if the youth labor force continues to grow worldwide, employment opportunities remain relatively limited, leading youth to make up over 40% of the world's total unemployed population.[284] Nonetheless, the global youth labor force is gradually shrinking, and one of the reasons for this is that more young people are seeking a job in new sectors, such as those in the green economy.[285] The term green economy is defined as an economy that views the environment as "an enabler of economic and social development;" therefore, the green economy helps to reduce the negative environmental impact of the traditional economy.[286] Moving towards a green economy can significantly reduce many of the global issues in the world today, such as climate change, economic depressions, and youth unemployment, because sustainable growth can reverse environmental degradation, yet support and expand international economies.[287] Achieving a green economy does not solely indicate protecting the environment, nor does it imply engaging in a unilateral solution to achieve sustainability, but rather a multilateral relationship involving youth, Member States, the environment, the private sector, training institutions, CSOs, and UN bodies.[288]

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[273] UN ESCAP, *UN and SDGs, A Handbook for Youth*, 2017, p. 24.
[274] UNESCO & UNEP, *YouthXchange: Green Skills and Lifestyles Guidebook*, 2016, p. 39.
[275] Ibid., p. 40.
[276] Ibid.
[277] Ibid.
[278] UNEP, *About Education and Training*.
[279] Ibid.
[280] UNEP, *Massive Open Online Courses (MOOC) on Disasters and Ecosystems: Resilience in a Changing Climate.*
[281] Ibid.
[282] Ibid.
[283] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[284] UNDP, *UNDP Strategy on Civil Society and Civic Engagement*, 2012, p. 7.
[285] UN DPI, *New UN report shows global youth unemployment rate still above financial crisis levels*, 2015.
[286] UNESCO & UNEP, *YouthXchange: Green Skills and Lifestyles Guidebook*, 2016, p. 7.
[287] UNEP, *The Transition to a Green Economy: Benefits, Challenges and Risks from a Sustainable Development Perspective*.
[288] Ibid.

Young people's transition from schools to the labor market marks a pivotal phase in their life, yet oftentimes their voices, experiences, and needs remain unheard.[289] Furthermore, young people are frequently trained for skills, but the job market does not match their skillset, leaving them unemployed or employed in vulnerable jobs that expose them to dangerous conditions.[290] To meet the needs of youth and promote their employment, the private sector, CSOs, NGOs, and Member States may invest in expanding their green infrastructure and green projects so as to develop their economies sustainably while reducing youth unemployment rates.[291] In light of the need to empower youth through green jobs, Solar Sister, a social entrepreneurship business in Africa, trains young women to become entrepreneurs in the green energy sector.[292] While similar projects have assisted in combating unemployment, increased action is needed in the green economy to meet the 40 million youth projected to join the labor market each year.[293] Even a two percent investment in the green economy could result in the creation of 10 to 20 million jobs and provide opportunities for young people's acquired skills to be used in innovative ways.[294] The creation of jobs that provide a living wage, employee rights, and social protections encourages youth to enjoy economic growth, social cohesion, and environmental sustainability, the three areas of sustainable development.[295] UNICEF's publication *Youth in Action on Climate Change: Inspirations from Around the World* demonstrates the incredible potential youth have to be at the forefront of creating new projects that reduce youth unemployment by engaging in projects that are in line both with UNEA's mandate and with the desire to promote awareness about climate change and its detrimental effects.[296] Furthermore, the projects included in the publication serve as a reminder for the international community that youth have the capabilities needed to engage in sustainable development, but they must be given access to the proper training to do so.[297]

Conclusion

It is important to recognize youth not only as beneficiaries of sustainable development, but also as key stakeholders who can shape the future direction of the 2030 Agenda.[298] Sustainable development cannot and will not be achieved if future generations are not empowered to participate fully at the regional, national, and global levels.[299] Member States may look at successful initiatives, such as Nepal's Green School Campaign, that have effectively integrated education to empower youth.[300] Through making youth key stakeholders in sustainable development, UNEA remains on track to realizing an inclusive, environmentally-conscious world envisioned by youth themselves.[301] The international community can integrate youth at every level, particularly by respecting the fundamental rights of youth and by improving youth's access to education and employment; by doing so, youth can become an empowered, dynamic force of social transformation towards sustainable development and a better future for all.[302]

Further Research

As delegates explore the topic at hand, they should keep in mind the following questions: Aside from employment and education, what else can be done to empower youth? How can Member States integrate youth wholly into sustainable development initiatives? What can the UN system, CSOs, and the private sector do to facilitate youth empowerment in light of UNEA's mandate? What role does UNEA play in providing youth with the tools they need to achieve sustainability? How can the UN facilitate the implementation process of programs aimed at empowering youth? What are some challenges or opportunities youth face that would impede or assist them in the process to becoming agents of change? How can UNEA work with other stakeholders to meet the targets outlined in the SDGs, particularly those that pertain directly to this topic? What are the current and future responsibilities of the

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[289] UN ESCAP, *UN and SDGs, A Handbook for Youth*, 2017, p. 35.
[290] Ibid.
[291] UNESCO & UNEP, *YouthXchange: Green Skills and Lifestyles Guidebook*, 2016.
[292] Ibid., p. 29.
[293] UN DESA, *Youth Civic Engagement*, 2016, p. 28.
[294] Burrow, *What if unemployment threatens our democratic way of life?*, 2012.
[295] UN DESA, *Sustainable development through decent jobs for youth.*
[296] UNICEF, *Youth in action on climate change: inspirations from around the world*, 2013.
[297] Ibid.
[298] UN ESCAP, *UN and SDGs, A Handbook for Youth*, 2017, p. 7.
[299] Ibid., p. 31.
[300] UNESCO & UNEP, *YouthXchange: Green Skills and Lifestyles Guidebook*, 2016, p. 40.
[301] UNESCO, *Youth Taking Action to Implement the 2030 Agenda Informal Summary*, 2016.
[302] UN ESCAP, *UN and SDGs, A Handbook for Youth*, 2017, p. 30.

international community when it comes to promoting youth empowerment, and how can this promote sustainable development overall?

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This report, authored by the Dutch UN Youth Representatives, offers delegates a Member State's insight on how to properly and effectively implement the SDGs for youth. Furthermore, it includes specific statistics on global youth population and demographics. The report also explores different innovative technologies that youth have created with the goal of sustainably developing their communities. It includes an overview of how a specific youth group successfully incorporated goals to implement the SDGs in their community, which may help delegates realize that youth can and do have the potential to lead the SDGs. Delegates may also find this document useful because it explains how the 2030 Agenda ties into the topic of youth in a simple, concise, and effective manner.

United Nations Children's Fund. (2013). *Youth in action on climate change: inspirations from around the world* [Brochure]. Retrieved 25 August 2017: https://www.unicef.org/education/files/Publication_Youth_in_Action_on_Climate_Change_Inspirations_from_Around_the_World_English.pdf

This publication is a detailed brochure compiled by the United Nations (UN) Children's Fund (UNICEF). The document includes information on climate change and showcases how certain young individuals and youth organizations have responded to mitigate and/or combat its effects. The publication is broken up into five main topics: "uncovering mitigation potential," "gearing up for the storm," "nurturing young leaders," "spreading the message," and "shaping up the future climate change regime," and each one encompasses various cases of youth-led initiatives. Delegates should pay particular attention to topics relating to sustainable development and to how youth are able to bring about change successfully. In addition, delegates can use this source to learn more about real-world examples of youth projects that are "by youth, for youth."

United Nations, Department of Economic and Social Affairs. (2010). *World Programme of Action for Youth*. Retrieved 25 August 2017 from: http://www.un.org/esa/socdev/unyin/documents/wpay2010.pdf

This document, originally published in 1995, marks one of the first comprehensive efforts of the international community to engage with youth, and thus represents an invaluable source for delegates to become acquainted with foundational issues related to youth. This report encourages Member States to increase opportunities for youth, emphasizing that strengthening national capacities allows youth to become directly involved in their local and regional communities. Moreover, the Programme provides a holistic overview of youth's role in development, including the state of youth in the world, the challenges and opportunities they face, and ways to surpass youth barriers. This document is particularly useful because it highlights 15 priority areas for youth empowerment, such as education, employment, hunger and poverty, environment, and health. Delegates may utilize the "proposals for action" section under each of the priority areas to better understand how Member States can address this topic to ultimately improve the livelihood of youth.

United Nations, Department of Economic and Social Affairs, Division for Social Policy and Development. (2016). *The World Youth Report on Youth Civic Engagement*. Retrieved 25 August 2017 from: http://www.unworldyouthreport.org/images/docs/un_world_youth_report_youth_civic_engagement.pdf

The UN UN DESA World Youth Report on Youth Civic Engagement *was inspired by the desire to add a civic engagement component to the biennial publication of* The World Youth Report, *and it reveals a collaborative effort that was made possible through the contributions of experts on the topic of youth and civic engagement. This publication aims to provide a catalyst for action and dialogue so that youth may be able to participate fully in their societies. Within the document, delegates will find three main components that pertain to youth: economic, political, and*

community engagement. Inside each of these sections, there is information that ties in civic engagement and youth empowerment, conveying the idea that for youth to have a voice, they must be allowed to become civically engaged. This report is useful for delegates seeking to learn more about the political and societal aspects of youth empowerment and engagement.

United Nations, Economic and Social Council. (2016). *Youth Taking Action to Implement the 2030 Agenda: Informal Summary*. Retrieved 25 August 2017 from: https://www.un.org/ecosoc/sites/www.un.org.ecosoc/files/files/en/2016doc/2016-youth-forum-summary.pdf

ECOSOC's informal summary provides a user-friendly, easy-to-read outline of the 2016 Youth Forum that was attended by youth representatives, Member States, and other key stakeholders. It includes a breakdown of the topics discussed at the forum, key messages to take away, and highlights of the discussions held in plenary sessions. Furthermore, it includes a section on the "Global Initiative on Decent Jobs for Youth," a UN system-wide initiative to promote youth employment, and a section on the "Specific analysis and recommendations to enhance partnerships involving youth." Both sections provide action-based focal points to empower youth. Delegates should use this source to learn more about the UN's approach to youth unemployment and the importance of multi-stakeholder partnerships when it comes to assisting youth. Also, delegates may find this document useful due to its discussion of youth as change-makers.

United Nations Educational, Scientific and Cultural Organization. (2016). *Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Education*. Retrieved 25 August 2017 from: http://uis.unesco.org/sites/default/files/documents/education-2030-incheon-framework-for-action-implementation-of-sdg4-2016-en_2.pdf

Both the Incheon Declaration *and the* Framework for Action, *which are linked in this document, serve to establish the interconnectedness of education and youth empowerment. Because the* Incheon Declaration *is UNESCO's primary education agenda until 2030, delegates wishing to learn more about current sustainable education initiatives should consider analyzing those mentioned in the* Incheon Declaration. *Within this publication, delegates may explore the points included in the* Incheon Declaration, *all of which reemphasize the commitment of the international community to achieve equitable education. Moreover, the second portion of the publication focuses on strategic, dynamic steps towards ensuring that education remains accessible to all, regardless of age, sex, or financial status. While reading, delegates should attempt to keep in mind that the education targets, strategies, and implementation modalities mentioned can all directly lead to an empowered generation of youth who may lead sustainability initiatives.*

United Nations Educational, Scientific and Cultural Organization & United Nations Environment Programme. (2016). *YouthXchange: Green Skills and Lifestyles Guidebook*. Retrieved 30 September 2017 from: http://wedocs.unep.org/bitstream/handle/20.500.11822/8641/-YouthXchange_guidebook_series_Green_skills_and_lifestyles-2016youthXchange_green_skills.pdf.pdf?sequence=2&isAllowed=y

The YouthXchange: Green Skills and Lifestyles Guidebook *presents a comprehensive approach by two major UN bodies, UNESCO and UNEP, to delineate, discuss, and provide suggestions on the topic of youth in sustainable development, specifically as it pertains to topics such as the green economy, green jobs, sustainable entrepreneurship, sustainable lifestyles, and educating youth for sustainable futures. As such, this document covers most, if not all, key areas discussed in this topic of the Background Guide. Reading about these subjects allows delegates to gain a better understanding of what sustainable development means, how it can be realistically achieved, and what current statistics and situations reveal about the future of sustainable development. From this, delegates may take the knowledge and apply it to other information they read about youth to assess how youth can further UNEP's vision and goals in light of the green economy.*

United Nations Human Settlements Programme. (2012) *Young people, participation, and sustainable development in an urbanizing world* [Report]. Retrieved 25 August 2017 from: http://www.youthpolicy.org/library/documents/young-people-participation-and-sustainable-development-in-an-urbanizing-world/

While the title of the UN Human Settlements Programme's (UN-Habitat) report highlights an urbanizing world, the report is much more comprehensive than merely focusing on issues that relate to urban development. The sections of this report include youth and sustainable development, young people and civil/political participation, and the political and economic contests of youth marginalization. Delegates will find the aforementioned sections very useful as they are the most relevant to youth empowerment. In particular, delegates should focus on how UN-Habitat portrays youth participation and youth education as crucial to the achievement of sustainable development.

United Nations Population Fund. (2014). *The Power of 1.8 Billion: Adolescents, Youth and the Transformation of the Future: UNFPA State of World Population 2014* [Report]. Retrieved 25 August 2017 from: https://www.unfpa.org/sites/default/files/pub-pdf/EN-SWOP14-Report_FINAL-web.pdf

This document is critical in understanding the statistics, challenges, and possibilities associated with youth in the 21st century. As a relatively recent report, it adequately portrays the state of youth, sheds light on how to address youth empowerment, and includes useful information related to education, employment, policy, and governance, as well as other topics that affect youth's lives. It is organized into 10 sections, all of which pertain to the topic at hand, from obstacles impeding youth empowerment to the future of sustainable development, with youth at its core. Additionally, it gives solutions, suggestions, and alternatives on how the international community and Member States can best give youth access to schooling, training, and sustainable development knowledge. Overall, the information provided allows delegates to gain a unique, unparalleled view of the significant role youth play and will continue to play in the achievement of the current development agenda.

World Conference on Youth 2014. (2014). *Colombo Declaration on Youth: 'Mainstreaming Youth in the Post-2015 Development Agenda.'* Retrieved 25 August 2017 from: http://www.cfa-international.org/userfiles/files/colombo-declaration-on-youth-final.pdf

The Colombo Declaration on Youth*, which incorporates the theme "Mainstreaming Youth in the Post-2015 Development Agenda," is the outcome document of a meeting focusing on empowering youth for sustainable development that was attended by record numbers of youth and youth representatives. The document covers a wide array of topics, such as inclusive youth-led development, poverty eradication, food and nutrition security, realizing equal access to quality education, full employment and entrepreneurship, and other issues. Because of the far-reaching nature of the Colombo Declaration, delegates may learn about the current state of youth and what must be done to guarantee their successful inclusion into development. Delegates should take particular notice of the sections connected to UNEA's work so that they can facilitate their research.*

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III. The Impact of Pollution on Marine Life

Introduction

As recognized in the United Nations (UN) Sustainable Development Goal (SDG) 14 of the *2030 Agenda for Sustainable Development* (2015), oceans are essential to the continued survival of much of the world's food, drinking water, climate, and oxygen supply, requiring careful management and protection.[303] Oceans provide approximately half the oxygen that humans require, absorb over a quarter of the carbon dioxide humanity produces, and represent 99% of the living space on Earth by volume.[304] Furthermore, the flora and fauna that inhabit oceans are some of the most biodiverse on the planet, with at least 200,000 identified individual species.[305] The marine environment, however, faces pressure from human activity at almost every level.[306] A significant challenge to the continued health of this environment comes from pollutants resulting from human activity, including plastic debris, solid waste, chemical runoff, and improperly handled toxic pollutants and sewage.[307] These pollutants produce a myriad of effects, both short- and long-term, and serve to endanger the sustained health of the marine environment and the human systems and processes that depend on it.[308] In its report to the UN General Assembly, the inaugural UN Ocean Conference of July 2017 recognized that "the well-being of present and future generations is inextricably linked to the health…of our oceans," and that human activity must evolve towards a more sustainable model in its use of and relationship with the marine environment.[309]

Marine pollutants do not originate from a singular input, instead being comprised of multiple substances and associated sources, each of which involves its own contexts, causes, and effects.[310] The largest category of these is pollutants originating from land-based sources, which make up approximately 80% of all marine pollution and consist primarily of agricultural and industrial runoff, sewage waste, and ocean debris.[311] While the movement of materials from land to ocean, either via waterways or via air, is a natural and expected part of the hydrological cycle, a growing body of scientific evidence shows that the accumulation of these inputs is resulting in a number of adverse effects on marine life.[312] For example, toxic substances that result from industry can interfere with the reproductive systems of marine animals and, in high doses, ultimately prove toxic.[313] Agricultural runoff can produce hypoxic "dead zones" of ocean unable to support aquatic life, while solid ocean debris, primarily plastic, can result in the entanglement of or ingestion by marine animals that often proves fatal.[314] Despite many international resolutions and frameworks of action, pollutants remain a growing and critical issue for the sustainable development of the world's oceans that will require continuous and interconnected work to properly adapt human activity so as to preserve the security of the marine environment.[315] This guide will outline the primary sources and components of marine pollution and how these interact with the environment into which they are released. It will also discuss the relevant work of the UN Environment Assembly (UNEA) in its role as the primary governance body for environmental matters, as well as that of the broader UN system and the international community.

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[303] UN DPI, *Goal 14: Conserve and Sustainably use the Oceans, Seas and Marine Resources*.
[304] Ibid.
[305] Ibid.
[306] Bernal et al., *First Global Integrated Marine Assessment: Chapter 54. Overall Assessment of Human Impact on the Oceans*, 2016, p. 1.
[307] UN Ocean Conference, *Concept Paper: Partnership dialogue 1: Addressing marine pollution*, 2017.
[308] Ibid.
[309] UN General Assembly, *Report of the UN Conference to Support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development (A/RES/70/226)*, 2017.
[310] Bernal et al., *First Global Integrated Marine Assessment: Chapter 54. Overall Assessment of Human Impact on the Oceans*, 2016, p. 2.
[311] UN Ocean Conference, *Concept Paper: Partnership dialogue 1: Addressing marine pollution*, 2017.
[312] Bernal et al., *First Global Integrated Marine Assessment: Chapter 54. Overall Assessment of Human Impact on the Oceans*, 2016; Simcock et al., *First Global Integrated Marine Assessment: Chapter 20. Coastal, Riverine and Atmospheric Inputs from Land*, 2016.
[313] Simcock et al., *First Global Integrated Marine Assessment: Chapter 20. Coastal, Riverine and Atmospheric Inputs from Land*, 2016, pp. 8-9.
[314] UN Ocean Conference, *Concept Paper: Partnership dialogue 1: Addressing marine pollution*, 2017.
[315] Ibid.

International and Regional Framework

International frameworks on the subject of marine pollution only truly developed in the late 1960s, with the previous widespread thinking being that the ocean could assimilate anything that human activity discarded into it.[316] The recognition of the impact of humanity on the marine environment developed in the 1960s and 1970s; one of the first instances of UN recognition of this relationship came in 1968 at the UN Educational, Scientific and Cultural Organization's (UNESCO) Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere, which was subsequently reinforced by the adoption of the *Declaration of the United Nations Conference on the Human Environment* (1972), otherwise known as the Stockholm Declaration.[317] This declaration was seminal in outlining the impact that humankind has had on the environment and devised 26 principles concerning it, including the prevention of oceanic pollution and the need for natural resources to be protected.[318] In doing so, the Stockholm Declaration provided a broad foundation for the subsequent frameworks that were to follow.[319]

The first detailed, policy-driven legislation was adopted with the *International Convention for the Prevention of Pollution from Ships* (MARPOL Convention) (1973).[320] Although initially focused only on pollution resulting from abandoned ships, its 1978 Protocol and subsequent annexes gradually expanded its remit to encompass legislation on the prevention of oil tanker discharge, pollution resulting from bulk liquids, ship-based sewage, and ship-based air pollution, among others.[321] This was developed with the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter* (London Convention) (1972), which brought into effect the prohibition of the dumping of vessels, aircraft, and structures at sea.[322]

The *United Nations Convention on the Law of the Sea* (UNCLOS) (1982) was the first international convention that outlined the broad set of rights and responsibilities of each Member State in relation to nearly all aspects of oceanic management, ranging from territorial disputes, free passage, and, importantly, the conservation of the oceanic environment.[323] This framework outlines the fundamental responsibility of all states to preserve the health of the ocean, while providing specific powers to coastal states in order to enforce national regulations on pollutants.[324] Articles 194 and 195 broadened the definitions of marine pollutants originally outlined by the London Convention so as to include any land-based sources, and detailed the duty of Member States to prevent the transfer of pollutants from any other area into the ocean.[325]

As awareness of the issue of marine pollution increased, so did the understanding that issues pertaining to the ocean crossed beyond national borders and therefore required an international and interconnected response.[326] The conception of the international effort towards sustainable development, including the protection of the environment, can be found in the 1992 UN Conference on Environment and Development (UNCED) and its *Agenda 21* outcome document.[327] *Agenda 21* provided detailed analysis and policy guidance on an integrated approach to the protection of the marine environment, including calling for "preventative and…anticipatory approaches to avoid[ing] degradation," the incentivizing of clean technologies to prevent marine pollution, and the "priority action" to

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[316] Simcock et al., *First Global Integrated Marine Assessment: Chapter 20. Coastal, Riverine and Atmospheric Inputs from Land*, 2016, p. 1.
[317] UN Conference on the Human Environment, *Declaration of the United Nations Conference on the Human Environment*, 1972.
[318] Handl, *Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), 1972 and The Rio Declaration on Environment and Development, 1992*, 2012, pp. 1-2.
[319] Ibid.
[320] UNESCO, *Intergovernmental conference of experts on the scientific basis for rational use and conservation of the resources of the biosphere*, 1968, p. 4; IMO, *International Convention for the Prevention of Pollution from Ships (MARPOL),* 1973.
[321] IMO, *International Convention for the Prevention of Pollution from Ships (MARPOL),* 1973.
[322] IMO, *Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London Convention 1972): Compilation of the full texts of the London Convention (1972) and of the 1996 Protocol thereto*, 1972.
[323] UNCLOS III, *The United Nations Convention on the Law of the Sea*, 1982.
[324] Ibid.
[325] Ibid.
[326] Ibid.
[327] Ibid.

establish monitoring programs on all oceanic discharges and emissions in cooperation with regional partners.[328] The conference also marked the opening for signature of the *Convention on Biological Diversity* (1992), which recognized the need for Member States to protect ecosystems from the unsustainable use of natural resources.[329] Nearly 20 years later, the *Honolulu Strategy* (2011), a collaboration between the UN Environment Programme (UNEP) and the Marine Debris Program, specifically addressed a prominent threat to marine fauna in adopting non-binding proposals for international collaboration on the reduction of marine debris, including plastic pollutants, and called for greater cooperation between non-governmental organizations (NGOs), civil society actors, and national governments.[330] These frameworks have contributed to the contemporary international approach to oceanic pollution, as encapsulated by SDG 14, which calls for focused and urgent actions to combat water pollution in all its forms.[331] Target 14.1 has specifically called for the reduction of oceanic debris and nutrient pollution by 2025.[332]

Role of the International System

As the world's "highest-level decision-making body on the environment," UNEA provides leadership and facilitates national cooperation on matters pertaining to environmental protection, including marine pollution.[333] Its work is broadly normative in nature and is subsequently operationalized through its relationships with other UN institutions, as well as through the body over which it governs, UNEP.[334] In December 2017, UNEA will convene its third meeting, with the overarching theme being pollution and the protection of environments from pollution across air, land, waterways, and oceans.[335] It is expected to conclude with the adoption of a political declaration on pollution, outlining "realistic steps" in addressing pollution.[336] The declaration is expected to include commitments on the part of Member States to support the development of more accurate data collection methods, promote fiscal incentives to stimulate policy change, incentivize the uptake of new technology, and target global policy on controlling pollutants where there is clear scientific evidence as to their environmental impact.[337] All Member States have been given the opportunity to contribute to the consultations preceding the meeting, as well as to the background report, *Towards a Pollution-Free Planet* (2017), that has guided much of the preparatory discussions.[338] Various external stakeholders, including civil society networks and NGOs, contributed to these preparations through UNEP's Major Groups and Stakeholders network, with a full forum of these stakeholders taking place in November 2017, preceding the third UNEA meeting.[339]

With UNEA setting relatively broad policy frameworks, it is the responsibility of a variety of more specialized programs, under the coordination of UNEP and UNEA, to operationalize or develop individual aspects of environmental efforts.[340] This includes the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA).[341] The program provides "conceptual and practical guidance…to eliminate marine degradation" from land-based sources.[342] This includes scientific and legislative analysis of global approaches to marine pollution, discussions on financing to combat pollution, and the assessment of cooperation among various UN bodies focused on the topic.[343] These are developed both through regular research publications as

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[328] UNCED, *Agenda 21*, 1992.
[329] UNCED, *Convention on Biological Diversity*, 1992.
[330] Marine Litter Network, *The Honolulu Strategy: A Global Framework for Prevention and Management of Marine Debris*, 2011.
[331] UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.
[332] Ibid.
[333] UNEA, *About the UN Environment Assembly*, 2017.
[334] Ibid.
[335] UNEA, *UN Environment Assembly: Overview*, 2017.
[336] UNEA, *A Political Declaration on Pollution*.
[337] UNEA, *Zero Draft of the Ministerial Outcome Document of the 2017 UN Environment Assembly "Towards a Pollution-Free Planet,"* 2017, p. 2.
[338] UNEA, *Member States and Stakeholders inputs to the Ministerial Declaration*, 2017; UNEA, *Member States and Stakeholders inputs to the Background Report*, 2017; UNEA, *Towards a Pollution-Free Planet*, 2017.
[339] UNEA, *Member States and Stakeholders inputs to the Background Report*, 2017; UNCED, *Agenda 21*, 1992, p. 270.
[340] UNEP, *Governing the Global Programme of Action*; UNEA, *About the UN Environment Assembly*, 2017.
[341] UNEP, *Governing the Global Programme of Action*.
[342] Ibid.
[343] IISD, *Fourth Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities*, 2017.

well as conferences such as the regular Intergovernmental Review Meeting of the GPA, the fourth of which took place in October 2017 in the build-up to UNEA 3.[344] Other examples of the variety of work undertaken in this sphere include the UN International Coral Reef Action Network (ICRAN) and the Regional Seas Programme (RSP), the latter of which formulates action plans designed to engage neighboring coastal states to standardize their approach to marine protection.[345]

UNEA also works across the UN system with other agencies on this topic.[346] UNESCO cooperates with UNEP through the Intergovernmental Oceanographic Commission (IOC-UNESCO), which is tasked with improving the collation of oceanic monitoring data through such programs as the Global Ocean Observing System (GOOS).[347] This is supported through the work of the World Meteorological Organization (WMO), whose Technical Commission for Oceanography coordinates efforts to improve oceanic scientific analysis.[348] It has been noted that reliable data on the effects of marine pollution are still somewhat lacking and limit the potential effectiveness of efforts to alleviate pollution.[349] The International Maritime Organization (IMO) oversees "standard-setting" for the global shipping industry and is responsible for the prevention of marine pollution by ships.[350] These, and other interagency activities, are coordinated by UN-Oceans, whose responsibility is to provide a transparent mechanism for the "coordination, coherence and effectiveness" of the various agencies under whom ocean management rests.[351]

At a broader level, the General Assembly's annual appraisal on "Oceans and the Law of the Sea" will frequently look to highlight the issue of marine pollution, including resolution 62/215 of 2008 and resolution 63/111 of 2009, which highlighted the importance of building capacity for developing states' wastewater strategies and controlling ship-based pollution, respectively.[352] The General Assembly also often highlights the work of bodies such as UNEP or the IMO, such as in resolution 57/141 of 2002, which commended the latter in its work on preventing ship-based pollution.[353] General Assembly resolution 69/245 (2014) drew attention to the alarming increase in hypoxic "dead zones," areas that are unable to maintain a healthy ecosystem due to a lack of oxygen, and harmful algal blooms as a result of land-based pollutants and waste.[354]

Plastic Debris

According to the 2017 UNEA report, *Towards a Pollution-Free Planet*, 75% of the litter now found in the oceans is plastic waste, and by 2050, it is estimated that oceans will contain more of this debris than fish.[355] Larger plastic debris, known as macroplastics, including single-use waste such as shopping bags and long-term waste such as industrial plastic refuse, will generally enter the ocean ecosystem through disposal via waterways.[356] The most obvious impact of this on marine life is entanglement or accidental ingestion, which will generally lead to injury and death, with the most commonly affected species being larger animals such as whales, turtles, and seabirds.[357] For example, it was reported that death occurs in 80% of cases of entanglement.[358] This causes pressure on the biodiversity and environmental security of marine animals, particularly as animals with a high frequency of plastic

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[344] IISD, *Fourth Intergovernmental Review Meeting on the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities*, 2017.
[345] UN Partnerships for SDGs, *International Coral Reef Action Network*; UNEP, *Regional seas programmes*.
[346] GOOS, *What is GOOS?*; UN-Oceans, *About UN-Oceans*, 2017.
[347] GOOS, *What is GOOS?*
[348] UN-Oceans, *About UN-Oceans*, 2017.
[349] Simcock et al., *First Global Integrated Marine Assessment: Chapter 20. Coastal, Riverine and Atmospheric Inputs from Land*, 2016, pp.1-4.
[350] IMO, *Introduction to IMO*.
[351] UN General Assembly, *Oceans and the Law of the Sea (A/68/L.18)*, 2013, p. 47; UN-Oceans, *About UN-Oceans*, 2017.
[352] UN General Assembly, *Oceans and the Law of the Sea (A/RES/62/215)*, 2008; UN General Assembly, *Oceans and the Law of the Sea (A/RES/63/111)*, 2009.
[353] UN General Assembly, *Oceans and the Law of the Sea (A/RES/57/141)*, 2002, pp. 8-9.
[354] UN General Assembly, *Oceans and the Law of the Sea (A/RES/69/245)*, 2014, p. 33.
[355] UNEA, *Towards a Pollution-Free Planet*, 2017, p. 9; Wearden, More plastic than fish in the sea by 2050, says Ellen MacArther, *The Guardian*, 2016.
[356] UNEP GPA, *Marine Plastic Debris and Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change*, 2016, pp. 36-37.
[357] Ibid., pp. 88-91.
[358] UN CMS, *Report I: Migratory Species, Marine Debris and its Management*, 2014, p. 46.

entanglement or ingestion, such as loggerhead sea turtles and monk seals, are already classified as endangered.[359] Non-lethal impacts, such as amputation of limbs and death of muscle tissue, can impact an animal's ability to move and hunt, and may negatively impact regular migratory patterns.[360] There is also evidence to suggest that the chemicals used to manufacture plastic bags and packaging have toxicological effects on aquatic life when ingested as well as when predators, including humans, later consume these.[361] Macroplastic debris is particularly prevalent in oceanic gyres – subtropical convergence zones wherein two currents meet – with large areas of debris being transported and trapped in these areas.[362] The Great Pacific Garbage Patch is the most notable example of this phenomenon, covering a combined area of 7.7 million square kilometers of floating marine debris in the Central North Pacific Ocean, which is a hazard to marine life and Pacific migratory patterns.[363]

Whereas macroplastics are generally objects that are immediately visible, microplastics are defined as small particles measuring less than 5mm.[364] Microplastics are also of international concern and are intentionally used in the manufacture of certain healthcare and cosmetic products as well as in printing powders and industrial abrasives, and will pass through conventional waste filtration systems.[365] "Secondary microplastics" are also unintentionally produced when the fragmentation or breakdown of larger plastics occur.[366] Microplastics can be ingested by sea animals, with the toxic effects not only impacting the initial animal, but also being transferred up the food chain to larger predators.[367] Microplastics may also contribute to the dispersal of pathogens that can harm both marine life and human health, with some evidence suggesting that human ingestion of these can cause serious gastrointestinal disorders or hormonal imbalances.[368]

The 2016 report of the UNEP/GPA, *Marine Plastic Debris and Microplastics*, provides a number of recommendations for both short and long-term international policy development.[369] In the short-term, the report highlights the need for improved governance on plastic pollution and higher levels of enforcement for existing legislation, which would include sharing regional best practices while utilizing local knowledge to create governance that works for each Member State.[370] European states have been particularly successful in adopting Extended Producer Responsibility (EPR) legislation, which places greater responsibility on manufacturers to ensure safe disposal at the end of each product's life, thereby incentivizing both greener manufacturing materials and better waste strategies.[371] Contrastingly, a 2015 study found that over half of global plastic waste leakage stems from five primary producers – China, Indonesia, Philippines, Thailand, and Vietnam – and that a substantial cause of plastic waste leakage is insufficient waste collection strategies.[372] Relatively basic infrastructure changes were highlighted as necessary to decrease this, including optimizing transport links to refuse sites, increasing waste collection services and recycling capacity, and implementing waste-to-fuel technologies in order to treat waste.[373]

As highlighted in the 2016 UNEP Policy Toolkit on Plastic Debris, national governments are increasingly seeking to implement legislation that limits the root source of plastic production.[374] Ireland was a leader in implementing a five-cent plastic bag tax, which decreased plastic bag consumption by 90%, with several other Member States following

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[359] Secretariat of the CBD, *Impacts of Marine Debris on Biodiversity: Current Status and Potential Solutions*, 2012, pp. 9-10.
[360] UN CMS, *Report I: Migratory Species, Marine Debris and its Management*, 2014, p. 47.
[361] Secretariat of the CBD, *Impacts of Marine Debris on Biodiversity: Current Status and Potential Solutions*, 2012, p. 20.
[362] Alsopp et al., *Plastic Debris in the World's Oceans*, p. 7.
[363] National Geographic Society, *Great Pacific Garbage Patch*; UN CMS, *Report I: Migratory Species, Marine Debris and its Management*, 2014.
[364] UNEP GPA, *Marine Plastic Debris and Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change*, 2016, p. 39.
[365] UNEA, *Marine Plastic Litter and Pollution (2/11) (UNEP/EA.2/Res.11)*, 2016, p. 2; UNEP GPA, *Marine Plastic Debris and Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change*, 2016, p. 39.
[366] UNEP GPA, *Marine Plastic Debris and Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change*, 2016, p. 39.
[367] Ibid., p. 97.
[368] Ibid.
[369] Ibid., pp. 112-155.
[370] Ibid., p. 119.
[371] Secretariat of the CBD, *Impacts of Marine Debris on Biodiversity: Current Status and Potential Solutions*, 2012, p. 31.
[372] Ocean Conservancy, *Stemming the Tide: Land-based strategies for a plastic-free ocean*, 2015, p. 7.
[373] Ibid., p. 8.
[374] UNEP, *Marine Litter Legislation: A Toolkit for Policymakers*, 2016, pp. 23-33.

this example.[375] Certain governments, such as Vanuatu, have banned single-use polystyrene foam items such as cups and plates and have incentivized compostable alternatives.[376] Non-governmental actors, including charities, civil society, and individual citizens have also developed a number of initiatives designed to reduce the sources of plastic pollution.[377] Awareness programs, such as Zero Waste MENA, are designed to encourage citizens to more carefully consider what they are discarding and work towards a "zero waste" society, with associated internet resources supporting this goal.[378] Beyond preventative strategies, a variety of efforts have proven crucial in cleaning up beaches and coastal areas from plastic debris.[379] The "Clean Up The World" program regularly undertakes activities that seek to clean coastal litter, de-entangle marine animals, and collect discarded fishing gear.[380] Furthermore, groups such as The Ocean Cleanup are utilizing new technologies to remove large quantities of debris in oceanic gyres.[381]

An even larger challenge is in implementing more long-term solutions, including developing sufficient support for societal behavior changes.[382] UNEP notes that wide-scale legislation will be effective only if individual consumers and larger industries understand their responsibility in contributing to marine pollution, as well as its severity and impact on the environment, and adapt their consumption habits accordingly.[383] However, public awareness of the scope of marine pollution remains relatively limited: in a survey on environmental issues undertaken in 2011, although participants regularly noted "pollution" as a concern for the health of marine life, the number of responses that included mention of "debris" or "litter" was much lower.[384] To counter this and foster a greater sense of social responsibility, initiatives such as Marine Litter in European Seas: Social Awareness & Co-Responsibility (MARLISCO) develop and record a variety of public awareness and volunteering campaigns, including television advertising, video competitions, and school-level tutorials.[385] These types of campaigns have seen particular prevalence in areas of coastal tourism, encouraging visitors and fishers to not litter.[386] The North Sea Foundation and the Plastic Soup Foundation have developed a mobile app, as part of the Beat the Microbead campaign, which allows consumers to identify products that contain harmful microplastics and, it is hoped, adjust their purchases accordingly.[387] The campaign is supported by a coalition of 91 NGOs advocating for legislative action by national governments to ban the use of microplastics in cosmetics.[388] In 2015, the United States became the first country to implement such a ban with the passage of the Microbead-Free Waters Act, which became effective in July 2017.[389] Similar efforts are underway in other countries: for example, at the 2017 Ocean Conference, Sweden, Finland, France, Iceland, Ireland, Luxembourg, and Norway committed to enacting similar bans by 2020.[390]

Hazardous and Toxic Substances

Since the development of global industry, there has been a three-fold increase in the global load of nitrogen and phosphorous in the oceans, generally originating from agricultural runoff or from untreated sewage.[391] When such wastewater is discharged into the ocean, it leads to a process of nutrient oversaturation, with an overabundance of

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[375] UNEP, *Marine Litter Legislation: A Toolkit for Policymakers*, 2016, p. 30.
[376] Ibid., pp. 32-33.
[377] Zero Waste MENA, *Zero Waste MENA Blog*; Alsopp et al., *Plastic Debris in the World's Oceans*, p. 35.
[378] Zero Waste MENA, *Zero Waste MENA Blog*.
[379] Alsopp et al., *Plastic Debris in the World's Oceans*, p. 35.
[380] Ibid.
[381] The Ocean Cleanup, *Technology*.
[382] UNEP GPA, *Marine Plastic Debris and Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change*, 2016, p. 132.
[383] Ibid.
[384] Buckley et al., *Report on European public awareness and perception of marine climate change risks and impacts*, 2011.
[385] MARLISCO, *The MARLISCO Guide for Reducing Marine Litter: Get Inspired and Become Innovative through Best Practices*, 2014, pp. 57-59.
[386] UNEP GPA, *Marine Plastic Debris and Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change*, 2016, p. 134.
[387] Plastic Soup Foundation, *Beat the Microbead*, 2017.
[388] Plastic Soup Foundation, *Beat the Microbead: Strategy*, 2017.
[389] *Plastic microbeads to be banned by 2017, UK government pledges*, BBC, 2016.
[390] UN Ocean Conference, *Ban plastic microbeads in cosmetics: by Sweden (Government)*, 2017.
[391] IOC-UNESCO, *A Blueprint for ocean and coastal sustainability*, 2011, p. 13.

algal blooms as a result.[392] The algae grow in large enough numbers to imbalance the delicate marine ecosystem, a process called eutrophication, primarily through the rapid consumption of oxygen as the algae sink and decay, creating hypoxic "dead zones" containing very little oxygen and damaging other flora and fauna in the process.[393] These harmful algal blooms (HABs) may prevent sunlight from reaching the water, further limiting oxygen levels.[394] These areas also attract harmful algae that may poison other marine life, as well as being carcinogenic in humans.[395] It is estimated that there are now over 400 hypoxic areas of ocean, with the inputs of hydrogen expected to yet increase by 50% by 2050.[396] Approximately 16% of 63 large marine ecosystems are deemed to be in the "high" or "highest" risk for marine eutrophication.[397]

In addition to the oversaturation of nutrients, poor wastewater disposal systems can lead to the improper discharge of hazardous substances.[398] Chemicals such as ammonia lead to fish mortality, while heavy compounds such as mercury and lead are dangerous both to marine and human health.[399] Advances in the technologies used in cosmetic products, pesticides, and pharmaceuticals can also lead to trace amounts of antibiotics, analgesics, polycyclic aromatic hydrocarbons (PAHs), and zinc being discharged into the marine environment.[400] These substances can bring reproductive and behavioral changes to aquatic life and destabilize the marine ecosystem, with many existing wastewater treatment plants being unable to detect these new categories of emerging contaminants.[401]

The prevalence of these nutrients and chemicals being discharged into the ocean stems largely from an inefficient regulatory environment in many Member States, poor institutional capacity for proper sewage treatment (particularly in developing states), and a general "short-termism" on behalf of large industrial actors.[402] Currently, it remains that approximately 80% of wastewater is discharged poorly treated or untreated altogether.[403] There is, however, increasing recognition that the current approach to wastewater is an overly-linear one, in that chemicals are used, consumed, and then disposed of into the ocean, whereas a cyclical system provides greater focus on the recycling of wastewater.[404] In 2017, UNEP/GPA and its coordination mechanism, the Global Wastewater Initiative, authored a report that highlighted the benefits of viewing wastewater as a resource that can be reused and repurposed.[405] It highlighted the requirement of a three-pronged approach to better utilizing wastewater: a supportive policy environment, technological deployment and the development of sustainable financing models to sustain the processes required.[406] The report cites examples such as the South African city of Durban, which, through the implementation of universal sanitation legislation, has developed its wastewater treatment capacity; it now treats domestic wastewater under strict regulations and resells this back to industrial customers, thereby freeing up valuable drinking water.[407] Coastal Member States such as Finland and Argentina have also developed National Action Plans, designed to standardize wastewater treatment and reduce the discharged amount of nutrients being released into the ocean.[408] Examples of the effective deployment of wastewater technologies include the NEWater Initiative of Singapore, a complex system of sewage transport, treatment plants and odor control techniques located in the heart of a dense urban environment.[409]

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[392] Ferreira et al., *Overview of eutrophication indicators to assess environmental status within the European Marine Strategy Framework Directive*, 2011, p. 120.
[393] Ibid., p. 121.
[394] UNEP-GPA, *Sanitation, wastewater management and sustainability: From waste disposal to resource recovery*, 2016, p. 73.
[395] IOC-UNESCO, *A Blueprint for ocean and coastal sustainability*, 2011, p. 13; Ferreira et al., *Overview of eutrophication indicators to assess environmental status within the European Marine Strategy Framework Directive*, 2011, p. 121.
[396] IOC-UNESCO, *A Blueprint for ocean and coastal sustainability*, 2011, pp. 13-17.
[397] UN DESA, *Progress of goal 14 in 2017*.
[398] UNEP-GPA, *Sanitation, wastewater management and sustainability: From waste disposal to resource recovery*, 2016, p. 73.
[399] Ibid., p. 74.
[400] Ibid., pp. 74-75.
[401] Ibid.
[402] UNEA, *Towards a Pollution-Free Planet*, 2017, pp. 32-33.
[403] UNEP, *Harnessing the potential of wastewater*.
[404] IOC-UNESCO, *A Blueprint for ocean and coastal sustainability*, 2011, p. 37.
[405] UNEP, *Harnessing opportunity: Wastewater as a managed resource*, 2017.
[406] Ibid., p. 3.
[407] Ibid., p. 9.
[408] Ibid., p. 7.
[409] Ibid., p. 15.

A 2016 report on the topic does accept that expensive "one-off" capital investments are often required in the initial deployment of wastewater recycling projects, and that such investments need to stem from a combination of the public and private sectors.[410] The report notes that, while sanitation and wastewater development will ultimate cost less than the health costs arising from a lack of sanitation, many of the benefits of wastewater technology – and reducing chemical discharge into the ocean – are non-monetized, namely an increase in human capital and long-term development.[411] Although scientific data on hypoxic zones and chemical discharge into the ocean is still developing, a transition away from a linear cycle of wastewater into one that prioritizes recycling and reuse will naturally lead to a decrease in it reaching marine environments.[412]

Conclusion

As noted in the zero draft of the Ministerial Outcome Document that will be adopted by Member States at the UNEA session at the end of 2017, oceanic pollution represents a threat to marine life and to the health, security, and survival of humanity.[413] It is increasingly clear that improper and unsustainable waste management strategies endanger marine life and ecosystems that are critical for sustainable development. As UNEA prepares for a major conference on pollution, it recognizes that, in order to reach the SDG target 14.1 of reducing marine pollution, concerted efforts are required, including through the expansion of data collection, legislative action by national governments, and the development of green technology, as well as the fostering of social responsibility and widespread behavioral changes.[414]

Further Research

As delegates research this topic, they can consider: What does the UNEA 3 conference, with its theme on global pollution control, hope to achieve, and how will UNEA 3 contribute to the achievement of SDG 4? How can UNEP and UNEA foster international cooperation on this issue while also understanding the differing requirements of each region? What role do individual Member States have in the prevention of marine pollution? How can national and local governments contribute to the reduction of waste in the oceans? How can educational and awareness campaigns affect the "social responsibility" of individuals and industry? Given that initial expenditure on green technology can be expensive, how can governments incentivize greater capital investment in modern wastewater strategies?

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International Maritime Organization. (1997). *Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London Convention 1972): Compilation of the full texts of the London Convention (1972) and of the 1996 Protocol thereto*. Retrieved 1 September 2017 from: http://www.imo.org/en/OurWork/Environment/LCLP/Documents/LC1972.pdf

> *The* London Convention *and its subsequent Protocol and amendments are among the seminal pieces of legislation in the development of marine pollution regulation. It provides a universal definition of "dumping" and is an example of the early calls to action to prevent marine pollution in a global setting. It is therefore very useful for delegates in understanding how international legislation has developed until the present day.*

Secretariat of the Convention on Biological Diversity. (2012). *Impacts of Marine Debris on Biodiversity: Current Status and Solutions* [Report]. Retrieved 25 September 2017 from: https://www.cbd.int/doc/publications/cbd-ts-67-en.pdf

> *This exhaustive report offers a comprehensive analysis of the issue of marine debris and its direct impact on the fauna and flora based in the marine environment. It allows delegates to not only understand the scale of the marine debris issue, but also directly links it to the topic at hand,*

[410] UNEP-GPA, *Sanitation, wastewater management and sustainability: From waste disposal to resource recovery*, 2016, p. 105.
[411] Ibid., pp. 103-105.
[412] UNEP, *Harnessing opportunity: Wastewater as a managed resource*, 2017, p. 32.
[413] UNEA, *Zero Draft of the Ministerial Outcome Document of the 2017 UN Environment Assembly "Towards a Pollution-Free Planet,"* 2017, p. 1.
[414] Ibid., p. 2.

offering a variety of case studies on how it impacts the biodiversity and overall health of the environment. Following this, the report presents a variety of proposed strategies that governments and organizations may take to rectify these impacts, supporting them with extensive data.

Simcock, A., et al. (2016). *First Global Integrated Marine Assessment: Chapter 20. Coastal, Riverine and Atmospheric Inputs from Land.* Retrieved 20 July 2017 from: http://www.un.org/Depts/los/global_reporting/WOA_RPROC/Chapter_20.pdf

This chapter forms part of the wider assessment on the "health" of the marine environment, which provides a fascinating and exhaustive analysis of the threats to oceanic health. Chapter 20 focuses on identifying the primary sources of water toxicity and chemical pollution and the effects that result from their increasing concentration in oceans and rivers. It is an analytical, science-based approach, but is presented in a way that allows delegates to quickly understand the multitude of substances that currently pose a risk to marine life.

United Nations Conference on the Law of the Sea, Third session. (1982). *United Nations Convention on the Law of the Sea*. Retrieved 18 July 2017 from: http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf

This landmark convention forms the first combined framework on international regulation and national responsibilities in regard to the ocean. Of particular interest for this topic will be Articles 194 and 195, which outline the responsibilities of Member States concerning the prevention of oceanic pollution. Although this convention has been built upon in subsequent decades, it remains a fundamental piece of legislation across the UN system, and one that will enable delegates to understand the kind of broad frameworks around oceanic regulation.

United Nations Environment Assembly. (2016). *Marine Plastic Litter and Pollution (2/11) (UNEP/EA.2/Res.11)* [Resolution]. Retrieved 18 July 2017 from: http://wedocs.unep.org/bitstream/handle/20.500.11822/11186/K1607228_UNEPEA2_RES11E.pdf?sequence=1&isAllowed=y

This is a resolution of UNEA that was adopted unanimously at their session in December 2016, which collates and highlights recent various projects and policies on the topic at hand. This source allows delegates to understand recent activities around the issue of plastic debris, including updates on various educational campaigns and knowledge-sharing initiatives. This resolution is essential in contextualizing what the body has discussed and agreed upon while also signposting towards potential future actions.

United Nations Environment Assembly. (2017). *Towards a Pollution-Free Planet* [Advance Copy]. Retrieved 27 August 2017 from: http://wedocs.unep.org/bitstream/handle/20.500.11822/21213/Towards_a_pollution_free_planet_advance%20version.pdf?sequence=2&isAllowed=y

In December 2017, UNEA will convene for its third session and discuss matters relating to its overarching theme: pollution. This report, compiled from a mixture of scientific research and contributions from Member States, is designed as preparatory material for the conference. As such, it is an excellent resource for delegates to understand the contemporary research on matters pertaining to marine pollution and how this will impact the decisions of UNEA in late 2017.

United Nations Environment Programme. (2016). *Marine Litter Legislation: A Toolkit for Policymakers.* Retrieved 20 July 2017 from: http://www.unep.org/environmentalgovernance/marine-litter-legislation-toolkit-policymakers

Published as a "toolkit" for national policymakers, this report provides analysis and suggestions on ways in which governments can devise legislation to reduce the amount of plastic refuse in the ocean. This allows delegates to understand the multitude of possibilities for action on this topic and includes a number of national and regional precedents to draw upon. This is a valuable resource for understanding how frameworks can be operationalized into real policy and is an excellent point of research in the formulation of national positions.

United Nations Environment Programme. (2016). *Marine Plastic Debris and Microplastics: Global Lessons and Research to Inspire Action and Guide Policy Change* [Report]. Retrieved 18 July 2017 from: https://wedocs.unep.org/rest/bitstreams/11700/retrieve

This recent report is a wide-ranging analysis of the issue of marine plastic pollution, its ecological and environmental impacts, and proposals for future policy changes to prevent further damage. This document allows delegates to gain a thorough understanding of the key statistics and causes behind this issue, and also to begin developing ideas on future proposals of action. It also provides an introduction to the precedence and context that it was produced within, including the Sustainable Development Goals (SDGs) and relevant regional frameworks.

United Nations Environment Programme. (2017). *Harnessing opportunity: Wastewater as a managed resource* [Report]. Retrieved 30 September 2017 from: http://wedocs.unep.org/bitstream/handle/20.500.11822/17679/harnessing_opportunity_wastewater.pdf?sequence=1&isAllowed=y

Researched under the direction of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) and its Global Wastewater Initiative, this report outlines the challenges and benefits to transitioning towards a more cyclical approach to wastewater. In highlighting a number of real-world examples, this report is valuable in providing opportunities for further research for delegates. It also provides excellent details on the "three-pronged" approach of governance, technology, and financing required to ensure wastewater strategies are sustainable moving forward.

UN-Oceans. (2017). *About UN-Oceans* [Website]. Retrieved 30 August 2017 from: http://www.unoceans.org/about/en/

Given the breadth and variety of work across a number of UN agencies, it is important for delegates to understand how various programs interact and complement one another. UN-Oceans is the designated collaboration mechanism to foster greater collaboration between those agencies for whom ocean management falls under their mandate. This overview page is an excellent overview of both the wide-reaching level of activity the UN undertakes in relation to oceans, but also in providing context as to how each individual activity contributes to the wider agenda.

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