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UN ENVIRONMENT PROGRAMME

BACKGROUND GUIDE 2016

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NATIONAL MODEL UNITED NATIONS





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Dear Delegates,

Welcome to the 2016 National Model United Nations Conference in New York (NMUN•NY)! We are pleased to introduce you to our committee, the United Nations Environment Programme (UNEP). This year's staff is: Directors Pauline Marcou (Conference A) and Maximilian Jungmann (Conference B), and Assistant Directors Jeffrey Thorpe (Conference A) and Katie Keelan (Conference B). Pauline recently graduated with a Master's degree in Global Affairs from Yale University, where she specialized in clean energy and environmental issues. She currently works at a renewable energy finance and consulting firm in Connecticut and is excited to return to NMUN•NY for her fourth year on staff. Max recently graduated from Heidelberg University with a Master's degree in Political Science and Sociology, with an emphasis on International Relations, and he received his B.A. in Political Science and Media, Communication and Society from the University of Trier. He works for a regional broadcasting station and is planning to pursue a Ph.D.; this is his third year on staff. Jeffrey completed both his B.A. in Political Science and International Studies and his M.P.A. with a concentration in Public Management at Georgia Southern University. Currently, he works at an international Transportation Spend Management company, and this is his third year on staff. Katie received her B.A. in International Studies and Political Science at the University of Wisconsin-Oshkosh. She is currently working as an Administrative Associate at an international development NGO in Washington, D.C. This will be her second year on staff.

The topics under discussion for UNEP are:

- I. Corruption and Environmental Governance
- II. Improving Sustainable Forest Management Practices
- III. Plastic Debris in the World's Oceans

UNEP is the leading environmental organization within the UN system and exercises a strong influence on the global environmental agenda. It serves as an advocate for the environment; monitors current trends; cooperates with other organizations, civil society, and governments to develop environmental instruments; and strengthens international cooperation to protect and manage the environment. In order to accurately simulate the committee, it will be critical for delegates to understand UNEP's specific role in the international environmental field and as the coordinator of the UN's work on environment-related issues. At NMUN•NY 2016, we will specifically simulate the United Nations Environmental Agency (UNEA) of UNEP.

We hope you will find this Background Guide useful as an introduction to the committee; however, it is not intended to replace individual research. We highly encourage you to explore your Member State's policies in depth, as well as to use the Annotated Bibliography and Bibliography to further your knowledge. In preparation for the conference, each delegation will submit a [position paper](#). Please take note of the [NMUN policies](#) on the website and in the [Delegate Preparation Guide](#) regarding plagiarism, codes of conduct, dress code, sexual harassment, and the awards philosophy and evaluation method. Adherence to these guidelines is mandatory.

The [NMUN Rules of Procedure](#) are available to download from the NMUN website. This document includes the long and short form of the rules, as well as an explanatory narrative and example script of the flow of procedure. It is thus an essential instrument in preparing for the conference, and a reference during committee.

If you have any questions concerning your preparation for the committee or the conference itself, feel free to contact the Under-Secretaries-General for the Development Department, Michael Buechl (Conference A) and Andrea Wong (Conference B). You can reach either USG at: usg.development@nmun.org.

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

Sincerely,

Conference A

Pauline Marcou, *Director*
Jeffrey Thorpe, *Assistant Director*

Conference B

Maximilian Jungmann, *Director*
Katie Keelan, *Assistant Director*

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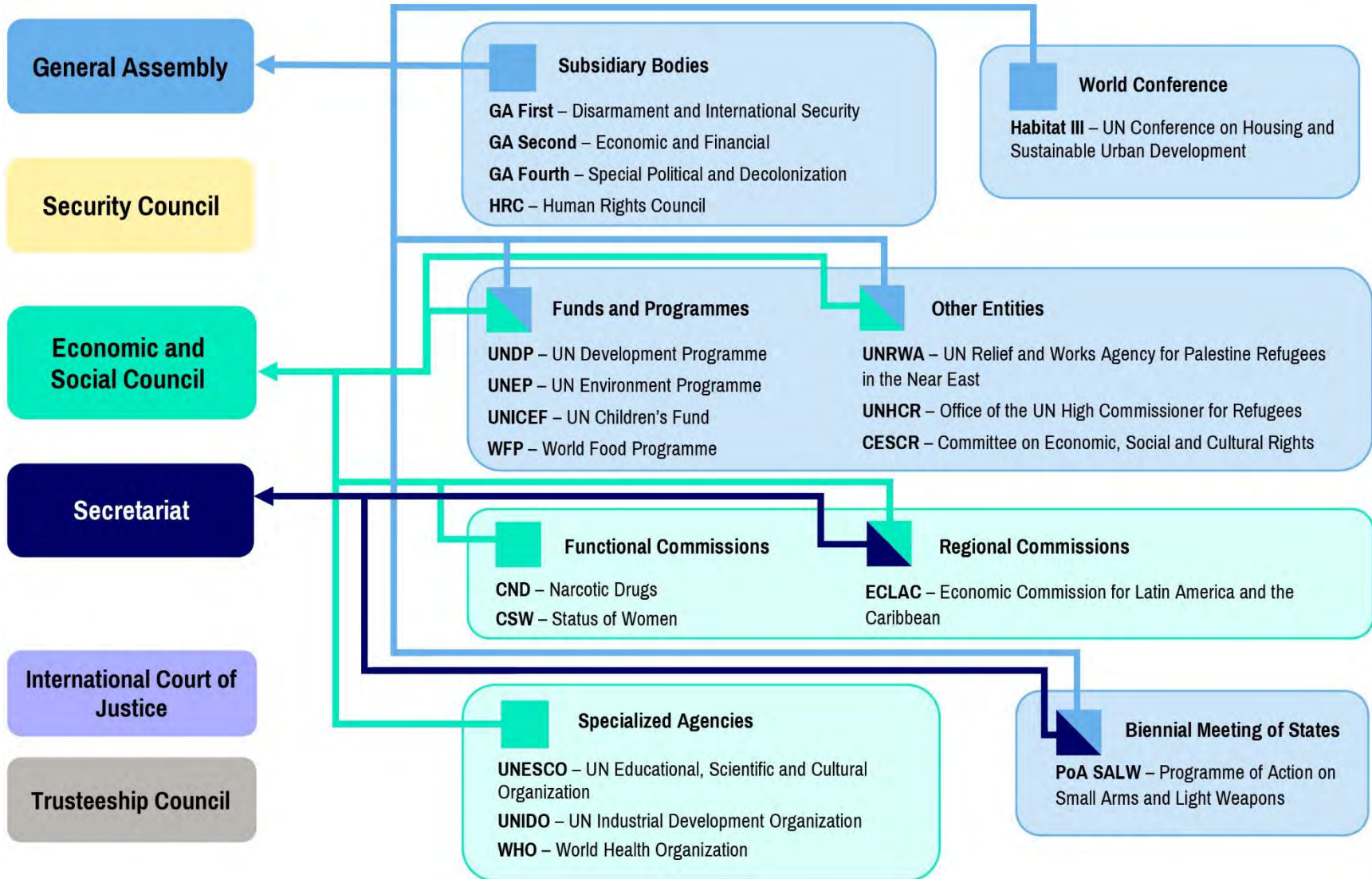


Abbreviations

BWI	Building and Wood Workers' International
CBD	Convention on Biological Diversity
CIFOR	Center for International Forestry Research
COP	Conference of the Parties
CPF	Collaborative Partnership on Forests
CSO	Civil society organization
DFID	Department for International Development
ECOSOC	Economic and Social Council
EMG	Environmental Management Group
FAO	Food and Agriculture Organization
FIP	Forest Investment Program
GA	General Assembly
GDP	Gross domestic product
GEF	Global Environmental Facility
GHG	Greenhouse gas
GMGSF	Global Major Groups and Stakeholders Forum
GOOS	Global Ocean Observing System
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
IACSD	Inter-Agency Committee on Sustainable Development
ICCWC	International Consortium on Combating Wildlife Crime
ICSU	International Council for Science
IMO	International Maritime Organization
INTERPOL	International Criminal Police Organization
IOC-UNESCO	Intergovernmental Oceanographic Commission of UNESCO
ITTO	International Tropical Timber Organization
MDGs	Millennium Development Goals
NGO	Non-governmental organization
OECD	Organisation for Economic Co-operation and Development
REDD+	Reducing emissions from deforestation and forest degradation
Rio+20	United Nations Conference on Sustainable Development
RSP	Regional Seas Programme
SFM	Sustainable forest management
SDGs	Sustainable Development Goals
SIDS	Small Island Developing States
STAR	Stolen Asset Recovery Assistance
TRACK	Tools and Resources for Anti-Corruption Knowledge
UNCAC	United Nations Convention against Corruption
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 Environmental Assembly
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
UNODC	United Nations Office on Drugs and Crime
UN-REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
VISC	Voluntary Indicative Scale of Contributions
WMO	World Meteorological Organization
WTO	World Trade Organization

United Nations System at NMUN·NY

This diagram illustrates the UN System simulated at NMUN·NY. It shows where each committee “sits” within the system, to help understand the reportage and relationships between the 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.





Committee Overview

Introduction

The United Nations (UN) Environment Programme (UNEP) is the “advocate, educator, catalyst, and facilitator” in promoting environmentally friendly practices and policies in the UN system.¹ It is a program and fund of the UN that ensures international, regional, and local coordination for environmental issues, and also ensures that various other UN entities take environmental impact into account when executing their missions.² UNEP reports directly to the General Assembly (GA).³ Their headquarters is located in Nairobi, Kenya, making it one of only two UN entities headquartered in a developing country.⁴ In May 2014, the GA, at the request of the Secretary-General, approved a budget increase for UNEP for the biennium 2014-2015, which has given UNEP the ability to improve ongoing projects and to address various other environmental issues.⁵

The United Nations Environment Programme (UNEP) is a programme and fund of the United Nations, reporting to the Economic and Social Council and the General Assembly.

The creation of UNEP was recommended at the UN Conference on Human Environment in Stockholm, Sweden, in 1972.⁶ Six months later, in December 1972, the GA adopted resolution 2997 (XXVII), which established UNEP as the official body concerned with environmental issues of the UN.⁷ Since that time, UNEP has played a significant role in coordinating environmental policy for various UN agencies. UNEP helped in the planning and execution of the UN Conference on Environment and Development (UNCED) in 1992.⁸ UNCED was the conference that led to the adoption of *Agenda 21* and the *Rio Declaration on Environment and Development*.⁹ Chapter 38 of *Agenda 21* calls for the creation of an inter-agency task force that would research the best ways to identify and address environmental issues.¹⁰ This led to the creation of the Inter-Agency Committee on Sustainable Development (IACSD), of which UNEP is a key member.¹¹ IACSD has a system of task managers, each in charge of specific thematic areas, with UNEP being the task manager concerned with the areas of the atmosphere, toxic chemical, hazardous waste, desertification and drought, and biodiversity.¹² UNEP also takes an active role in other thematic areas of the organization, using their environmental expertise to ensure that no areas of concern go unnoticed.¹³

NMUN·NY 2016 will specifically simulate the United Nations Environmental Agency (UNEA), the governing body of UNEP. UNEA was formally established by General Assembly resolution 67/251 in 2013, and replaced the Governing Council as UNEP’s governing body. UNEA is composed of all Member States of the UN.

Governance, Structure and Membership

UNEP’s structure is as follows: the United Nations Environmental Assembly of UNEP (UNEA) comprised of all Member States, the Secretariat, the Environment Fund, and the Committee of Permanent Representatives.¹⁴ At its inception, a Governing Council of 58 members governed UNEP, but in 2013, the UNEA took its place.¹⁵ The

¹ UNEP, *What UNEP Does*.

² Ibid.

³ UN General Assembly, *Institutional and financial arrangements for international environmental co-operation (A/RES/2997(XXVII))*, 1972.

⁴ UNEP, *What UNEP Does*.

⁵ UNEP, *Proposed revised biennial Programme of work and budget for 2014–2015 (UNEP/EA.1/7/Ad. 1)*, 2014.

⁶ UNEP, *Declaration of the United Nations Conference on the Human Environment*, 1972.

⁷ UN General Assembly, *Institutional and financial arrangements for international environmental co-operation (A/RES/2997(XXVII))*, 1972.

⁸ UNEP, *UNEP’s Coordination Mandate*.

⁹ Ibid.

¹⁰ UN Division on Sustainable Development, *Agenda 21*, 1992.

¹¹ UNEP, *UNEP’s Coordination Mandate*.

¹² Ibid.

¹³ Ibid.

¹⁴ UNEP, *UNEP Governance Structure*.

¹⁵ UN General Assembly, *Institutional and financial arrangements for international environmental co-operation (A/RES/2997(XXVII))*, 1972.

Assembly aimed at strengthening UNEP in the aftermath of the 2012 UN Conference on Sustainable Development (Rio+20), at which Member States called for recognizing UNEP as the leading global environmental authority.¹⁶ UNEA meets biennially in order to set the global environmental agenda and to discuss policy about emerging challenges.¹⁷ The UNEP Secretariat is also responsible for UNEA and consists of a rotating President, three Vice-Presidents, and a Rapporteur who oversee all of UNEP's activities.¹⁸ The Environment Fund is UNEP's main source of funding.¹⁹ Member States' financial contributions are based upon the Voluntary Indicative Scale of Contributions (VISIC), which means Member States are not required to provide funding to UNEP, though they are highly encouraged to donate.²⁰ If they choose to donate, the recommended amount is determined according to their gross domestic product (GDP), but is by no means limited to the corresponding amount.²¹ UNEP's Committee of Permanent Representatives consists of all Permanent Missions to the UN, and their purpose is to give advice to the UNEA and to create subsidiary organs that may be necessary to complete UNEP's functions.²² The Committee of Permanent Representatives is overseen by an Executive Bureau.²³ The Executive Bureau consists of a five Member State panel, which oversees all of the Committee's actions.²⁴ Executive Bureau members are elected for two-year terms, and the UN principles of equitable geographic distribution apply.²⁵

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 22/14.²⁹ This Decision called for UNEP's regional offices to strengthen their partnerships with other UN agencies in their region, create financial institutions to fund environmental causes, and establish and/or enhance partnerships with relevant local groups in order to strengthen UNEP's mission in each region.³⁰

Mandate, Functions and Powers

Upon the adoption of GA resolution 2997 (XXVII), UNEP was mandated 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 Since 1972, UNEP's mandate has been amended and modified numerous times, including its most recent update in 2002.³²

The first amendment to UNEP's mandate came in 1992, via *Agenda 21*, which led to UNEP's involvement with IACSD.³³ Five years later, in 1995, the GA held a special session to review the implementation of *Agenda 21* and

¹⁶ UNEP, *About UNEA*.

¹⁷ UNEP, *UNEP Governance Structure*.

¹⁸ UN General Assembly, *Change of the designation of the Governing Council of the United Nations Environment Programme (A/67/784)*, 2013.

¹⁹ UNEP, *About our Funding*.

²⁰ *Ibid.*

²¹ *Ibid.*

²² UNEP, *Committee of Permanent Representatives*.

²³ *Ibid.*

²⁴ *Ibid.*

²⁵ *Ibid.*

²⁶ UNEP, *Regional Consultations*.

²⁷ *Ibid.*

²⁸ *Ibid.*

²⁹ UNEP, Report of the twenty-second session of the Governing Council/Global Ministerial Environment Forum, 2003, pp. 61-62.

³⁰ UNEP, *Report of the Twenty-Second Session of the Governing Council/Global Ministerial Environment Forum*, 2003, p. 9.

³¹ UN General Assembly, *Institutional and financial arrangements for international environmental co-operation (A/RES/2997(XXVII))*, 1972.

³² UNEP Governing Council, *Global Ministerial Forum. International Environmental Governance. Report of the Executive Director, UNEP/GCSS.VII/2*, 2002.

³³ UNEP, *UNEP's Coordination Mandate*.

amended UNEP's mandate by stating, "UNEP is to be the leading global environmental authority that sets the global environmental agenda."³⁴ In 1997, the Secretary-General requested that the GA create a Task Force to review and propose reforms for UN activities concerning the environment and human settlements.³⁵ In October of 1998, per the guidance of the Task Force, the GA put forth a set of recommendations that would further amend UNEP's mandate.³⁶ As a result, the Executive Director of UNEP was placed in charge of a new committee called the Environmental Management Group (EMG).³⁷ 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.³⁸

The mandate was further amended upon UNEP's adoption of the *Nairobi Declaration* (1997).³⁹ This amendment created a new "core mandate" for the organization.⁴⁰ The core mandate did not replace the original mandate, but it shifted the focus of UNEP to ensure a more modern and technologically friendly approach is taken to environmental issues.⁴¹ It 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 community and the UN; and providing key policy advice for UN bodies, governments, and other institutions.⁴² UNEP's mandate was most recently modified in 2002, through the *Johannesburg Declaration on Sustainable Development*.⁴³ *The Johannesburg Declaration* calls on UNEP to strengthen their ties and cooperation with the World Trade Organization (WTO), the UN Development Programme (UNDP), and all relevant non-governmental organizations (NGOs) to ensure efficiency of programs, initiatives, and resources in all areas.⁴⁴

After Rio+20 in 2012, UNEP's Governing Council was expanded to include all Member States.⁴⁵ This was done to strengthen UNEP and to ensure its place as the global leader on the environment.⁴⁶ UNEP's first universal session was held in February 2013, where the decision was made to change the Governing Council to UNEA.⁴⁷ The UNEA has its own mandate that allows UNEA to make major strategic decisions for UNEP, provide political guidance (especially for Member State-specific programs), and to promote strong scientifically-based policies.⁴⁸

UNEP's mandate calls for the efficiency and accuracy of information-sharing in order to ensure that environmental policy is scientifically and technologically accurate.⁴⁹ The mandate also emphasizes the need for strong ties between UNEP and other organizations, such as the WTO and UNDP, to ensure that various projects and programs are environmentally friendly.⁵⁰ Overall, UNEP's mandate permits UNEP to address the environment in the UN system.⁵¹ UNEP's mandate requires UNEP to monitor the programs of other UN entities to ensure they are executed in an environmentally sound manner.⁵²

³⁴ UN General Assembly, *Programme for the Further Implementation of Agenda 21 (A/RES/S-19/2)*, 1997, par. 123.

³⁵ UNEP, *UNEP's Coordination Mandate*.

³⁶ *Ibid.*

³⁷ UN General Assembly, *Environment and Human Settlements: Report of the Secretary General (A/53/463)*, 1998.

³⁸ *Ibid.*

³⁹ UNEP, *Nairobi Declaration*.

⁴⁰ New Zealand Ministry of Foreign Affairs and Trade, *United Nations Handbook*, 2015.

⁴¹ UNEP, *UNEP's Coordination Mandate*.

⁴² New Zealand Ministry of Foreign Affairs and Trade, *United Nations Handbook*, 2015.

⁴³ UNEP, *UNEP's Coordination Mandate*.

⁴⁴ UN WSSD *Johannesburg Declaration on Sustainable Development (A/Conf.199/20)*, 2002.

⁴⁵ UNEP, *United Nations Environment Programme Upgraded to Universal Membership Following Rio+20 Summit*, 2012.

⁴⁶ UNEP, *About UNEA*.

⁴⁷ UN General Assembly, *Change of the designation of the Governing Council of the United Nations Environment Programme (A/67/784)*, 2013.

⁴⁸ UNEP, *About UNEA*.

⁴⁹ New Zealand Ministry of Foreign Affairs, *United Nations Handbook*, 2015.

⁵⁰ UN WSSD, *Johannesburg Declaration on Sustainable Development (A/Conf.199/20)*, 2002.

⁵¹ UNEP, *UNEP's Coordination Mandate*.

⁵² *Ibid.*

UNEP ensures the implementation of their mandate by promoting international cooperation on existing environmental policies and guiding the creation of new environmental policies.⁵³ UNEP also monitors the state of the global environment, on both an international and regional scale, and share the gathered information with interested parties.⁵⁴ Another major way UNEP implements their mandate is by using environmental awareness to help governments, the private sector, and civil society work to address environmental threats.⁵⁵ UNEP contributes significantly in developing regional plans for environmental sustainability, helping Member States who are facing sizeable challenges to create and implement environmental policies, and providing individual Member States with support in environmental capacity-building.⁵⁶ On a more global scale, UNEP works to develop international environmental law and ensure the proper use of environmental information and instruments.⁵⁷

UNEP oversees eight major conventions, each organized under separate Secretariats: the *Convention of Biological Diversity*, the *Convention on International Trade of Endangered Species of Wild Flora and Fauna*, the *Convention on Migratory Species of Wild Animals*, the *Convention on Persistent Organic Pollutants*, the *Convention of Climate Change*, the *Convention on Desertification*, the *Regional Seas Convention*, and the *Rotterdam Convention on Informed Consent*.⁵⁸ The role of these Secretariats is to monitor, report on, and implement programs in the area that its internationally-agreed-upon convention specifies.⁵⁹ For example, the Secretariat for the *Convention of International Trade of Endangered Species of Wild Flora and Fauna* is responsible for monitoring and stopping any black market trade of endangered plants or animals, and to help ensure that legal trade in these species is safe and does not threaten their existence.⁶⁰

UNEP has the ability to create task forces and subsidiaries in order to implement the environmental policy they develop.⁶¹ However, any resolution concerning environmental policy that UNEP passes, or any proposed body to be created, must first be submitted to either the GA or the Economic and Social Council (ECOSOC) for approval.⁶² If the GA or ECOSOC approves of UNEP's proposals, they become official policy of the UN, and UNEP can move forward with implementation.⁶³

Recent Sessions and Current Priorities

UNEP currently has seven thematic priorities: climate change, disasters and conflicts, ecosystem management, environmental governance, chemicals and waste, resource efficiency, and environment under review.⁶⁴ These seven areas were chosen because they represent the most pressing emerging issues and allow UNEP to focus on both broad and particular needs internationally, regionally, and in Member State-specific ways.⁶⁵

In 2012, UNEP released their medium term strategy plan for 2014-2017.⁶⁶ Their medium term strategy involves four key areas that will help UNEP to further implement their mandate, improve the state of the global environment, and ensure human wellness through the improvement and maintenance of the environment.⁶⁷ UNEP's four key areas are: to continuously review the world's environmental situation, improve early warning systems and global environmental policy by using the best available science, improve relationships and technical support specific to the needs of various Member States, and contributing to the formulation, development, and improvement of environmental policy and laws around the world.⁶⁸ All four of these key areas promote UNEP's main goal for their

⁵³ UNEP, *What UNEP Does*.

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ Ibid.

⁵⁸ UNEP, *Secretariats on Various Conventions*.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ UN System Chief Executive Board of Coordination, *United Nations Environment Programme*.

⁶² Ibid.

⁶³ Ibid.

⁶⁴ UNEP, *UNEP Priorities*.

⁶⁵ UNEP, *Policy Statement by Achim Steiner, UN Under-Secretary-General and UNEP Executive Director*, 2014.

⁶⁶ UNEP, *2014-2017 Medium Term Strategy*, 2012.

⁶⁷ Ibid.

⁶⁸ Ibid.

medium term plan: to decrease carbon emissions globally and promote the use of sustainable technologies in order to improve and maintain the state of the world's environments.⁶⁹

Another important recent event of UNEP was the first session of UNEA, held June 2014 at the UNEP headquarters in Nairobi, Kenya.⁷⁰ The concluding two-day high-level segment of the Assembly mainly centered on the topic of the “Sustainable Development Goals and the Post-2015 Development Agenda, including Sustainable Consumption and Production,” with an accompanying ministerial dialogue on Illegal Trade in Wildlife.⁷¹ Overall, UNEA adopted a total of 17 resolutions and two decisions.⁷² The resolutions cover a large range of topics, from marine plastic debris to environmental sustainability in the context of sustainable development and poverty eradication.⁷³

In 2012, UNEP was significantly involved in the Rio+20 conference.⁷⁴ UNEP's plan for Member States to transition to more green economies, by improving human livelihood and social equity while maintaining environmentally conscientious policy, was accepted and put into the outcome document, *The Future We Want*.⁷⁵ Rio+20 also initiated the post-2015 development agenda intergovernmental negotiation process.⁷⁶ UNEP lead the discussion around environmental aspects of what would become the Sustainable Development Goals (SDGs), ensuring that the environment was fully embedded in the SDGs following an “integrated approach” of sustainable development.⁷⁷ The GA officially recognized the role the Programme has played in the post-2015 development agenda.⁷⁸ UNEP is also one of the first members of the UN Interagency Task Team on Science, Technology and Innovation for the SDGs, as included within the Technology Facilitation Mechanism to support the SDGs.⁷⁹

Climate change has also become a predominant topic on the agenda of the Programme, following the latest Conferences of the Parties (COP) since 2009 and ahead of the COP21 conference in Paris in November and December 2015.⁸⁰ UNEP's work in this field is informed by the negotiation process of the UN Framework Convention on Climate Change (UNFCCC), and the Programme was highly engaged in the COP20 conference that was held in Lima, Peru, in December 2014.⁸¹ The work of UNEP's Climate Change sub-programme centers around four areas: adapting to climate change, mitigating climate change, reducing emissions from deforestation and forest degradation (REDD), and enhancing knowledge and communication about the science of climate change.⁸² In January 2014, UNEP launched a new online platform to collect, process, and share environmental scientific data and knowledge.⁸³ UNEP Live gathers the latest information from a large range of sources, from UNEP to regional and national contributors, and makes it available to the public through apps, media content and online publishing tools.⁸⁴ Climate change is a dominating topic across the platform, with two themes that deal with it out of the four covered.⁸⁵

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. UNEP's mission is to ensure that the work of all UN entities, programs, funds, and Member States, CSOs, and private industry is environmentally sustainable and in line with international laws and norms concerning the environment.

⁶⁹ UNEP, *2014-2017 Medium Term Strategy*, 2012.

⁷⁰ UNEP, *About UNEA*.

⁷¹ Ibid.

⁷² 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.

⁷³ Ibid.

⁷⁴ UNEP, *Inclusive Green Economy Given Go Ahead by Heads of State at Rio+20*, 2012.

⁷⁵ UN CSD, *The Future We Want*, 2012.

⁷⁶ UNEP, *UNEP and the Post-2015 Agenda*.

⁷⁷ UNEP, *Embedding the Environment in Sustainable Development Goals*, 2013.

⁷⁸ UN General Assembly, *Report of the United Nations Environment Assembly of the United Nations Environment Programme (A/RES/69/223)*, 2014.

⁷⁹ UN General Assembly, *Transforming Our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015, p. 25

⁸⁰ UNEP, *Climate Change*.

⁸¹ UNEP, *Climate Change Factsheet*, 2010; UNEP, *Lima COP20/CMP10*, 2014.

⁸² UNEP, *Climate Change Factsheet*, 2010.

⁸³ UNEP, *UNEP Live Knowledge Platform Launched to Fill Gaps Between Data Providers and Consumers*, 2014.

⁸⁴ Ibid.

⁸⁵ UNEP, *UNEP Live*.



Annotated Bibliography

United Nations Environment Programme. (n.d.) *About UNEP* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/About/>

This website provides all of the basic information about UNEP, who they are, what they do, and why they are important in the UN system. The main page provides links to more detailed information about UNEP's various functions, programs, and their structure. This is an important starting point for delegates and should be used as a first step to grasp an understanding of the committee and what delegates can actually accomplish as a body. Through the pages linked in the "About" section, delegates will also be able to find valuable resources when researching the committee's topics of discussion.

United Nations Environment Programme. (n.d.) *UNEP and the Post-2015 Agenda* [Website]. Retrieved 21 July 2015 from: <http://unep.org/post2015/>

The post-2015 development agenda is set to embrace all aspects of sustainable development, through a series of Sustainable Development Goals. UNEP has been playing a key role in mainstreaming all environmental topics within the 'integrated approach' to the SDGs. It has published a significant number of discussion papers and reports, and also established strong partnerships with non-governmental organizations to ensure a broad representation of all environmental actors within the process. Delegates can find all relevant information about the work of UNEP on the post-2015 agenda on this webpage.

United Nations Environment Programme. (n.d.) *UNEP's Coordination Mandate* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/newyork/UNEPsCoordinationMandate/tabid/56200/Default.aspx>

This webpage contains the entirety of UNEP's official mandate, including all amendments and updates. It gives dates, membership information, information about the Secretary-General Review requirements, and a multitude of other important facts that govern UNEP. This document is one of the most important sources of delegates participating in UNEP, because it gives detailed information about what can be done and/or suggested by the body. It contains links to programs, various UN entities, and other relevant links delegates will find useful in further research for a variety of topics.

United Nations Environment Programme. (n.d.) *What UNEP Does* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=493&ArticleID=5391>

This webpage gives the basic information concerning what UNEP does and how their responsibilities are executed. It gives a basic overview of what UNEP's mandate allows and how proposed programs and resolutions get put into action. Delegates should read over this page, and utilize the links to more detailed information, in order to fully understand UNEP as a committee and what they can achieve or implement.

United Nations Environment Programme. (2012). *UNEP's Medium Term Strategy for 2014-2017* [Strategy Document]. Retrieved 28 September 2015 from: www.unep.org/pdf/MTS_2014-2017_Final.pdf

The current medium term strategy for UNEP explains what UNEP has focused on in the past, what has been successful, what needs improvement, and where UNEP is headed in the future. This document gives a complete, comprehensive look into the next few years for UNEP and what their main goals are. This document will be very valuable in delegates' research because it explains specifically what UNEP wants to achieve by 2017 and how they plan on achieving it. Also, understanding UNEP's current medium term strategy will help delegates to understand what UNEP is currently working on and priorities for the environment agenda.

United Nations Environment Programme. (2014). *Resolutions and decisions adopted by the United Nations Environment Assembly of the United Nations Environment Programme at its first session on 27 June 2014* [Website]. Retrieved 21 July 2015 from: http://www.unep.org/unea/UNEA_Resolutions.asp

This document compiles all 17 resolutions and two decisions from the first session of the UN Environmental Assembly that was held in Nairobi, Kenya in June 2014. The scope of work is quite large, and provides delegates with a good understanding of the topics and issues that members of the UNEA covered. From small changes to the rules of procedures to ecosystem-based adaptation

and even marine plastic debris and microplastics, the Assembly voted on various resolutions that reassert the work accomplished and will shape the goals and activities of the Programme for the future.

United Nations, General Assembly, Sixty-ninth session. (2014). *Report of the United Nations Environment Assembly of the United Nations Environment Programme (A/RES/69/223)* [Resolution]. Adopted on the report of the Second Committee (A/69/468/Add.7). Retrieved 21 July 2015 from: <http://undocs.org/A/RES/69/223>

This resolution addressed the first report of the UNEA to the General Assembly. It highlights the work accomplished by the Environment Assembly, and emphasizes on certain issues to be prioritized on the agenda of the Programme, such as capacity-building and technology support for developing countries. It gives an idea of the focus of the work of the committee within the post-2015 development agenda for the coming years, and officially agreed to add the item “Report of the United Nations Environment Assembly of the United Nations Environment Programme” to the agenda of the seventy-first session of the General Assembly.

United Nations System Chief Executive Board of Coordination. (n.d.) *United Nations Environment Programme* [Website]. Retrieved 28 September 2015 from <http://www.unsceb.org/content/unesp>

The webpage is a crucial resource for delegates researching UNEP. The page gives UNEP’s history, mandate, purpose, and place within the UN system all in one, easy to navigate place. This page also contains links to UNEP’s important publications, such as the GEO series, their annual report, and the Environment Data Explorer. There is also important information regarding the leadership of UNEP. Delegates should use this source liberally to familiarize themselves with UNEP and its functions.

Bibliography

New Zealand, Ministry of Foreign Affairs and Trade. (2015). *United Nations Handbook, 2015-16*. Retrieved 21 September 2015 from: http://www.mfat.govt.nz/UNHB2015/MFAT151%20UN%20Handbook_2015-16.pdf

United Nations Conference on Environment and Development. (1992). *Agenda 21* [Outcome Document]. Retrieved 28 September 2015 from: <http://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

United Nations Conference on Sustainable Development. (2012). *The Future We Want (A/RES/66/288)* [Outcome Document]. Retrieved 28 September 2015 from: <http://undocs.org/A/RES/66/288>

United Nations Environment Programme (n.d.). *About UNEA* [Website]. Retrieved 21 September 2015 from: <http://www.unep.org/unea/about.asp>

United Nations Environment Programme. (n.d.). *About UNEP* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/About/>

United Nations Environment Programme. (n.d.). *Climate Change* [Website]. Retrieved 21 July 2015 from: <http://unep.org/climatechange/>

United Nations Environment Programme. (n.d.). *Committee of Permanent Representatives* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/about/sgb/CommitteeofPermanentRepresentatives/tabid/129502/Default.aspx>

United Nations Environment Programme. (n.d.). *Environmental Calendar* [Website]. Retrieved 21 September 2015 from: <http://www.unep.org/ecalendar/>

United Nations Environment Programme. (n.d.). *Nairobi Declaration* [Website]. Retrieved 21 September 2015 from: <http://www.unep.org/documents.multilingual/default.asp?DocumentID=287&ArticleID=1728&l=en>

United Nations Environment Programme. (n.d.). *UNEP Priorities* [Website]. Retrieved 21 July 2015 from: <http://www.unep.org/about/Priorities/tabid/129622/Default.aspx>



- United Nations Environment Programme. (n.d.). *Regional Consultations* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/civil-society/IntheRegions/RegionalConsultations/tabid/52196/Default.aspx>
- United Nations Environment Programme. (n.d.). *Secretariat on Various Conventions* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=43&ArticleID=234>
- United Nations Environmental Programme. (n.d.). *UNEP and the Post-2015 Agenda* [Website]. Retrieved 21 July 2015 from: <http://unep.org/post2015/>
- United Nations Environment Programme. (n.d.). *UNEP's Coordination Mandate* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/newyork/UNEPsCoordinationMandate/tabid/56200/Default.aspx>
- United Nations Environment Programme. (n.d.). *UNEP Governance Structure* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/about/sgb/UNEPGovernanceStructure/tabid/129494/Default.aspx>
- United Nations Environment Programme. (n.d.). *UNEP Live* [Website]. Retrieved 21 August 2015 from: <http://uneplive.unep.org/>
- United Nations Environment Programme. (n.d.). *UNEP Structure* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/about/Structure/tabid/129623/Default.aspx>
- United Nations Environment Programme. (n.d.). *United Nations Environment Assembly of the United Nations Environment Programme* [Website]. Retrieved 19 August 2015 from: <http://www.unep.org/unea/en/>
- United Nations Environment Programme. (n.d.). *What UNEP Does* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=493&ArticleID=5391>
- United Nations Environment Programme. (1972). *Declaration of the United Nations Conference on the Human Environment*. Retrieved 28 September 2015 from: <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=97&articleid=1503>
- United Nations Environment Programme. (2003). *Report of the Twenty-Second Session of the Governing Council/Global Environment Forum*. Retrieved 28 September 2015 from: <http://www.unep.org/gc/gc22/REPORTS/K0360710English.pdf>
- United Nations Environment Programme. (2010). *Climate Change Factsheet*. Retrieved 21 August 2015 from: http://www.unep.org/climatechange/Portals/5/documents/Factsheets/Climate_change.pdf
- United Nations Environment Programme. (2012). *Inclusive Green Economy Given Go Ahead by Heads of State at Rio+20* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/newscentre/default.aspx?DocumentID=2688&ArticleID=9195>
- United Nations Environment Programme. (2012). *UNEP's Medium Term Strategy for 2014-2017* [Strategy Document]. Retrieved 28 September 2015 from: www.unep.org/pdf/MTS_2014-2017_Final.pdf
- United Nations Environment Programme. (2012, December 21). *United Nations Environment Programme Upgraded to Universal Membership Following Rio+20 Summit* [Press Release]. Retrieved 28 September 2015 from: <http://www.unep.org/documents.multilingual/default.asp?documentid=2700&articleid=9363&l=en>
- United Nations Environment Programme. (2013). *Embedding the Environment in Sustainable Development Goals – UNEP Post-2015 Discussion Paper 1*. Retrieved 20 August 2015 from: http://unep.org/pdf/UNEP_Post_2015_Discussion_Paper_1_%28Version2%29.pdf
- United Nations Environment Programme. (2014). *Lima COP20/CMP10* [Website]. Retrieved 21 August 2015 from: <http://www.unep.org/climatechange/ClimateChangeConferences/COP20/tabid/794500/Default.aspx>



United Nations Environment Programme. (2014). *Policy Statement by Achim Steiner, UN Under-Secretary-General and UNEP Executive Director* [Website]. Retrieved 28 September 2015 from: <http://www.unep.org/NewsCentre/default.aspx?DocumentID=2791&ArticleID=10930>

United Nations Environment Programme. (2014). *Proposed revised biennial programme of work and budget for 2014–2015 (UNEP/EA.1/7/Add. 1)* [Report]. Retrieved 28 September 2015 from: <http://www.unep.org/unea/download.asp?ID=4833>

United Nations Environment Programme. (2014). *Resolutions and decisions adopted by the United Nations Environment Assembly of the United Nations Environment Programme at its first session on 27 June 2014* [Outcome Document]. Retrieved 21 July 2015 from: http://www.unep.org/unea/UNEA_Resolutions.asp

United Nations Environment Programme. (2014, January 16). *UNEP Live Knowledge Platform Launched to Fill Gaps Between Data Providers and Consumers* [Press Release]. Retrieved 21 August 2015 from: <http://www.unep.org/NewsCentre/default.aspx?ArticleID=10690&DocumentID=2758>

United Nations Environment Programme, Governing Council. (2002). *Global Ministerial Forum. International Environmental Governance. Report of the Executive Director, UNEP/GCSS.VII/2*. Retrieved 21 September 2015 from: <http://www.unep.org/GC/GCSS-VII/Documents/k0200009.pdf>

United Nations, General Assembly. (1972). *Institutional and financial arrangements for international environmental cooperation (A/RES/2997(XXVII))* [Resolution]. Retrieved 28 September 2015 from: [http://undocs.org/A/RES/2997\(XXVII\)](http://undocs.org/A/RES/2997(XXVII))

United Nations, General Assembly, Nineteenth special session. (1997). *Programme for the Further Implementation of Agenda 21 (A/RES/S-19/2)* [Resolution]. Retrieved 28 September 2015 from: <http://undocs.org/A/RES/S-19/2>

United Nations, General Assembly, Fifty-third session. (1998). *Environment and Human Settlements; Report of the Secretary-General (A/53/463)* [Report]. Retrieved 28 September 2015 from: <http://undocs.org/A/53/463>

United Nations, General Assembly, Sixty-seventh session. (2013). *Change of the designation of the Governing Council of the United Nations Environment Programme (A/67/784)* [Report]. Retrieved 28 September 2015 from: <http://undocs.org/A/67/784>

United Nations, General Assembly, Sixty-ninth session. (2014). *Report of the United Nations Environment Assembly of the United Nations Environment Programme (A/RES/69/223)* [Resolution]. Adopted on the report of the Second Committee (A/69/468/Add.7). Retrieved 21 July 2015 from: <http://undocs.org/A/RES/69/223>

United Nations, General Assembly, Seventieth session. (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*. Retrieved 13 November 2015 from: <http://undocs.org/A/RES/70/1>

United Nations System Chief Executive Board of Coordination. (n.d.) *United Nations Environment Programme* [Website]. Retrieved 28 September 2015 from <http://www.unsceb.org/content/unep>

United Nations, World Summit on Sustainable Development. (2002). *Johannesburg Declaration on Sustainable Development (A/CONF.199/20)* [Outcome document]. Retrieved 28 September 2015 from: <http://undocs.org/A/CONF.199/20>

I. Corruption and Environmental Governance

“Corruption is an insidious plague that has a wide range of corrosive effects on societies. It undermines democracy and the rule of law, leads to violations of human rights, distorts markets, erodes the quality of life and allows organized crime, terrorism and other threats to human security to flourish.”⁸⁶

Introduction

The United Nations (UN) Environmental Programme (UNEP) serves as the UN’s primary environmental advocate.⁸⁷ UNEP leads debate and decision-making processes that can result in the formation of environmental laws and policies on all levels of government.⁸⁸ Though UNEP is the primary UN body committed to environmental governance, policies are carried out largely at the national level.⁸⁹ Good environmental governance nationally, as well as regionally and globally, is critical to environmental stability.⁹⁰ However, a widespread issue that has an effect on good governance is corruption. This concept covers a large range of practices but the most generally accepted definition for corruption is “the misuse of public or private position for direct or indirect personal gain.”⁹¹ Corruption hinders good environmental governance practices and becomes a detriment to environmental governance’s ultimate goal of environmental sustainability.⁹² There are international environmental law mechanisms in place to help combat the issue of corruption; however, international law lacks the ability to properly hold national governments accountable.⁹³ It is the responsibility of all Member States, groups, and individuals who influence environmental governance, including the private sector and non-governmental organizations (NGOs) not just political officials, to address the issue of corruption, in environmental governance.⁹⁴

International and Regional Framework

Corruption

On 14 December 2005, the *United Nations Convention against Corruption* (UNCAC) went into effect as a focused effort of the General Assembly to combat corruption in the world.⁹⁵ The convention was designed to be an international legal document, independent from the *United Nations Convention against Transnational Organized Crime*, which only introduces various ways corruption occurs and urges states to adopt legislation that would criminalize acts of corruption of public officials.⁹⁶ Despite both international documents addressing corruption as an issue to combat, both lack a concrete definition of what corruption is, but do provide examples of corrupt practices.⁹⁷ The UNCAC contains various measures and ideologies that address ways of combating corruption at all levels of governance as well as within the private sector.⁹⁸ The convention is broken into the topics of prevention, criminalization, international cooperation, and asset recovery.⁹⁹ In addition to the functional topics, the UNCAC also has its own review measures put into place with Article 63 to assess the implementation of the convention.¹⁰⁰ In cases concerning the environment and environmental governance, the UNCAC has been used as a call for action, through Article 5 of the Convention, which addresses the need to integrate anti-corruption measures into efforts to promote accountability and transparency.¹⁰¹ Applying article 5 to sectors of government as well as other articles such as Articles 9, 12, and 13 that address management, the public sector, and the participation of society, respectively, UNCAC requires states to address corruption in every aspect of their government, which can include

⁸⁶ UNODC, *United Nations Convention against Corruption*, 2015.

⁸⁷ UNEP, *About UNEP*, 2015.

⁸⁸ *Ibid.*

⁸⁹ UNEP, *UNEP’s Environmental Governance Programme*, 2015.

⁹⁰ UNEP, *Environmental Governance*, 2015.

⁹¹ UNODC, *United Nations Handbook on Practical Anti-corruption Measures for Prosecutors and Investigators*, 2004, p. 23.

⁹² UNODC, *Corruption and the Environment*, 2015.

⁹³ Shelton & Kiss, *Judicial Handbook on Environmental Law*, 2005, p. 13.

⁹⁴ *Malmö Ministerial Declaration*, 2000.

⁹⁵ UNODC, *United Nations Convention against Corruption*, 2015.

⁹⁶ *Ibid.*; UNODC, *United Nations Convention against Transnational Organized Crime*, 2014.

⁹⁷ UNODC, *United Nations Convention against Corruption*, 2015; UNODC, *United Nations Convention against Transnational Organized Crime*, 2014.

⁹⁸ UN General Assembly, *United Nations Convention against Corruption (A/RES/58/4)*, 2003.

⁹⁹ *Ibid.*

¹⁰⁰ *Ibid.*

¹⁰¹ Dinh, *Addressing Corruption in the Environmental Sector: How the United Nations Convention against Corruption Provides a Basis for Action*, 2012, p. 36.

the environment.¹⁰² Through each article, national governments are encouraged to increase their individual efforts to address anti-corruption operations in their country on multiple levels.¹⁰³ Therefore, strengthening states' environmental governance is an inevitable product of implementing the UNCAC fully.¹⁰⁴

Environmental Governance

Environmental governance is not constrained to one international convention or document but is the accumulation of various international conventions and frameworks. These frameworks in general draw attention to various environmental issues and direct the international community on overall environmental goals, such as on climate change, ecological systems, and environmental sustainability. UNEP defines environmental governance as:

"Multi-level interactions (i.e., local, national, international/global) among, but not limited to, three main actors, i.e., state, market, and civil society, which interact with one another, whether in formal and informal ways; in formulating and implementing policies in response to environment-related demands and inputs from the society; bound by rules, procedures, processes, and widely-accepted behavior; possessing characteristics of "good governance"; for the purpose of attaining environmentally-sustainable development."¹⁰⁵

One of the first conventions that helped shape these multi-level interactions internationally, while serving as a reflection of the world's increasing commitment to sustainable development, was the *Convention on Biological Diversity* (CBD) adopted by UNEP in May 1992.¹⁰⁶ The purpose of the convention is the conservation and protection of biodiversity, meaning the variability of living organisms – terrestrial and aquatic.¹⁰⁷ In addition to the protection of biodiversity, the convention also promotes the sustainable use of natural resources while promoting the equal distribution of usage and benefits from those resources.¹⁰⁸ In its entirety, the Convention covers all ecosystems, all genetic resources, and every species.¹⁰⁹ The comprehensiveness of the Convention's goals and its blanket protections make it a landmark for international law.¹¹⁰

There are many documents that address environment protection like the *Convention on Biological Diversity*. The *United Nations Framework Convention on Climate Change* (UNFCCC) of March 1994 is an international document with almost universal acceptance.¹¹¹ The UNFCCC was created to limit continual human interference to global climate change.¹¹² UNFCCC aims to limit human impact on the environment through the stabilization and management of greenhouse emissions, which is then intended to make the adverse effects of humans gradual and give ecosystems the ability to adapt slowly overtime.¹¹³ Ideally, this process will further ensure that food production and the economy centered on agriculture would be sustainable and develop in a safe manner.¹¹⁴ Another framework is the *Kyoto Protocol* adopted in December 1998 that, like the UNFCCC, focuses on greenhouse emissions internationally.¹¹⁵ Unlike UNFCCC, however, the protocol acknowledges that certain Member States, mainly developed countries, contribute more greenhouse emissions than other Member States.¹¹⁶ Essentially, the protocol calls for Member States to assess and address their greenhouse emissions and their own effect on global climate change.¹¹⁷ Though the protocol puts specific restraints and asks more of developed countries, it highlights the

¹⁰² Dinh, *Addressing Corruption in the Environmental Sector: How the United Nations Convention against Corruption Provides a Basis for Action*, 2012, p. 36.

¹⁰³ Ibid.

¹⁰⁴ Ibid.

¹⁰⁵ UNEP, *Definition of Environmental Governance*, 2008.

¹⁰⁶ Convention on Biological Diversity, *History of the Convention*, 2015.

¹⁰⁷ Convention on Biological Diversity, 1992.

¹⁰⁸ Ibid.

¹⁰⁹ Convention on Biological Diversity, *Sustaining Life on Earth*, 2015.

¹¹⁰ Ibid.

¹¹¹ UNFCCC, *First steps to a safer future: Introducing The United Nations Framework Convention on Climate Change*, 2014.

¹¹² Ibid.

¹¹³ *The United Nations Framework Convention on Climate Change*, 1992.

¹¹⁴ Ibid.

¹¹⁵ UNFCCC, *Kyoto Protocol*, 2014.

¹¹⁶ Ibid.

¹¹⁷ *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 1998.

potential for innovative technologies to correct damages caused by climate change and the need to develop information sharing between Member States.¹¹⁸

Another document that helps shape environmental governance is the *Malmö Ministerial Declaration* of May 2000.¹¹⁹ The Malmö Declaration solidifies itself as a building block for environmental governance because it addresses who should be involved in taking action in environmental affairs while bringing to light challenges facing the global community.¹²⁰ The declaration outlines the various challenges faced by the global community when addressing the environment.¹²¹ In addition to placing particular emphasis on UNEP in the development of the environmental agenda, the Malmö Declaration emphasizes the private sector as an emerging influence on environmental sustainability and governance.¹²² Lastly, the declaration addresses the role of civil society organizations (CSOs) and their importance.¹²³ The declaration states that CSOs should have free access to information sharing not only to raise public awareness, but also to hold policy-makers accountable and advocate for transparency as an anti-corruption measure.¹²⁴

Understanding the need for a global unified effort to combat corruption and strengthen environmental governance, the Sustainable Development Goals (SDGs) incorporate the same goals that the frameworks mentioned seek to achieve.¹²⁵ The SDGs are the implementation and goals of the global community for the post-2015 development agenda established through the Rio+20 conference.¹²⁶ Though all SDGs are important, Goals 9, 11, 12, 13, 14, and 15 are of particular significance when considering the environment. Goals 9 and 11 address a need for more sustainable infrastructure for habitation in urban areas and industries.¹²⁷ Goals 12 through 15 address the themes surrounding environmental governance, specifically, sustainable consumption of natural resources; conservation of the ocean and seas and the sustainable use of marine resources; the management of climate change; and the protection and restoration of terrestrial ecosystems.¹²⁸ Another important SDG is Goal 16, which mainly refers to human rights issues and attempts to promote peaceful and inclusive societies where everyone has equal access to justice.¹²⁹ One of the ways that Goal 16 addresses environmental governance is calling for the decrease in corruption and bribery in all forms.¹³⁰ It aims to create transparent, accountable, effective, and inclusive institutions at all levels of government.¹³¹ Through the SDGs, the goal of the UN is to reduce corruption and bribery through integrated decision-making, more participation from the international community and its citizens, and overall international cooperation in the development of global strategies.¹³²

Role of the International System

UNEP has been the leading environmental authority globally since 1972.¹³³ As the lead contributor to the development of environmental law, UNEP provides a means for information sharing which enhances Member States' decision-making on environmental policies.¹³⁴ In addition, UNEP is an advocate for furthering international and regional cooperation in environmental policy and the advancement of international and regional environmental goals.¹³⁵ To assist Member States in their creation and implementation of international environmental policy, UNEP created the Environmental Governance Sub-programme which addresses key factors in governance such as: international decision-making on environmental governance processes, ensuring the capacity to reach international

¹¹⁸ *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 1998.

¹¹⁹ *Malmö Ministerial Declaration*, 2000.

¹²⁰ *Ibid.*

¹²¹ *Ibid.*

¹²² UNEP, *Global Ministerial Environment Forum*, 2000; *Malmö Ministerial Declaration*, 2000.

¹²³ *Malmö Ministerial Declaration*, 2000.

¹²⁴ *Ibid.*

¹²⁵ UN DESA, *Sustainable Development Goals*, 2015.

¹²⁶ *Ibid.*

¹²⁷ UN General Assembly, *Transforming Our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

¹²⁸ *Ibid.*

¹²⁹ *Ibid.*

¹³⁰ *Ibid.*

¹³¹ *Ibid.*

¹³² *Ibid.*

¹³³ UNEP, *Environmental Governance*, 2015.

¹³⁴ UNEP, *UNEP's Environmental Governance Programme*, 2015.

¹³⁵ *Ibid.*

objectives and national agendas, and the furthered integration of environmental sustainability in development on all levels of government.¹³⁶ One key objective of the sub-program is strengthening and improving the adherence of environmental law, which includes increasing cooperation between Member States when addressing offenses to the environment.¹³⁷ By strengthening cooperation between national governments and regional organizations, UNEP, through the sub-program, also works to strengthen stakeholder participation with the hope to see further enforcement of international environmental law and policy.¹³⁸ Furthermore, UNEP encourages the help of various CSOs to aid in environmental issues.¹³⁹ Given the huge stakeholder population involved in environmental policy, UNEP has been coordinating a global civil society forum, the Global Major Groups and Stakeholders Forum (GMGSF), since 2000.¹⁴⁰ GMGSF is an open political decision-making meeting that involves all stakeholders who influence environmental governance.¹⁴¹ It contributes to the overall agenda-setting process of the United Nations Environmental Assembly (UNEA) of UNEP and its members have the ability to share their expertise within the forum.¹⁴²

Although UNEP has the lead on environmental governance, it still heavily relies on partnerships with other UN organizations, like the United Nations Office on Drugs and Crime (UNODC), and national governments to help combat corruption. UNODC serves as the world's leading organization against the proliferation of illicit drugs and international crime.¹⁴³ Combating corruption internationally is a major task for UNODC and the organization has partnered with the public and private sectors and CSOs to hinder the activities of corrupt officials internationally.¹⁴⁴ As a means to strengthen international efforts to combat corruption, UNODC launched an anti-corruption database named TRACK (Tools and Resources for Anti-Corruption Knowledge), which combines both legal and non-legal knowledge on anti-corruption policies and initiatives.¹⁴⁵ TRACK addresses many themes surrounding corruption with one being the environment.¹⁴⁶ TRACK is unique because it provides a means for various organizations and governments to share information that fulfills components of the frameworks for both environmental governance and corruption mentioned previously.¹⁴⁷ In addition to TRACK, UNODC has been pursuing and implementing programs such as Stolen Asset Recovery Assistance (STAR) to help states obtain assets stolen by corrupt officials.¹⁴⁸ As mentioned before, UNODC seeks to foster the cooperation of the public and private sectors in its goals to combat corruption.¹⁴⁹ Through the public sector, UNODC attempts to strengthen the integrity of the judiciary circuit.¹⁵⁰ Understanding that a corrupt judiciary process is a serious setback to enforcing and punishing corrupt officials and practices, UNODC, in close collaboration with Transparency International, the British Department for International Development (DFID), and the UN Special Rapporteur on the Independence of Judges and Lawyers, has been able to identify and raise awareness on the importance and practice of judiciary integrity.¹⁵¹ In regards to the private sector, UNODC abides by the decision adopted by the Conference of the States Parties to the *United Nations Convention against Corruption* resolution 3/2 that states the private sector's preventive role in combating corruption through internal audits and regulation compliance.¹⁵² UNODC contributes to information sharing and the support of the United Nations Global Compact, the largest corporate initiative on sustainability.¹⁵³ Concerning the environment specifically, UNODC has been engaged in multilateral partnerships locally, regionally, and globally to tackle environmental crimes.¹⁵⁴ UNODC has been a partnering contributor to the International

¹³⁶ UNEP, *Environmental Governance*, 2015.

¹³⁷ UNEP, *Strengthening Environmental Rule of Law*, 2015.

¹³⁸ UNEP, *Environmental Crime*, 2015.

¹³⁹ UNODC, *Major Groups And Stakeholders In International Environmental Policy-Making*, 2015.

¹⁴⁰ *Ibid.*

¹⁴¹ *Ibid.*

¹⁴² *Ibid.*

¹⁴³ UNODC, *About UNODC*, 2015.

¹⁴⁴ *Ibid.*

¹⁴⁵ UNODC, *UNODC's Action against Corruption and Economic Crime*, 2015; UNODC, *UNODC Launches TRACK Portal and Anti-Corruption Legal Library*, 2015.

¹⁴⁶ UNODC, *Corruption Themes*, 2015.

¹⁴⁷ *Ibid.*

¹⁴⁸ UNODC, *UNODC's Action against Corruption and Economic Crime*, 2015.

¹⁴⁹ *Ibid.*

¹⁵⁰ *Ibid.*

¹⁵¹ UNODC, *Strengthening the Integrity of the Judiciary*, 2015.

¹⁵² UNODC, *Work with the Private Sector*, 2015.

¹⁵³ *Ibid.*; UNODC, *CAC/COST 3 Resolutions and Decisions*, 2015; UN Global Compact, *What is UN Global Compact*, 2015.

¹⁵⁴ UNODC, *Transnational Organized Crime: Environmental crime: trafficking in wildlife and timber*, 2015.

Consortium on Combating Wildlife Crime (ICCWC), a group that focuses on providing support to national wildlife law enforcement organizations to help enforce national laws.¹⁵⁵ Also contributors to the ICCWC include: the secretariat of *Convention on International Trade in Endangered Species of Wild Fauna and Flora*, the International Criminal Police Organization (INTERPOL), the World Bank, and the World Customs Organization.¹⁵⁶

Furthermore, other intergovernmental organizations like the Global Environmental Facility (GEF) work to improve environmental governance internationally by providing financial support for environmental projects.¹⁵⁷ The GEF is an organization dedicated to the international cooperation of Member States, international organizations, other CSOs, and private sector organizations.¹⁵⁸ Though the GEF works mainly as a financial body supporting conventions and frameworks such as the CBD and the UNFCCC, it also has its own network of CSOs, known as the GEF CSO Network, which is committed to addressing environmental issues.¹⁵⁹ The GEF has also partnered with organizations like the World Bank and UNEP to fund projects nationally, regionally, and globally; all of which have been made accessible for review through the GEF database of projects.¹⁶⁰ These diverse projects include Strengthening Governance and Financial Sustainability of the National Protected Area System in the Ukraine to Engaging Policy Makers and the Judiciary to Address Poaching and Illegal Wildlife Trade in Africa.¹⁶¹

One key NGO addressing the issue of corruption and environmental governance is Transparency International, which is specifically dedicated to the overall fight against corruption.¹⁶² The NGO works in over 100 countries, advocates for good governance, and fights the topic of corruption in various areas such as: security and defense, forestry, sports, water, climate change, and health.¹⁶³ Specifically on environmental issues like water and forestry, Transparency International acts as a microphone for citizens by holding political leaders and private sector officials accountable and aware of the consequences of corruption on those resources at the local level.¹⁶⁴ Currently, Transparency International is leading the “Unmask the Corrupt” campaign, which is an effort to engage citizens to unmask corrupt politicians and businesspeople by speaking up.¹⁶⁵

Finally, private companies possess a great deal of influence in the decision processes of the public sphere, even if this influence is accompanied with a great deal of corruption that takes place within the public sector.¹⁶⁶ Nonetheless, the private sector can play a role in disesteeming businesses that partake and are ran by corrupt and unethical officials.¹⁶⁷ Article 12 of the UNCAC also portends a greater role for the private sector with the potential development of an internal audit framework to increase transparency and a more depth code of conduct that would act as a safeguard to ensure private sector integrity.¹⁶⁸

Corruption and Natural Resources

Being able to manage natural resources is key to the overall goal of sustainable development, the mediation of resource-driven conflicts, and the promotion of transparency.¹⁶⁹ Despite the great benefits natural resources provide to society such as wealth and regional stabilization, they often act as drivers for conflict and instability.¹⁷⁰ Also in post-conflict situations the availability of natural resources often goes hand in hand with corruption and bad governance, mainly due to the internal need to harness those resources and provide financial gain.¹⁷¹ In general,

¹⁵⁵ UNODC, *Transnational Organized Crime: Environmental crime: trafficking in wildlife and timber*, 2015.

¹⁵⁶ *Ibid.*

¹⁵⁷ Global Environmental Facility, *What is GEF*, 2013.

¹⁵⁸ *Ibid.*

¹⁵⁹ *Ibid.*; Global Environmental Facility, *The GEF and Civil Society*, 2015.

¹⁶⁰ Global Environmental Facility, *Area of Work*, 2015.

¹⁶¹ Global Environmental Facility, *GEF Projects*, 2013.

¹⁶² Transparency International, *Who We Are*, 2015.

¹⁶³ *Ibid.*; Transparency International, *What We Do: By Topic*, 2015.

¹⁶⁴ Transparency International, *What is Transparency*, 2015.

¹⁶⁵ Transparency International, *Unmask the Corrupt*, 2015.

¹⁶⁶ Transparency International, *Private Sector*, 2015.

¹⁶⁷ UNODC, *Corruption and the Environment*, 2015.

¹⁶⁸ UN General Assembly, *United Nations Convention against Corruption (A/RES/58/4)*, 2003.

¹⁶⁹ UNEP, *What is ECP*, 2015.

¹⁷⁰ *Ibid.*

¹⁷¹ *Ibid.*

areas of the economy like water and forestry are vulnerable to the corrupt practices of embezzlement, bribery, and the unjustified distribution of legal permits.¹⁷²

Corruption and Water Policy

Water is a basic human need and is required for a wide range of activities including drinking, sanitation, and energy production.¹⁷³ Corruption within the water management sector is widespread due to the basic necessity of the resource.¹⁷⁴ Water management projects are usually large-scale and expensive, which provides the opportunity for bribery and embezzlement.¹⁷⁵ These corrupt actions can add 30% to 45% to the cost of creating and enhancing water management infrastructure, which equates upwards to about \$12 billion a year.¹⁷⁶ These corrupt actions by officials can lead to insufficient infrastructure and, in turn, polluted water for hygiene, food preparation, and drinking.¹⁷⁷

Corruption and Forestry

Corruption in the forestry industry allows for the infiltration of organized crime.¹⁷⁸ As a result of organized crime and corrupt officials turning a blind eye, there has been a severe loss of biodiversity, endangerment of plant species, and increased carbon emissions in forested areas, which contributes to climate change.¹⁷⁹ In most cases, corruption in the forestry sector occurs in areas where forestry officials are allowed to carry out their operations without their superiors' oversight and/or heavy public oversight.¹⁸⁰ There have been attempts to address illegal logging; however, corrupt government officials make reform in forestry hard to manage.¹⁸¹ The World Bank estimates that the amount of wood that is lost due to illegal logging is about \$23 billion.¹⁸² Due to the lack of regulations, illegal-logging activities contributes an additional 20% to the world's annual greenhouse emissions.¹⁸³ Unfortunately, large-scale changes to the world's forested areas have caused damage that is irreversible.¹⁸⁴

Corruption and Carbon Trade

The carbon trade was intended to help with growing greenhouse gas (GHG) emissions internationally.¹⁸⁵ However, this growing billion-dollar market risks not completely obtaining its goals due to corruption.¹⁸⁶ As seen with the water and timber industries, GHG markets have been touched by issues of bribery, fraud, and officials abusing their authority.¹⁸⁷ In carbon trade, as in forestry and water policy, instances of corruption become particularly detrimental when officials adversely use their authority, thus undermining the positive effects of incentives in the market that foster competition for lower emissions.¹⁸⁸ However, with the ratification of UNCAC and the Organisation for Economic Co-operation and Development's (OECD) *Convention on Combating Bribery of Foreign Officials in International Business Transactions*, countries have taken multilateral approaches to formulate anti-corruption policy.¹⁸⁹ As a result, Member States have extended their efforts to strengthen better decision-making processes, provide better transparency within the market, and formulate better regulatory frameworks.¹⁹⁰

¹⁷² Dinh, *Addressing Corruption in the Environmental Sector: How the United Nations Convention against Corruption Provides a Basis for Action*, 2012, p. 35; UNODC, *Corruption and the Environment*, 2015.

¹⁷³ Transparency International, *Water*, 2015.

¹⁷⁴ Dinh, *Addressing Corruption in the Environmental Sector: How the United Nations Convention against Corruption Provides a Basis for Action*, 2012, p. 35; UNODC, *Corruption and the Environment*, 2015; Transparency International, *Water*, 2015.

¹⁷⁵ Transparency International, *Water*, 2015.

¹⁷⁶ UNODC, *Corruption and the Environment*, 2015; Transparency International, *Water*, 2015.

¹⁷⁷ UNODC, *Corruption and the Environment*, 2015.

¹⁷⁸ *Ibid.*

¹⁷⁹ *Ibid.*

¹⁸⁰ Layden et al., *The Status of Information on Corruption in the Forestry Sector, U4 Expert Answer*, 2010.

¹⁸¹ *Ibid.*

¹⁸² Transparency International, *Forestry* 2015.

¹⁸³ *Ibid.*

¹⁸⁴ UNODC, *Corruption and the Environment*, 2015.

¹⁸⁵ UNEP Global Environment Alert Service, *The impact of corruption on climate change: threatening emissions trading mechanisms*, 2013.

¹⁸⁶ *Ibid.*

¹⁸⁷ *Ibid.*

¹⁸⁸ *Ibid.*

¹⁸⁹ *Ibid.*

¹⁹⁰ *Ibid.*

Combating Corruption in Environmental Governance

Addressing the issue of corruption in environmental governance is difficult because of the cross-border nature of many of the criminal acts involved, but it is a necessary action to create equal access to, distribution of, and protection of natural resources.¹⁹¹ The issue for policy makers and other actors that seek to help national governments on corruption is being able to discern between actual corrupt individuals and a lack of ability to support proper management.¹⁹² Although it is true that lack of ability or the capacity to support can cause corruption, it is important to identify that they are two separate issues.¹⁹³

When the barrier to environmental governance is, in fact, corruption and not lack of management, one successful strategy has been addressing corrupt practices by means of incentives and mitigation.¹⁹⁴ One mitigation strategy developed by the United Nations Development Programme (UNDP) is reducing emissions from deforestation and forest degradation or REDD+.¹⁹⁵ REDD+ is a potential revenue stream for developing countries as the project seeks to “establish a large-scale system of financial incentives to encourage forest-rich developing countries to reduce their levels of deforestation and forest degradation, and to increase their carbon stocks.”¹⁹⁶ The program works by opening the dialogue and providing financial support for a multilateral approach to reducing greenhouse gas emissions and removing excess carbon in the atmosphere.¹⁹⁷ Despite its major benefits in assisting with adaption, mitigating emissions, and improving livelihoods, REDD+ is still not full-proof when battling against corruption because the program itself is susceptible to corrupt actions by officials and other actors through its implementation.¹⁹⁸ As stated before, forestry is vulnerable to corruption and despite REDD+’s potentially vast financial benefits, political officials, private sector individuals, and even NGOs have the ability to take advantage of the program and undermine the benefits REDD+ could have procure locally and regionally.¹⁹⁹

Conclusion

Corruption is a widespread issue in the world today that induces sub-optimal environmental governance.²⁰⁰ As stated above, \$12 billion a year is added to the cost of proper water management infrastructure and \$23 billion are tied up in the illegal harvesting of timber. Organizations within the UN such as UNEP and UNODC address issues of corruption and its negative toll on environmental governance. However, those solutions are susceptible to the same corruption that they seek to address as seen with REDD+, where sometimes the programs that are put into place can be used for the purpose they were created to combat. One effective tool is to strengthen transparency and citizen awareness as seen through the work of NGOs such as Transparency International. CSOs and NGOs are a great source of knowledge and communication to citizens. Given their useful and specialized nature, UNEP has engaged the help of NGOs and CSOs through its sub-program, as well as other governments and UN bodies. However, combating corruption is a hard task to handle although not impossible. As seen with the water sector and forest industry, it takes oversight and strong policies to hinder the individuals who may abuse their status or authority. Going forward, UNEP will need to find a way to better streamline collaborative efforts internationally to effectively defeat corruption.

Further Research

Delegates should look for means to collectively and multilaterally address corruption at all levels of government. In addition to addressing corruption in national governments, delegates should focus on strengthening transparency and awareness about corruption in the environmental sector among citizens. How can TRACK be used in a more universal manner and not just be kept among governments and CSOs? Regarding CSOs, how can delegates use the

¹⁹¹ UNODC, *Corruption and the Environment*, 2015; UN Information Service, *Corruption and the Environment (UNIS/CP/731)*, 2013.

¹⁹² UNODC, *Corruption and the Environment*, 2015.

¹⁹³ *Ibid.*

¹⁹⁴ UNDP, *Staying on Track: Tackling Corruption Risks in Climate Change*, 2011.

¹⁹⁵ *Ibid.*

¹⁹⁶ *Ibid.*

¹⁹⁷ *Ibid.*

¹⁹⁸ *Ibid.*

¹⁹⁹ *Ibid.*

²⁰⁰ UNEP Global Environment Alert Service, *The impact of corruption on climate change: threatening emissions trading mechanisms*, 2013.



unique expertise and connectivity to citizens of those organizations to better impede corrupt practices and provide mutual gains for stakeholders? Since the GEF funds projects at all levels of government, how can regional organizations enlist the financial contributions of GEF to aid in strengthening environmental policies for anti-corruption? Understanding that the private sector has a great deal of influence within the environmental sector, how can UNEP aid national and regional bodies in holding the private sector accountable while fostering private sector participation in anti-corruption efforts? Lastly, REDD+, can prove to be a great monetary investment for Member States if used properly: what lessons can be learned and how can the program be better implemented in order to hinder corruption amongst officials as well as other key actors?

Annotated Bibliography

Convention on Biological Diversity. (1992). Retrieved 9 August 2015 from: <https://www.cbd.int/doc/legal/cbd-en.pdf>

The Convention on Biological Diversity is a landmark document that is fundamental in establishing environmental governance. This convention has an over-arching reach that protects all living organisms unseen before in environmental law. Lastly, the Convention addresses the safe usage and distribution of natural resources, and more importantly, the actions needed to protect them. Delegates can benefit from this foundational knowledge of conservation and distribution on biological diversity resources.

Dinh, T. (2012). Addressing Corruption in the Environmental Sector: How the United Nations Convention against Corruption Provides a Basis for Action. *Corruption, Environment and the United Nations Convention Against Corruption* (pp. 34-50). Indonesia: UNODC. Retrieved 21 July 2015 from:

https://www.unodc.org/documents/corruption/Publications/2012/Corruption_Environment_and_the_UNCAC.pdf

Speaking at a conference addressing corruption in the environmental sector, the author makes a link between the UN's fight against international corruption and the international environmental sector. This source is important because it provides justification for a more proactive approach against corruption in the environmental sector by using the Convention against Corruption. Additionally, the source further clarifies the link between the negative effect of corruption and the environmental sector. Delegates can benefit from the author's position on anti-corruption policies as they continue their own research.

Shelton, D. & Kiss, A. (2005). *Judicial Handbook on Environmental Law*. Nairobi, Kenya: United Nations Environment Programme. Retrieved 20 July 2015 from: <http://www.unep.org/delc/Portals/119/publications/Judicial-Handbook-Environmental-Law.pdf>

The Judicial Handbook on Environmental Law is a great resource to further simplify international environmental law. The handbook breaks down international environmental law on all levels of government, making it a useful tool for delegates while formulating their policy prescriptions on this topic. Also, the handbook provides relevant case studies and court cases that can supplement information found in the background guide. Alongside simplifying legal language, the handbook also provides insight into enforcement of environmental law.

Transparency International. (2015). *Who We Are?* [Website]. Retrieved 16 August 2015 from: <https://www.transparency.org/about/>

Transparency International has shown itself as an influential advocate against corruption in every form. Though this particular source is not substantially informative, it does highlight the many actions taken by Transparency International. In addition, the organization provides detailed facts and insights on various aspects of corruption in the environment. In addition, solutions are provided by the organization as a means to combat corruption in that topical area.

United Nations Convention against Corruption. (2004). Retrieved 6 August 2015 from: https://www.unodc.org/documents/treaties/UNCAC/Publications/Convention/08-50026_E.pdf

The Convention against Corruption is the fundamental document combating corruption internationally. This Convention provides background knowledge on issues faced by the international community while attempting to address corruption in its entirety. While it addresses the problems caused by corruption, it also provides various means of addressing them through direct action objectives. Delegates should use this as a foundation document when incorporating the public sector and CSOs to aid them in their efforts.

United Nations Development Programme. (2011). *Staying on Track: Tackling Corruption Risks in Climate Change* [Website]. Retrieved 23 August 2015 from:

http://www.unredd.net/index.php?option=com_docman&task=doc_download&gid=3790&Itemid=53

The REDD+ program is an innovative program that utilizes incentives as a means to combat corruption. This is an important document for delegates because REDD+ is widely used internationally to combat corruption in many areas of environmental governance. Unfortunately, REDD+ is not an infallible instrument of change; however, delegates should seek to understand

and utilize this resource as a solution to corruption. Additionally, this source provides case studies on other forms of corruption that can be addressed that affect the international environmental sector.

United Nations Environment Programme. (2000). *Malmö Ministerial Declaration*. Retrieved 20 July 2015 from: http://www.unep.org/malmo/malmo_ministerial.htm

The Malmö Ministerial Declaration is a foundational document for international environmental governance. As a historical document, the declaration outlines key issues that face policy-makers in the twenty-first century in the environmental sector. Also, the Declaration addresses the role of the private sector as well as civil organizations. By utilizing the Malmö Declaration, delegates will gain more foundational knowledge of the role of the international community in environmental issues. Lastly, the source solidifies the necessity of incorporating the public sector and non-governmental actors in enforcing environmental law.

The United Nations Framework Convention on Climate Change. (1992). Retrieved 21 July 2015 from: http://unfccc.int/files/essential_background/convention/background/application/pdf/convention_text_with_annexes_english_for_posting.pdf

The United Nations Framework Convention on Climate Change (UNFCCC) is the sister document of the Convention on Biological Diversity. As the sister document, it is the landmark international document concerning greenhouse emissions and Member State accountability. Climate change is one of the areas of environmental governance and policy most susceptible to corrupt practices because it is heavily interconnected to forestry, water, and other environmental factors. Like the Convention on Biological Diversity, the UNFCCC urges accountability and the regulation of greenhouse emissions of all Member States. This is important to delegates because it provides fundamental knowledge of climate change policies.

United Nations, General Assembly, Seventieth session. (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*. Retrieved 2 November 2015 from: <http://undocs.org/A/RES/70/1>

The Sustainable Development Goals are and will continue to be a major objective for the United Nations. It is important for delegates to review and understand the SDGs while attempting to address this topic. Environmental sustainability is a major objective for the international community, and as a delegate of UNEP, it is crucial to be well versed in how the committee is attempting to address the SDGs. In addition, special attention should be placed on Goals 9, 11, 12, 13, 14, and 15 as they directly have an influence on the formulation of the environmental governance agenda.

United Nations Office on Drugs and Crime. (2015). *UNODC Launches TRACK Portal and Anti-Corruption Legal Library* [Website]. Retrieved 12 August 2015 from: <https://www.unodc.org/unodc/en/corruption/news-track.html>

TRACK can be a tremendous asset for delegates as they share ideas concerning anti-corruption practices. As a database, TRACK provides a wealth of useful knowledge that can prove extremely helpful to policy formulation. In addition, this source can provide fundamental background knowledge of past actions taken against corrupt officials as well as what actions can be taken currently. Delegates are highly encouraged to navigate through this source in order to gain a deeper insight into anti-corruption activities.

Bibliography

Convention on Biological Diversity. (1992). Retrieved 9 August 2015 from: <https://www.cbd.int/doc/legal/cbd-cn.pdf>

Convention on Biological Diversity. (2015). *History of the Convention* [Website]. Retrieved 9 August 2015 from: <https://www.cbd.int/history/default.shtml>

Convention on Biological Diversity. (2015). *Sustaining Life on Earth* [Website]. Retrieved 9 August 2015 from: <https://www.cbd.int/convention/guide/default.shtml?id=action>

- Dinh, T. (2012). Addressing Corruption in the Environmental Sector: How the United Nations Convention against Corruption Provides a Basis for Action. *Corruption, Environment and the United Nations Convention Against Corruption* (pp. 34-50). Indonesia: UNODC. Retrieved 21 July 2015 from: https://www.unodc.org/documents/corruption/Publications/2012/Corruption_Environment_and_the_UNCAC.pdf
- Global Environmental Facility. (2013). *The GEF and Civil Society* [Website]. Retrieved 16 August 2015 from: <https://www.thegef.org/gef/csos>
- Global Environmental Facility. (2013). *GEF Projects?* [Website]. Retrieved 17 September 2015 from: https://www.thegef.org/gef/gef_projects_funding
- Global Environmental Facility. (2013). *What is GEF?* [Website]. Retrieved 16 August 2015 from: <https://www.thegef.org/gef/whatisgef>
- Kyoto Protocol to the United Nations Framework Convention on Climate Change*. (1998). Retrieved 21 July 2015 from: <http://unfccc.int/resource/docs/convkp/kpeng.pdf>
- Layden, M., et al. (2010). The Status of Information on Corruption in the Forestry Sector. *U4 Expert Answer*. Retrieved 21 September 2015 from: <http://www.u4.no/publications/the-status-of-information-on-corruption-in-the-forestry-sector/>
- Malmo Ministerial Declaration*. (2000). Retrieved 21 July 2015 from: http://www.unep.org/malmo/malmo_ministerial.htm
- Shelton, D. & Kiss, A. (2005). *Judicial Handbook on Environmental Law*. Nairobi, Kenya: United Nations Environment Programme. Retrieved 20 July 2015 from: <http://www.unep.org/delc/Portals/119/publications/Judicial-Handbook-Environmental-Law.pdf>
- Transparency International. (2015). *Forestry* [Website]. Retrieved 16 August 2015 from: <https://www.transparency.org/topic/detail/forestry>
- Transparency International. (2015). *Private Sector* [Website]. Retrieved 23 October 2015 from: https://www.transparency.org/topic/detail/private_sector
- Transparency International. (2015). *Water* [Website]. Retrieved 16 August 2015 from: <https://www.transparency.org/topic/detail/water>
- Transparency International. (2015). *What is Transparency?* [Website]. Retrieved 16 August 2015 from: <https://www.transparency.org/what-is-corruption/#what-is-transparency>
- Transparency International. (2015). *What We Do: By Topic* [Website]. Retrieved 16 August 2015 from: <https://www.transparency.org/topic/>
- Transparency International. (2015). *Who We Are?* [Website]. Retrieved 16 August 2015 from: <https://www.transparency.org/about/>
- Transparency International. (2015). *Unmask the Corrupt* [Website]. Retrieved 17 September 2015 from: http://www.transparency.org/unmask_the_corrupt/en/section-what-you-can-do
- United Nations Convention against Corruption*. (2004). Retrieved 6 August 2015 from: https://www.unodc.org/documents/treaties/UNCAC/Publications/Convention/08-50026_E.pdf
- United Nations Convention against Transnational Organized Crime*. (2000). Retrieved 6 August 2015 from: https://www.unodc.org/documents/middleeastandnorthafrica/organised-crime/UNITED_NATIONS_CONVENTION_AGAINST_TRANSNATIONAL_ORGANIZED_CRIME_AND_THE_PROTOCOLS_THERETO.pdf

United Nations Department of Economic and Social Affairs. (2015). *Open Working Group proposal for Sustainable Development Goals*. Sustainable Development Knowledge Platform [Website]. Retrieved 23 August 2015 from: <https://sustainabledevelopment.un.org/sdgsproposal>

United Nations Department of Economic and Social Affairs (2015). *Sustainable Development Goals*. Sustainable Development Knowledge Platform [Website]. Retrieved 23 August 2015 from: <https://sustainabledevelopment.un.org/?menu=1300>

United Nations Environmental Programme. (2008). *Definition of Environmental Governance* [Website]. Retrieved 9 August 2015 from: http://www.unep.org/training/programmes/Instructor%20Version/Part_2/Activities/Interest_Groups/Decision-Making/Core/Def_Enviro_Governance_rev2.pdf

United Nations Development Programme. (2011). *Staying on Track: Tackling Corruption Risks in Climate Change* [Website]. Retrieved 23 August 2015 from: http://www.unredd.net/index.php?option=com_docman&task=doc_download&gid=3790&Itemid=53

United Nations Environmental Programme. (2015). *About UNEP* [Website]. Retrieved 9 August 2015 from: <http://unep.org/About/>

United Nations Environmental Programme. (2015). *Environmental Crime* [Website]. Retrieved 16 August 2015 from: http://unep.org/environmentalgovernance/law/e-rol/env_crime/tabid/794036/Default.aspx

United Nations Environmental Programme. (2015). *Environmental Governance* [Website]. Retrieved 21 July 2015 from: <http://unep.org/environmentalgovernance/>

United Nations Environment Programme. (2000). *Malmö Ministerial Declaration*. Retrieved 20 July 2015 from: http://www.unep.org/malmo/malmo_ministerial.htm

United Nations Environmental Programme. (2015). *UNEP's Environmental Governance Programme* [Website]. Retrieved 21 July 2015 from: <http://unep.org/environmentalgovernance/EG-New/Intro/tabid/132201/Default.aspx>

United Nations Environmental Programme. (2015). *Strengthening Environmental Rule of Law* [Website]. Retrieved 9 August 2015 from: <http://unep.org/environmentalgovernance/law/e-rol/tabid/132209/Default.aspx>

United Nations Environmental Programme. (2015). *What is ECP?* [Website]. Retrieved 12 August 2015 from: <http://www.unep.org/disastersandconflicts/Introduction/ECP/whatisecp/tabid/105949/Default.aspx>

United Nations Environmental Programme Global Environment Alert Service. (2013). *The impact of corruption on climate change: threatening emissions trading mechanisms* [Website]. Retrieved 24 October 2015 from: http://na.unep.net/geas/archive/pdfs/GEAS_Mar2013_EnvCorruption.pdf

The United Nations Framework Convention on Climate Change. (1992). Retrieved 21 July 2015 from: http://unfccc.int/files/essential_background/convention/background/application/pdf/convention_text_with_annexes_english_for_posting.pdf

United Nations Framework Convention on Climate Change. (2014). *First steps to a safer future: Introducing The United Nations Framework Convention on Climate Change* [Website]. Retrieved 21 July 2015 from: http://unfccc.int/essential_background/convention/items/6036.php

United Nations Framework Convention on Climate Change. (2014). *Kyoto Protocol* [Website]. Retrieved 21 July 2015 from: http://unfccc.int/kyoto_protocol/items/2830.php

United Nations, General Assembly, Fifty-eighth session. (2003). *United Nations Convention against Corruption (A/RES/58/4)*. Retrieved 29 October 2015 from: <http://undocs.org/A/RES/58/4>



United Nations, General Assembly, Seventieth session. (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*. Retrieved 2 November 2015 from: <http://undocs.org/A/RES/70/1>

United Nations Global Compact. (2015). *What is UN Global Compact?* [Website]. Retrieved 12 August 2015 from: <https://www.unglobalcompact.org/what-is-gc>

United Nations Information Service. (2013, 27 November). *Corruption and the Environment (UNIS/CP/731)* [Press Release]. Retrieved 21 July 2015 from: <http://www.unis.unvienna.org/unis/en/pressrels/2013/uniscp731.html>

United Nations Office on Drugs and Crime. (2004). *United Nations Handbook on Practical Anti-corruption Measures for Prosecutors and Investigators*. Retrieved 9 August 2015 from: <https://www.unodc.org/pdf/crime/corruption/Handbook.pdf>

United Nations Office on Drug and Crime. (2012) *Corruption and the Environment* [Website]. Retrieved 18 July 2015 from: http://www.anticorruptionday.org/documents/actagainstcorruption/print/materials2012/corr12_fs_ENVIRONMENT_en.pdf

United Nations Office on Drug and Crime. (2012) *Corruption Themes* [Website]. Retrieved 21 July 2015 from: <http://www.track.unodc.org/CorruptionThemes/Pages/home.aspx>

United Nations Office on Drugs and Crime. (2015). *About UNODC* [Website]. Retrieved 9 August 2015 from: <http://www.unodc.org/unodc/en/about-unodc/index.html?ref=menutop>

United Nations Office on Drug and Crime. (2015) *CAC/COST 3 Resolutions and Decisions* [Website]. Retrieved 21 September 2015 from: <https://www.unodc.org/unodc/en/treaties/CAC/CAC-COSP-session3-resolutions.html>

United Nations Office on Drugs and Crime. (2015). *Major Groups And Stakeholders In International Environmental Policy-Making* [Website]. Retrieved 12 August 2015 from: <http://www.unep.org/civil-society/Governance/tabid/105629/Default.aspx>

United Nations Office on Drugs and Crime. (2015). *Strengthening the Integrity of the Judiciary* [Website]. Retrieved 12 August 2015 from: <http://www.unodc.org/unodc/en/corruption/judiciary.html>

United Nations Office on Drugs and Crime. (2015). *Transnational Organized Crime: Environmental crime: trafficking in wildlife and timber* [Website]. Retrieved 26 October 2015 from: <https://www.unodc.org/toc/en/crimes/environmental-crime.html>

United Nations Office on Drugs and Crime. (2015). *UNODC's Action against Corruption and Economic Crime* [Website]. Retrieved 12 August 2015 from: <http://www.unodc.org/unodc/corruption/>

United Nations Office on Drugs and Crime. (2015). *UNODC Launches TRACK Portal and Anti-Corruption Legal Library* [Website]. Retrieved 12 August 2015 from: <https://www.unodc.org/unodc/en/corruption/news-track.html>

United Nations Office on Drugs and Crime. (2015). *United Nations Convention against Corruption* [Website]. Retrieved 12 August 2015 from: <https://www.unodc.org/unodc/en/treaties/CAC/>

United Nations Office on Drugs and Crime. (2015). *Work with the Private Sector?* [Website]. Retrieved 12 August 2015 from: <http://www.unodc.org/unodc/en/corruption/private-sector.html>

II. Improving Sustainable Forest Management Practices

“Forests are on the front lines of climate change. These ecosystems, rich with biodiversity, are increasingly vulnerable to changes in weather, temperature and rainfall patterns. It is essential, therefore, that we work to preserve and sustainably manage our forests.”²⁰¹

Introduction

According to the *2015 Global Forest Resources Assessment*, approximately 30% of the Earth’s total land area, or roughly 4 billion hectares, is covered by forests.²⁰² As both a diverse ecosystem and unique natural resource that is essential for human development, forests provide shelter, food security, fuel, income, natural materials, and water, as well as serving many other critical purposes, which is why they must be protected and prioritized on the global agenda.²⁰³ Between 2000 and 2010, forests were affected by deforestation and forest degradation at a rate of approximately 13 million hectares per year, an area roughly equivalent to the size of Greece.²⁰⁴ Deforestation, which is defined by the *United Nations Framework Convention on Climate Change* (1992) as “the direct human-induced conversion of forested land to non-forested land,” includes burning, tree removal for agricultural development, logging for timber, and indirect degradation from climate change.²⁰⁵ In contrast, as defined by the United Nations Environment Programme (UNEP), forest degradation is “the temporary or permanent lowering of the productive capacity of [forests].”²⁰⁶

As a primary developer of the global environmental agenda, UNEP adheres closely to the purposes and principles of the United Nations (UN).²⁰⁷ UNEP, which works to preserve forests through its work in ecosystem management as one of its seven priority areas, maintains that the sustainable management of land leads to an overall improvement in human security.²⁰⁸ The amount of deforestation and forest degradation have slowed since the international community placed a heavier policy focus on sustainable forest management (SFM) with the hope that this trend will persist with the global implementation of the post-2015 development agenda through the Sustainable Development Goals (SDGs).²⁰⁹ If not, an estimated 289 million hectares of forest will be lost, releasing 169 billion tons of carbon dioxide into the atmosphere by 2050, and this will have drastic consequences for climate change and biodiversity.²¹⁰ Consequently, the global community has continued to draw attention to the importance of SFM and to include forests in conversations surrounding climate change and the post-2015 development agenda.²¹¹

Defining Sustainable Forest Management

SFM is a “dynamic process” that ultimately requires many actors working cooperatively and collaboratively to build capacity, share information, and provide expertise to protect the world’s forest ecosystems.²¹² SFM maintains the overall productive capacity of forests for society while protecting and ensuring the long-term viability of forests for present and future use.²¹³ SFM practices are multidimensional processes and policies that rely completely on human action and must be implemented at global, national, and local levels, as well as within forest management units.²¹⁴ SFM can be a tool for negotiating both the positive and negative tradeoffs of forest-related actions with relevant stakeholders and justifying necessary intervention during periods of conflict.²¹⁵ Ultimately, SFM works to reduce

²⁰¹ UN DPI, *Secretary-General, on International Day of Forests, Stresses Investment, Smart Policies Essential for Building Sustainable, Climate-Resilient Future*, 2015.

²⁰² UN FAO, *Global Forest Resources Assessments: Current Assessment*, 2015.

²⁰³ UN FAO, *Selected FAO Forestry and other Publications 2015*, 2015, p. 2.

²⁰⁴ UN FAO, *Global Forest Resources Assessment*, 2010, p. 10.

²⁰⁵ World Wildlife Fund, *Deforestation: Overview*, 2015.

²⁰⁶ UN FAO, *Land degradation in south Asia: Its severity, causes and effects upon the people*, 1994.

²⁰⁷ UNEP, *About UNEP*.

²⁰⁸ UNEP, *UNEP Priorities*, 2015.

²⁰⁹ UNEP, *Policy Coherence of the Sustainable Development Goals: A Natural Resource Perspective*, 2015, p. 22.

²¹⁰ Khew, *Why it's crucial to curb deforestation*, *The Straits Times*, 2015.

²¹¹ UN FAO, *Global Forest Resources Assessments: Current Assessment*, 2015.

²¹² UN FAO, *Sustainable Forest Management: About*, 2014.

²¹³ *Ibid.*

²¹⁴ *Ibid.*

²¹⁵ *Ibid.*

forest degradation and deforestation as a means of preserving the social, economic, cultural, and environmental value of forests for sustainable development.²¹⁶

International and Regional Framework

In 1987, the World Commission on Environment and Development published the report *Our Common Future*.²¹⁷ This groundbreaking report championed the idea of sustainable development, which led to the 1992 UN Conference on Environment and Development (UNCED) and the publishing of *Agenda 21*, an action plan for addressing sustainable development and environmental protection.²¹⁸ Chapter 11 of *Agenda 21*, “Combating Deforestation,” recognized the significance of forests to sustainable development and recommended that Member States create programs focused on sustainable forestry.²¹⁹ UNCED also resulted in the *Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests* (the Forest Principles) (1992).²²⁰ The Forest Principles, inter alia, establish substantive recommendations on forest conservation, identify the critical role forests play in environmental preservation, and specify a global plan of action on forest efforts involving the alignment of national policies, preservation of natural forest resources, and development of SFM practices.²²¹ The Forest Principles also emphasize how significant forests are to sustainable development by noting the renewable contributions forests provide, such as employment, fuel, food, shelter, and protecting biodiversity.²²²

The international community focused its agenda in 2000 to address extreme poverty, lack of education, health, the environment, and climate change through the Millennium Development Goals (MDGs).²²³ With MDG 7 addressing environmental sustainability, the result over 15 years, according to *The Millennium Development Goals Report 2015*, was a decrease in the rate of deforestation and a decline in yearly “net loss in forest area.”²²⁴ Despite such progress, the international community recognized that work remains to protect forests and therefore defined several new goals focused on the environment in the post-2015 development agenda, including SDG 15: “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.”²²⁵ Associated with SDG 15 are 12 targets addressing various aspects of forest protection, including SFM, deforestation, conservation, reducing biodiversity loss, mobilizing resources, and enhancing international support.²²⁶

The General Assembly (GA) addressed SFM in resolution 61/193 of 2006, which declared 2011 as the International Year of Forests; resolution 62/98 of 2007, which adopted the *Non-legally Binding Instrument on all Types of Forests* (2007); and resolution 67/200 of 2013, which established that 21 March of every year shall be celebrated as the International Day of Forests.²²⁷ The International Day of Forests involves community-focused events including tree-planting ceremonies, awareness raising, and local outreach as a means to bring attention to the significance of forests.²²⁸ The *Non-legally Binding Instrument on all Types of Forests* reinforced the Forest Principles and set global objectives for forests, with the aim of protecting the significant value of all forest types through SFM.²²⁹ Regionally,

²¹⁶ UN FAO, *Sustainable Forest Management*, 2015.

²¹⁷ UN DPI, *Global Issues: Environment*.

²¹⁸ Ibid.

²¹⁹ UNCED, *Agenda 21*, 1992.

²²⁰ UN General Assembly, *Report of the United Nations Conference on Environment and Development, Annex III: Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (A/CONF.151/26 (Vol.III))*, 1992.

²²¹ Ibid.

²²² Ibid.

²²³ UN DPI, *Global Issues: Environment*.

²²⁴ UN DESA, *The Millennium Development Goals Report 2015*, 2015, p. 52.

²²⁵ UNEP, *Policy Coherence of the Sustainable Development Goals: A Natural Resource Perspective*, 2015, p. 25.

²²⁶ UN DPI, *Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss*, 2015; UN General Assembly, *Transforming Our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

²²⁷ UN General Assembly, *International Year of Forests, 2011 (A/RES/61/193)*, 2006; UN General Assembly, *Non-legally binding instrument on all types of forests (A/RES/62/98)*, 2007; UN General Assembly, *International Day of Forests (A/RES/67/200)*, 2012.

²²⁸ UN DPI, *International Day of Forests: Background*.

²²⁹ UN General Assembly, *Non-legally binding instrument on all types of forests (A/RES/62/98)*, 2007.

Member States have established forest-related agreements through regional organizations including the Southern African Development Community, the Association of Southeast Asian Nations, and the European Union.²³⁰ These regional agreements support the international community's focus on protecting forests and achieving SDG 15 through the establishment of collaborative policies that include SFM practices.²³¹ Regional agreements also supplement national forest policy and, according to the Food and Agriculture Organization of the United Nations (FAO), in 2010, 143 countries had forest policy statements.²³²

Role of the International System

Substantive conversations regarding forests predated the inception of the UN through the World Forestry Congress, which first convened in 1926 and continues to meet every six years to raise awareness of forest-related issues.²³³ The UN was involved in the issue of forests by providing support through FAO to this group in 1945; however, not until 1972 did the UN begin to pay special attention to the use of the environment's natural resources.²³⁴ In 1972, the UN Conference on the Human Environment addressed this concern by declaring 19 principles to serve as a guiding agenda for global environmental issues.²³⁵

Building upon the initial momentum of the MDGs, the Economic and Social Council (ECOSOC) adopted resolution 2000/35 of 2000, which created the United Nations Forum on Forests (UNFF).²³⁶ As an intergovernmental body with universal membership, UNFF established the four Global Objectives on Forests, which promote universal commitment to SFM based on the Forest Principles, *Agenda 21*, and the *Rio Declaration on Environment and Development* (1992).²³⁷ UNFF is an intergovernmental body focused on garnering global political commitments to ensure the longevity of SFM practices, forest conservation, and development.²³⁸ Meeting every two years, UNFF also works to assess the global implementation of SFM practices.²³⁹

UNEP, as a designated promoter of sustainable environmental practices and policies within the UN System, is a collaborative and cooperative entity focused on building an international agenda focused on solving environmental issues.²⁴⁰ UNEP supports ecosystem management through its commitment to building state capacity, providing expertise on numerous dynamic issues, and reporting on the current status of forests and their impact.²⁴¹ It is under UNEP's ecosystem management sector that projects related to forests, as one of the most significant and impactful terrestrial ecosystems, are created and implemented.²⁴² Through the Ecosystem Management Programme, UNEP explores how an integrated approach to environmental management, including SFM, is critical to maintaining ecosystems that provide essential services related to climate change, water, natural disasters, and energy.²⁴³ As the need for SFM practices increases, especially in light of climate change, UNEP has focused on building partnerships to reduce threats to forest ecosystems.²⁴⁴ For example, UNEP's partnership with FAO and the United Nations Development Programme (UNDP) led to the creation of the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD).²⁴⁵

²³⁰ Southern African Development Community, *Documents & Publications: Protocol on Forestry (2002)*, 2012; ASEAN, *Agreement and Declarations*, 2014; European Commission, *Agriculture and Rural Development: EU Forest Action Plan*, 2010.

²³¹ UNEP, *Policy Coherence of the Sustainable Development Goals: A Natural Resource Perspective*, 2015, p. 33.

²³² UN FAO, *Developing Effective Forest Policy: A guide*, 2010, p. 1.

²³³ UN FAO, *World Forestry Congress: Historical Context*, 2015.

²³⁴ UN DPI, *Global Issues: Environment*.

²³⁵ *Ibid.*

²³⁶ UNFF, *UN Forum on Forests*.

²³⁷ *Ibid.*

²³⁸ *Ibid.*

²³⁹ UNFF, *Capacity Development*.

²⁴⁰ UNEP, *About UNEP*.

²⁴¹ *Ibid.*

²⁴² UNEP, *Ecosystem Management: UNEP's Work: Terrestrial Ecosystems: Forests*.

²⁴³ UNEP, *Ecosystem Management Programme: A new approach to Sustainability*, 2009, p. 1.

²⁴⁴ UNEP, *Ecosystem Management: UNEP's Work: Terrestrial Ecosystems: Forests*.

²⁴⁵ *Ibid.*

Developed in 2008, UN-REDD aims to reduce global emissions from forest deforestation and degradation in developing countries by addressing the economic value of forests and forest resources.²⁴⁶ UN-REDD provides financial rewards to developing countries for reducing carbon emissions associated with deforestation, thereby incentivizing capacity-building to facilitate long-term, sustainable reductions in emissions and preserve the socioeconomic value of forests.²⁴⁷ REDD+ is a related initiative that expands upon UN-REDD by creating national-level strategies to address subjects such as conservation, SFM practices, and forest carbon stock enhancement.²⁴⁸ REDD+ strategies require support through reduced global emissions by both developed and developing countries to ensure success.²⁴⁹ Operating through seven integrated areas of support, UN-REDD creates supportive guidelines and sponsors workshops through the REDD+ Academy in partnership with the UNEP Environmental Education and Training Unit.²⁵⁰ The REDD+ Academy is a capacity-building tool for partner countries with the aim to develop REDD+ strategies through training on forest monitoring systems, safeguards, finance, and many other topics.²⁵¹

As one of the primary partners dedicated to UN-REDD, FAO is an intergovernmental organization that focuses not only on eradicating hunger and reducing poverty, but also on increasing agricultural productivity and promoting sustainable use of natural resources.²⁵² As one of the primary international bodies focused on forests, FAO promotes policy dialogue, provides technical expertise, facilitates national policy creation and implementation, and facilitates discussion on advancing SFM practices.²⁵³ Every five years, FAO conducts a Global Forest Resources Assessment to analyze the current state of the world's forests and the trends that have emerged over the observation period with the most recent released in September 2015.²⁵⁴ These assessments identify potential opportunities for Member States to take action, including actions related to SFM.²⁵⁵ FAO developed the SFM Toolbox, which utilizes case studies to demonstrate effective implementation of SFM practices at a local level.²⁵⁶ Additionally, FAO is the chair of the Collaborative Partnership on Forests (CPF), which is a voluntary forum of international organizations used to discuss streamlining SFM processes and build strategic partnerships.²⁵⁷ FAO created eight fact sheets on aspects of SFM including REDD+, the multiple functions of forests, food security and livelihoods, indigenous populations, gender, primary forests, biodiversity, and climate change through the CPF Working Group on Advancing a Common Message on SFM.²⁵⁸

Recognizing the importance of civil society to SFM, the CPF has forged partnerships with organizations such as the Center for International Forestry Research (CIFOR) to obtain additional information to benefit the improvement of SFM practices.²⁵⁹ Having worked in the Congo Basin and in the Peruvian Amazon to promote SFM, CIFOR has aided in identifying the positive impacts of forests in these specific areas, which has led to new SFM policy creation that could also be adapted within other regions of the international community.²⁶⁰ Other civil society organizations working to promote SFM include Building and Wood Workers' International (BWI), which has identified that many workers in the forestry industry live in poverty.²⁶¹ Additionally, workers' rights and labor standards are minimal for those in the forestry industry, which inhibits the successful implementation of SFM practices.²⁶² BWI works to address workers' needs by collaborating with trade unions to build capacity and improve communication through their global wood and forestry program.²⁶³

²⁴⁶ UN-REDD, *Frequently Asked Questions and Answers –The UN REDD Programme and REDD+*, 2010, p. 2.

²⁴⁷ *Ibid.*

²⁴⁸ *Ibid.*

²⁴⁹ UN-REDD, *Frequently Asked Questions and Answers –The UN REDD Programme and REDD+*, 2010.

²⁵⁰ UN-REDD, *Global-level Activities*, 2015; UN-REDD, *REDD+ Academy*, 2015.

²⁵¹ UN-REDD, *REDD+ Academy*, 2015.

²⁵² UN FAO, *About FAO*, 2015.

²⁵³ UN FAO, *Global Forest Resources Assessment 2010*, 2010.

²⁵⁴ UN FAO, *Global Forest Resources Assessment: FRA history*, 2008; UN FAO, *Global Forest Resources Assessments: Current Assessment*, 2015.

²⁵⁵ UN FAO, *Global Forest Resources Assessments: Current Assessment*, 2015.

²⁵⁶ UN FAO, *Sustainable Forest Management*, 2015.

²⁵⁷ Collaborative Partnership on Forests, *About the Collaborative Partnership on Forests*, 2015.

²⁵⁸ Collaborative Partnership on Forests, *Working Group on Sustainable Forest Management*, 2015.

²⁵⁹ Center for International Forestry Research, *The Collaborative Partnership on Forests (CPF)*, 2014.

²⁶⁰ *Ibid.*

²⁶¹ Building and Wood Workers' International, *Wood and Forestry*, 2011.

²⁶² *Ibid.*

²⁶³ *Ibid.*

The Impact of Forests

The importance of improving SFM practices is evident in light of the 1.6 billion people who depend on forests for their sustenance.²⁶⁴ Forests provide a substantial number of goods and services that contribute to global socioeconomic development, growth of social capital, and poverty reduction.²⁶⁵ These goods and services derive from the high biodiversity of forests: it is estimated that approximately 80% of the world's documented species are located in forests alone.²⁶⁶ Biodiversity, which is defined by the *Convention on Biological Diversity* (1992) as “the variability among living organisms from all sources,” generates 40% of the global economy and is especially crucial to the survival of the rural poor.²⁶⁷ Forests also provide regulating services; notably, they address the effects of climate change by storing carbon from the atmosphere and purify water by filtering out impurities.²⁶⁸

Forests and the Green Economy

While there is no internationally agreed upon definition of the term “green economy,” UNEP defines it as an economy “that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities.”²⁶⁹ A green economy is “low-carbon, resource-efficient, and socially inclusive.”²⁷⁰ Green economies focus on improving socioeconomic opportunity through environmentally conscious sustainable development practices targeting increased employment opportunities and decreased carbon emissions.²⁷¹ Forests contribute to the successful development of a green economy since they are a source of energy, food, and shelter while storing carbon.²⁷² In the global transition to a green economy, forests have spurred economic and human development by contributing 22% toward household income and, in 2006, \$468 billion of global gross domestic product (GDP).²⁷³ Through public and private investment, the full economic and societal potential of forests can be realized with SFM practices that identify the productive aspects of forests, especially those related to reducing carbon emissions.²⁷⁴ UNEP has found that implementing REDD+ could have a significant impact on the development of a green economy through its results-based financial rewards, assistance with developing SFM policies, and provision of technical and logistical support.²⁷⁵

Forests and Climate Change

According to the FAO, “forests have four major roles in climate change” including reducing carbon emissions, producing wood as an alternative source of energy, reacting sensitively to climate change, and recycling carbon emissions into biomass and soils.²⁷⁶ However, if forests continue to face deforestation without consistent reforestation, the international community will witness increased levels of species extinction, higher carbon emission levels, and more stagnant weather patterns.²⁷⁷ If the Amazon rainforest were to experience complete deforestation, regional levels of precipitation and evaporation would decrease to a level experienced during periods of constant desertification.²⁷⁸ To address the link between forests and climate change, FAO created the Forest and Climate Change Programme.²⁷⁹ Focused on merging climate change and forest-related activities within Member States, the program provides technical assistance and guidance in collaboration with FAO partners.²⁸⁰ Integrating climate change considerations into SFM guidelines is another significant approach under development with the FAO

²⁶⁴ UN DESA, *The Millennium Development Goals Report 2015*, 2015, p. 52.

²⁶⁵ UN FAO, *World Forestry Congress 2015: Forests for socioeconomic development and food security*, 2015.

²⁶⁶ Khew, Why it's crucial to curb deforestation, *The Straits Times*, 2015.

²⁶⁷ *Convention on Biological Diversity*, 1992, Art. 2; Secretariat of the Convention on Biological Diversity, *Sustainable Forest Management, Biodiversity and Livelihoods: A Good Practice Guide*, 2009, p. 3.

²⁶⁸ UN FAO, *Selected FAO Forestry and other Publications 2015*, 2015, p. 2; Secretariat of the Convention on Biological Diversity, *Sustainable Forest Management, Biodiversity and Livelihoods: A Good Practice Guide*, 2009, p. 6.

²⁶⁹ UNEP, *Forests in a Green Economy: A synthesis*, 2011, p. 5.

²⁷⁰ UN DPI, *Sustainable Development: Green Economy*.

²⁷¹ UNEP, *Green Economy: About GEI*, 2015.

²⁷² UNEP, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, 2011, p. 156.

²⁷³ UNEP, *Forests in a Green Economy: A synthesis*, 2011, p. 5.

²⁷⁴ *Ibid.*, p. 11.

²⁷⁵ UNEP, *Forest Ecosystems in the Transition to a Green Economy and the Role of REDD+ in the United Republic of Tanzania*, 2015, p. 5.

²⁷⁶ UN FAO, *Roles of forests in climate change*, 2012.

²⁷⁷ UNEP, *UNEP Year Book 2011*, 2011, p. 47.

²⁷⁸ UNEP et al., *Vital Forest Graphics*, 2009, p. 32.

²⁷⁹ UN FAO, *FAO Forest and Climate Change Programme*, 2013.

²⁸⁰ *Ibid.*

program to assist Member States in creating strategies for forest adaptation and mitigation.²⁸¹ In July 2015, participants at the fourth International Conference on Forests and Water in a Changing Environment discussed the hydrological process and forest disturbance.²⁸² These international conversations highlight the need to incorporate numerous considerations in the development of SFM practices and policy.²⁸³

Forests and Water Ecosystems

Water ecosystems are just one of many ecosystems that are interconnected with forest ecosystems.²⁸⁴ UNEP defines an ecosystem as “dynamic, complex plant, animal and microorganism communities and the non-living environment, functioning as one unit.”²⁸⁵ UNEP’s ecosystem management approach focuses on the links between all ecosystems to support ecosystem preservation and existence.²⁸⁶ Global fresh water shortages are an ongoing international problem that will be exacerbated by forest depletion according to the 2013 FAO report *Forests and Water: International Momentum and Action*.²⁸⁷ SFM practices can provide a balance to maximize the benefits of forests while preserving the water-related services that forests provide.²⁸⁸ To address a lack of information in this area, institutions such as the International Union of Forest Research Organizations continue to gather data on the complex relationship between forest and water ecosystems.²⁸⁹ Ultimately, cross-sectoral research on water and forests can improve policymakers’ understanding of how SFM practices can be implemented.²⁹⁰

Implementing Sustainable Forest Management Practices

The various forest types, for example temperate versus tropical forests, mean SFM practices vary significantly, but it is important that policy processes align at the national level to prevent extreme differences between Member States that could result in varying degrees of forest degradation.²⁹¹ Despite existing national SFM policies and legislation covering roughly 99% of the world’s forests, enforcement, implementation, and regulation remain some of the challenges associated with implementing SFM practices.²⁹² Additionally, SFM requires sufficient financial resources, environmentally sound technology transfer, increased capacity, and good governance to ensure success, particularly in landlocked developing, least developed, and Small Island Developing States (SIDS).²⁹³

Financing Sustainable Forest Management Practices

To realize the full potential of forests, significant financial investment to maintain and implement SFM practices is required from not only public and private sectors, but also local entities that rely on forests to maintain their existence.²⁹⁴ For example, to sustain a 15,000-hectare forest in Gabon, \$4.5 million is needed and more than half of those dollars are allocated to the development of an SFM plan, which involves research, assessment, and training of public and private stakeholders.²⁹⁵ More broadly, while Target 2 of SDG Goal 15 aims to “halt deforestation” by 2020, UNEP has estimated that further investment of \$40 billion annually will be required to even halve deforestation by 2030.²⁹⁶ Unfortunately, financial investment in forests and SFM is low, due in part to limited economic incentives associated with SFM practices generally, which have resulted in continued deforestation for timber extraction and expanding agricultural terrain as population and population densities increase.²⁹⁷ The Forest Investment Program (FIP) is working to finance SFM as a supporter and collaborator with REDD+ efforts.²⁹⁸ FIP

²⁸¹ UN FAO, *Guidance for integrating climate change issues into forest management*, 2013.

²⁸² University of British Columbia, *4th International Conference on Forests and Water in a Changing Environment*, 2015.

²⁸³ Collaborative Partnership on Forests, *Working Group on Sustainable Forest Management*, 2015.

²⁸⁴ University of British Columbia, *4th International Conference on Forests and Water in a Changing Environment*, 2015.

²⁸⁵ Conceptual Framework Working Group of the Millennium Ecosystem Assessment, *Ecosystems and Human Well-Being*, 2003, p. 49.

²⁸⁶ UNEP, *Ecosystem Management*, p. 2.

²⁸⁷ UN FAO, *Forests and Water: International Momentum and Action*, 2013, p. 1.

²⁸⁸ *Ibid.*, p. 2.

²⁸⁹ *Ibid.*, p. 3.

²⁹⁰ *Ibid.*, p. 37.

²⁹¹ UN FAO, *Sustainable Forest Management: About*, 2014.

²⁹² UN FAO, *Global Forest Resources Assessments: Current Assessment*, 2015.

²⁹³ UN General Assembly, *Non-legally binding instrument on all types of forests (A/RES/62/98)*, 2007.

²⁹⁴ UNEP, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, 2011, p. 160.

²⁹⁵ *Ibid.*, p. 174.

²⁹⁶ UN General Assembly, *Transforming Our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015; UNEP, *Forests in a Green Economy: A synthesis*, 2011, p. 13.

²⁹⁷ UNEP, *Forests in a Green Economy: A synthesis*, 2011, p. 8.

²⁹⁸ Climate Investment Funds, *Forest Investment Program*, 2015.

supports REDD+ through its funding of 38 projects focused on protecting forest ecosystems, supporting local economies beyond the forest sector, aiding in capacity-building and forest governance, and addressing climate change.²⁹⁹ Though currently operating in only eight pilot countries, FIP is expected to receive additional financing to produce projects for many Member States looking to improve SFM practices.³⁰⁰

Transparency and Accountability

The Forest Principles note the need to sustain forests in a transparent manner with good forest governance practices.³⁰¹ Many challenges remain with respect to good governance, which is integral to ensuring the success of SFM in addition to reducing carbon emissions and eliminating illegal forest activities.³⁰² According to the *2015 Global Forest Resources Assessment*, one of the most significant hindrances to implementing SFM practices is the lack of accountability, which stems from the inability of governments to enforce compliance.³⁰³ UNEP has identified the importance of recordkeeping and reporting of forest-related activities to ensure the success and transparency of SFM; yet, records maintained at the national level are generally inaccessible.³⁰⁴ Records are important not only for tracking forest-related activities, but also for tracking global, regional, and national rates of deforestation and degradation.³⁰⁵ Corruption in the forestry sector can take many forms including approving illegal deals, accepting bribes, or ignoring illicit logging activities for profit.³⁰⁶ To address global forestry governance, FAO and the World Bank created the Framework for Assessing and Monitoring Forest Governance to assist governments and other stakeholders with monitoring and assessing policy, planning, and implementation aspects of forest governance within specific countries.³⁰⁷ UN-REDD assisted a number of partner countries with assessing risks related to corruption in REDD+ and formulating plans of action to address these risks.³⁰⁸ The results demonstrated a need to improve understanding of causes of deforestation and land degradation, establish safeguards, and create new, incentive-based systems within the forestry sector.³⁰⁹ Findings also revealed that stakeholders involved in SFM should build collaborative partnerships to foster capacity development, which can serve as a deterrent for corruption.³¹⁰ UN-REDD has also conducted evaluations that provide recommendations for improvement of transparency and accountability with respect to forest governance within specific countries.³¹¹ For example, recommendations for Indonesia's forest licensing system included gathering additional public opinion regarding the forest licensing process, creating a streamlined approach to online licensing systems, implanting a code of ethics to maintain accountability and transparency among officials, provide additional training, and formulate indicators for future improvement.³¹²

Mitigating Illicit Forest Activities and Conflict

Poor forest governance presents opportunities for illegal forest activities that have a negative impact on SFM.³¹³ In many instances, illicit logging leads to deforestation, which places yet another strain on Member States working to implement SFM practices.³¹⁴ The World Bank estimates that roughly \$10 billion is lost annually due to illegal logging activities internationally.³¹⁵ It is also suggested that illegal logging stems from logging bans put in place by

²⁹⁹ Climate Investment Funds, *Forest Investment Program*, 2015.

³⁰⁰ *Ibid.*

³⁰¹ UN General Assembly, *Report of the United Nations Conference on Environment and Development, Annex III: Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (A/CONF.151/26 (Vol.III))*, 1992.

³⁰² FAO, *Forest governance assessment and monitoring*, 2014.

³⁰³ UN FAO, *Global Forest Resources Assessments: Current Assessment*, 2015.

³⁰⁴ UNEP, *Forest Ecosystems in the Transition to a Green Economy and the Role of REDD+ in the United Republic of Tanzania*, 2015, p. 66.

³⁰⁵ UNEP et al., *Vital Forest Graphics*, 2009, p. 10.

³⁰⁶ UN FAO, *State of the World's Forests 2001: Part II – Key Issues in the Forest Sector Today*, 2001, pp. 88-90.

³⁰⁷ UN FAO, *Framework for assessing and monitoring forest governance*, 2012.

³⁰⁸ UN-REDD, *Sharing National Experiences in Strengthening Transparency, Accountability and Integrity for REDD+*, 2013, p. 2.

³⁰⁹ *Ibid.*

³¹⁰ *Ibid.*, p. 17.

³¹¹ UN-REDD, *Towards Better Forest Governance for REDD+ in Indonesia: An Evaluation of the Forest Licensing System in Indonesia*, 2015, p. 1.

³¹² *Ibid.*, pp. 40-41.

³¹³ UN FAO, *Forest Law Compliance and governance*, 2010.

³¹⁴ UNEP, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, 2011, p. 157.

³¹⁵ UN FAO, *Forest Law Compliance and Governance*, 2010.

governments due to timber shortages or in response to ongoing illegal logging activities.³¹⁶ Based on a study conducted by FAO and the International Tropical Timber Organization (ITTO), the root causes of illegal activities in the forest sector include lack of enforcement capacity, corruption, demand for inexpensive timber, and insufficient policy and laws.³¹⁷ FAO recommends the establishment of political commitments to eliminate corruption by formulating good forest governance practices through the creation of transparent laws, training of law enforcement personnel, and policy implementation to support the economic position of Member States.³¹⁸ Though not as frequently, poor governance can also contribute to forest-related conflicts that reduce the success of implementing SFM practices.³¹⁹ Conflicts can result in migration, famine, destruction, or disease, which directly affect the surrounding ecosystems.³²⁰ Forests are often the unintended victims of conflict as they are burned or chopped down due to their agricultural significance or relative location in relation to the conflict.³²¹ Armed conflict can have direct consequences, such as deforestation to reveal the opposing forces, or indirect consequences, such as the destabilization of SFM practices.³²²

Conclusion

Improving SFM practices will require committed international, regional, and national approaches to ensure the inclusion of all relevant issues and necessary policies.³²³ Recognizing that SFM includes social, economic, environmental, and cultural aspects, SFM policies must consider both forests themselves and species that depend upon forests.³²⁴ Rapidly changing environmental issues will require SFM practices that can easily adapt while remaining committed to international environmental policy and law.³²⁵ Continued use of country-based case studies will provide a better understanding for major international actors such as UNEP, FAO, ITTO, and others to develop guidelines that are applicable to all Member States regardless of the forest types within their borders.³²⁶ UNEP, as a global authority on the environment and a leader of the global environmental agenda, aims to facilitate the implementation of forest-related SDGs and transition to a global green economy by addressing regional and country priorities, building partnerships to foster sustainable development, and raising awareness of the harmful effects of deforestation and forest degradation.³²⁷ Additionally, UNEP remains committed to supporting UN-REDD and REDD+ with the aid of scientific assessments, policy assistance to ensure transparent forest governance, and integration of SFM practices into national development processes.³²⁸

Further Research

As the international community continues to discuss the important aspects of climate change, forest policy, specifically SFM policy, will be a major aspect of the international conversation. Delegates should take into consideration: what role will UNEP have in the development of SFM practices? How can other actors participate in those discussions and what role will they have on the outcome for SFM policy? What will the influence be from both developed and developing Member States? Can programs such as UN-REDD have a greater global impact? Is the creation of a green economy more likely to occur with the creation of SFM policy? If so, who will oversee that process? How can SDG 15 aid in the promotion or implementation of SFM practices?

³¹⁶ UN FAO & ITTO, *Best practices for improving law compliance in the forestry sector*, 2005, p. 10.

³¹⁷ *Ibid.*, p. 7.

³¹⁸ UN FAO, *Forest Law Compliance and Governance*, 2010.

³¹⁹ UN FAO, *Conflict Management in Forestry*, 2012.

³²⁰ *Ibid.*

³²¹ *Ibid.*

³²² *Ibid.*

³²³ UN FAO, *Sustainable Forest Management: About*, 2014.

³²⁴ *Ibid.*

³²⁵ *Ibid.*

³²⁶ *Ibid.*

³²⁷ UNEP, *Medium-Term Strategy 2014-2017*, 2015, p. 27.

³²⁸ *Ibid.*

Annotated Bibliography

Food and Agriculture Organization of the United Nations. (2015). *Global Forest Resources Assessments: Current Assessment* [Website]. Retrieved 23 August 2015 from: <http://www.fao.org/forest-resources-assessment/current-assessment/en/>

This website is particularly important because it contains the most recent Global Forest Resource Assessment released in September 2015. This assessment is one of the most comprehensive examinations of the current state of the world's forest resources; it also includes the most current projections of where SFM practices are headed. It explores the current trends of deforestation and forest degradation in addition to providing recommendations to remedy the threats posed to forests including climate change and human impacts. Delegates should use this assessment to analyze which aspects of SFM need to be addressed most urgently and to determine how UNEP should proceed given the most recent status of forest resources.

Food and Agriculture Organization of the United Nations. (2015). *Selected FAO Forestry and other Publications 2015* [Catalogue]. Retrieved 18 August 2015 from: <http://www.fao.org/3/a-i4782e.pdf>

Providing an introductory description of the significance of forests, this publication is a catalogue of documents and publications that are useful for research on forests and their significance to the Earth's preservation. Breaking down these publications into relevant subtopics related to forests, this document also makes special note of relevant international events focused on forests. This booklet provides the perfect platform for introductory research on the topic as well as more detailed information on SFM strategies.

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. (2015). *Extract from 2014 Annual Report: Private Sector and Green Economy*. Retrieved 20 July 2015 from: http://www.unredd.net/index.php?option=com_docman&view=download&alias=14258-green-economy-and-private-sector-engagement-2014-annual-report&category_slug=2014-report-excerpts-by-outcome&Itemid=134

This overview, which is directly excerpted from the UN-REDD 2014 Annual Report, emphasizes the intricacies of the private sector and the green economy in relation to UN REDD's work. It provides specific examples of where UN-REDD has worked and the outcomes seen within various countries. Though brief, this section identifies some of the key lessons learned, ongoing challenges, and future considerations that are relevant to UN-REDD's work in protecting the green economy in partnership with the private sector.

United Nations, Department of Economic and Social Affairs. (2015). *The Millennium Development Goals Report 2015*. Retrieved 21 August 2015 from:

[http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf)

As the final report monitoring the progress of the MDGs, this report gives the most up-to-date picture of international action and progress prior to the adoption of the new SDGs. Focusing specifically on MDG 7, which relates directly to environmental targets and forests, the report explains how much progress has been made and how much is left to accomplish to ensure environmental stability. The report addresses the increased carbon emissions contributing to climate change as a direct result of deforestation.

United Nations Environment Programme. (n.d.). *Ecosystem Management: UNEP's Work: Terrestrial Ecosystems: Forests* [Website]. Retrieved 19 July 2015 from:

<http://www.unep.org/ecosystemmanagement/UNEPsWork/TerrestrialEcosystems/Forests/tabid/3166/Default.aspx>

This website provides a complete overview of the work UNEP contributes to forests and serves as an introduction to the topic. While giving a complete description of the environmental significance of forests, it also details some of the projects and partnerships in which UNEP is involved to fulfill its commitment to SFM. This should serve as a starting point for delegates to internalize the work of UNEP in forest management.

United Nations Environment Programme. (2009). *Ecosystem Management Programme: A new approach to Sustainability* [Report]. Retrieved 20 July 2015 from:

<http://www.unep.org/ecosystemmanagement/Portals/7/Documents/EMP-Booklet.pdf>

While this report is not exclusive to forest management, it offers comparable approaches to environmental management with a look at the Ecosystem Management Programme under UNEP. It details the various services provided and often mentions how forests are positively affected by this work. It lays out a step-by-step process for the program and details within each step the key tasks to be addressed and the relevant actors to keep involved. It provides a unique look into a programmatic breakdown of ongoing programs headed by UNEP.

United Nations Environment Programme. (2011). *Forests in a Green Economy: A synthesis* [Report]. Retrieved 20 August 2015 from: http://www.unep.org/pdf/PressReleases/UNEP-ForestsGreenEco-basse_def_version_normale.pdf

This synthesis provides a breakdown of forests' role in developing an international green economy. It provides statistical evidence of forests' financial contributions to a potential green economy, while also noting how much the economy is currently affected by deforestation and forest degradation. To provide examples of countries moving toward a national green economy, the synthesis highlights various case studies of developing countries that, given the necessary changes, would be able to shift successfully to a green economy.

United Nations Environment Programme. (2015). *Forest Ecosystems in the Transition to a Green Economy and the Role of REDD+ in the United Republic of Tanzania* [Report]. Retrieved 20 July 2015 from: http://apps.unep.org/publications/index.php?option=com_pub&task=download&file=011738_en

As one of the more comprehensive case studies available, this report connects the work of REDD+ to the green economy. Although it is limited to one country in Africa, this report touches on many cross-cutting issues that could affect any country with large forest ecosystems within its borders. Additionally, the last section provides insight into the creation of national forest management strategies that could assist delegates in discovering how national policies contribute to global management practices.

United Nations Environment Programme. (2015). *Policy Coherence of the Sustainable Development Goals: A Natural Resource Perspective* [Report]. Retrieved 20 July 2015 from: http://apps.unep.org/publications/index.php?option=com_pub&task=download&file=011737_en

This 2015 report provides a unique perspective on the newly adopted SDGs, with a spotlight on the policy implications related to natural resources. The report highlights forests throughout and recognizes forests' unique importance while also highlighting the need to include forests in the SDGs. The report takes note of the detrimental effects of deforestation, as well as the importance of protecting natural forest resources by creating effective policies. Specifically, the section focused on "strategies to reduce pressures on the natural resource system and develop synergies" details possible paths for improvement and further development.

United Nations, General Assembly. (1992). *Report of the United Nations Conference on Environment and Development, Annex III: Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (A/CONF.151/36 (Vol.III))*. Retrieved 20 August 2015 from: <http://www.un.org/documents/ga/conf151/aconf15126-3annex3.htm>

Emerging from one of the most significant environmental conferences conducted by the international community, the 1992 Forest Principles, though not legally binding, recognize the importance of forests to the global environment. This document explains not only the significance of the various types of forests, but also why it is so critical to protect them from many potential threats. Providing recommendations for actors at the international, regional, and national levels, the principles incorporate the social, economic, cultural, and environmental significance of forests for sustainable development purposes. This document is a foundational piece of the international conversation surrounding SFM practices and their evolution.

Bibliography

Association of Southeast Asian Nations. (2014). *Agreements & Declarations: Agreements on Agriculture and Forestry* [Website]. Retrieved 21 August 2015 from: <http://www.asean.org/communities/asean-economic-community/category/agreements-declarations-5>

Building and Wood Workers' International. (2011). *Wood and Forestry* [Website]. Retrieved 20 October 2015 from: <http://www.bwint.org/default.asp?Issue=INDWF&Language=EN>

Center for International Forestry Research. (2014). *The Collaborative Partnership on Forests (CPF)* [Website]. Retrieved 23 August 2015 from: <http://www.cifor.org/partners/collaborative-partnership-forests-cpf/>

Charter of the United Nations. (1945). Retrieved 18 August 2015 from: <http://www.un.org/en/documents/charter/chapter1.shtml>

Climate Investment Funds. (2015). *Forest Investment Program* [Website]. Retrieved 22 October 2015 from: <http://www.climateinvestmentfunds.org/cif/node/5>

Collaborative Partnership on Forests. (2015). *About the Collaborative Partnership on Forests* [Website]. Retrieved 23 August 2015 from: <http://www.cpfweb.org/73947/en/>

Collaborative Partnership on Forests. (2015). *Working Group on Sustainable Forest Management* [Website]. Retrieved 23 August 2015 from: <http://www.cpfweb.org/76228/en/>

Conceptual Framework Working Group of the Millennium Ecosystem Assessment. (2003). *Ecosystems and Human Well-Being*. Retrieved 21 October 2015 from: http://pdf.wri.org/ecosystems_human_wellbeing.pdf

Convention on Biological Diversity. (1992). Retrieved 4 November 2015 from: <https://www.cbd.int/doc/legal/cbd-en.pdf>

European Commission. (2010). *Agriculture and Rural Development: EU Forest Action Plan* [Website]. Retrieved 21 August 2015 from: http://ec.europa.eu/agriculture/fore/action_plan/index_en.htm

Food and Agriculture Organization of the United Nations. (n.d.). *Conflict Management in Forestry* [Website]. Retrieved 20 July 2015 from: <http://www.fao.org/forestry/conflict/en/>

Food and Agriculture Organization of the United Nations. (n.d.). *Facts and figures: Forest Cover* [Website]. Retrieved 18 August 2015 from: <http://www.fao.org/forestry/28808/en/>

Food and Agriculture Organization of the United Nations. (n.d.). *International Day of Forests* [Website]. Retrieved 20 July 2015 from: <http://www.fao.org/forestry/international-day-of-forests/en/>

Food and Agriculture Organization of the United Nations. (1994). *Land degradation in south Asia: Its severity, causes and effects upon the people* [Report]. Retrieved 18 August 2015 from: <http://www.fao.org/docrep/v4360e/v4360e03.htm>

Food and Agriculture Organization of the United Nations. (2001). *State of the World's Forests 2001: Part II – Key Issues in the Forest Sector Today* [Report]. Retrieved 26 September 2015 from: <ftp://ftp.fao.org/docrep/fao/003/y0900e/y0900e02.pdf>

Food and Agriculture Organization of the United Nations. (2008). *Global Forest Resources Assessment: FRA history* [Website]. Retrieved 23 August 2015 from: <http://www.fao.org/forestry/fra/24691/en/>

Food and Agriculture Organization of the United Nations. (2010). *Developing Effective Forest Policy: A guide* [Report]. Retrieved 21 August 2015 from: <http://www.fao.org/docrep/013/i1679e/i1679e00.pdf>

Food and Agriculture Organization of the United Nations. (2010). *Forest Law Compliance and Governance* [Website]. Retrieved 26 September 2015 from: <http://www.fao.org/forestry/law/en/>

Food and Agriculture Organization of the United Nations. (2010). *Global Forest Resources Assessment 2010* [Report]. Retrieved 4 November 2015 from: <http://www.fao.org/docrep/013/i1757e/i1757e.pdf>

- Food and Agriculture Organization of the United Nations. (2012). *Conflict Management in Forestry* [Website]. Retrieved 4 November 2015 from: <http://www.fao.org/forestry/conflict/en/>
- Food and Agriculture Organization of the United Nations. (2012). *Framework for assessing and monitoring forest governance* [Website]. Retrieved 26 September 2015 from: <http://www.fao.org/forestry/governance/monitoring/71390/en/>
- Food and Agriculture Organization of the United Nations. (2012). *Roles of forests in climate change* [Website]. Retrieved 24 August 2015 from: <http://www.fao.org/forestry/climatechange/53459/en/>
- Food and Agriculture Organization of the United Nations. (2013). *FAO Forest and Climate Change Programme* [Website]. Retrieved 5 November 2015 from: <http://www.fao.org/forestry/climatechange/64860/en/>
- Food and Agriculture Organization of the United Nations. (2013). *Forests and Water: International Momentum and Action* [Report]. Retrieved 21 October 2015 from: <http://www.fao.org/docrep/017/i3129e/i3129e.pdf>
- Food and Agriculture Organization of the United Nations. (2013). *Guidance for integrating climate change issues into forest management* [Website]. Retrieved 24 August 2015 from: <http://www.fao.org/forestry/climatechange/65120/en/>
- Food and Agriculture Organization of the United Nations. (2014). *Forest governance assessment and monitoring* [Website]. Retrieved 26 September 2015 from: <http://www.fao.org/forestry/governance/monitoring/en/>
- Food and Agriculture Organization of the United Nations. (2014). *Sustainable Forest Management: About* [Website]. Retrieved 18 August 2015 from: <http://www.fao.org/forestry/sfm/85084/en/>
- Food and Agriculture Organization of the United Nations. (2015). *About FAO* [Website]. Retrieved 4 November 2015 from: <http://www.fao.org/about/en/>
- Food and Agriculture Organization of the United Nations. (2015). *Global Forest Resources Assessments: Current Assessment* [Website]. Retrieved 23 August 2015 from: <http://www.fao.org/forest-resources-assessment/current-assessment/en/>
- Food and Agriculture Organization of the United Nations. (2015). *Selected FAO Forestry and other Publications 2015* [Catalogue]. Retrieved 18 August 2015 from: <http://www.fao.org/3/a-i4782e.pdf>
- Food and Agriculture Organization of the United Nations. (2015). *Sustainable Forest Management* [Website]. Retrieved 20 July 2015 from: <http://www.fao.org/forestry/sfm/en/>
- Food and Agriculture Organization of the United Nations. (2015). *World Forestry Congress: Forests for socioeconomic development and food security* [Website]. Retrieved 20 October 2015 from: <http://www.fao.org/about/meetings/world-forestry-congress/programme/sub-theme-dialogues/socioeconomic/en/>
- Food and Agriculture Organization of the United Nations. (2015). *World Forestry Congress: Historical Context* [Website]. Retrieved 20 August 2015 from: <http://www.fao.org/about/meetings/world-forestry-congress/background/past-congresses/en/>
- Food and Agriculture Organization of the United Nations & International Tropical Timber Organization. (2005). *Best practices for improving law compliance in the forestry sector* [Report]. Retrieved 23 October 2015 from: <ftp://ftp.fao.org/docrep/fao/008/A0146e/A0146E00.pdf>
- International Tropical Timber Organization. (2014). *About ITTO* [Website]. Retrieved 23 August 2015 from: http://www.itto.int/about_itto/
- Khew, C. (2015, October 18). Why it's crucial to curb deforestation. *The Straits Times*. Retrieved 19 October 2015 from: <http://www.straitstimes.com/asia/why-its-crucial-to-curb-deforestation>

Sandker, M., et al. (2015). *Technical considerations for Forest Reference Emission Level and/or Forest Reference Level construction for REDD+ under the UNFCCC*. United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries & Food and Agriculture Organization of the United Nations. Retrieved 20 July 2015 from:

http://www.unredd.net/index.php?option=com_docman&view=download&alias=14118-technical-considerations-for-forest-reference-emission-level-andor-forest-reference-level-construction-for-redd-under-the-unfccc&category_slug=frl&Itemid=134

Southern African Development Community. (2012). *Documents & Publications: Protocol on Forestry (2002)* [Website]. Retrieved 21 August 2015 from: <http://www.sadc.int/documents-publications/show/802>

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. (n.d.). *About REDD+* [Website]. Retrieved 20 July 2015 from: <http://www.un-redd.org/AboutREDD/tabid/102614/Default.aspx>

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. (n.d.). *About the UN-REDD Programme* [Website]. Retrieved 20 July 2015 from: <http://www.un-redd.org/AboutUN-REDDProgramme/tabid/102613/Default.aspx>

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. (2010). *Frequently Asked Questions and Answers –The UN REDD Programme and REDD+*. [Report]. Retrieved 20 July 2015 from: <http://www.unep.org/forests/Portals/142/docs/UN-REDD%20FAQs%20%5B11.10%5D.pdf>

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. (2013). *Sharing National Experiences in Strengthening Transparency, Accountability and Integrity for REDD+* [Report]. Retrieved 22 October 2015 from: <http://www.europe.undp.org/content/dam/geneva/docs/Sharing%20National%20Experiences%20in%20REDD+%20Integrity%20-%20UN-REDD%20-%20Final-17%20December%202013.pdf>

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. (2014). *Extract from 2014 Annual Report: Private Sector and Green Economy*. Retrieved 20 July 2015 from: http://www.unredd.net/index.php?option=com_docman&view=download&alias=14258-green-economy-and-private-sector-engagement-2014-annual-report&category_slug=2014-report-excerpts-by-outcome&Itemid=134

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. (2015). *Global-level Activities* [Website]. Retrieved 23 August 2015 from: http://www.un-redd.org/Stakeholder_Engagement/Global_Activities/tabid/55631/Default.aspx

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. (2015). *REDD+ Academy* [Website]. Retrieved 23 August 2015 from: <http://www.un-redd.org/REDDAcademy/tabid/132073/Default.aspx>

United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. (2015). *Towards Better Forest Governance for REDD+ in Indonesia: An Evaluation of the Forest Licensing System in Indonesia* [Report]. Retrieved 22 October 2015 from: http://www.unredd.net/index.php?option=com_docman&view=document&alias=14181-an-evaluation-of-the-forest-licensing-system-in-indonesia-1&category_slug=anti-corruption-and-redd-771&Itemid=134

United Nations Conference on Environment and Development. (1992). *Agenda 21* [Outcome Document]. Retrieved 4 November 2015 from: <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

United Nations, Department of Economic and Social Affairs. (2015). *The Millennium Development Goals Report 2015*. Retrieved 21 August 2015 from: [http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf)

United Nations, Department of Public Information. (n.d.). *Global Issues: Environment* [Website]. Retrieved 20 August 2015 from: <http://www.un.org/en/globalissues/environment/>

United Nations, Department of Public Information. (n.d.). *International Day of Forests: Background* [Website]. Retrieved 19 October 2015 from: <http://www.un.org/en/events/forestsday/background.shtml>

United Nations, Department of Public Information. (n.d.). *Sustainable Development: Green Economy* [Website]. Retrieved 20 August 2015 from: <https://sustainabledevelopment.un.org/index.php?menu=1446>

United Nations, Department of Public Information. (2012, November 5). *Cost of deforestation in Kenya far exceeds gains from forestry and logging, UN joint study finds* [Press Release]. Retrieved 24 August 2015 from: http://www.un.org/apps/news/story.asp?NewsID=43417#.VduST_IVhBc

United Nations, Department of Public Information. (2015, March 16) *Secretary-General, on International Day of Forests, Stresses Investment, Smart Policies Essential for Building Sustainable, Climate-Resilient Future* [Press Release]. Retrieved 18 August 2015 from: <http://www.un.org/press/en/2015/sgsm16597.doc.htm>

United Nations, Department of Public Information. (2015). *Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss* [Website]. Retrieved 26 September 2015 from: <http://www.un.org/sustainabledevelopment/biodiversity/>

United Nations Environment Programme. (n.d.). *About UNEP* [Website]. Retrieved 18 August 2015 from: <http://www.unep.org/about/>

United Nations Environment Programme. (n.d.). *Ecosystem Management* [Report]. Retrieved 22 October 2015 from: http://www.unep.org/pdf/UNEP_Profile/Ecosystem_management.pdf

United Nations Environment Programme. (n.d.). *Ecosystem Management: Introduction* [Website]. Retrieved 19 July 2015 from: <http://www.unep.org/ecosystemmanagement/Introduction/tabid/293/language/en-US/Default.aspx>

United Nations Environment Programme. (n.d.). *Ecosystem Management: UNEP's Work: Terrestrial Ecosystems: Forests* [Website]. Retrieved 19 July 2015 from: <http://www.unep.org/ecosystemmanagement/UNEPsWork/TerrestrialEcosystems/Forests/tabid/3166/Default.aspx>

United Nations Environment Programme. (2009). *Ecosystem Management Programme: A new approach to Sustainability* [Report]. Retrieved 20 July 2015 from: <http://www.unep.org/ecosystemmanagement/Portals/7/Documents/EMP-Booklet.pdf>

United Nations Environment Programme. (2011). *Forests in a Green Economy: A synthesis* [Report]. Retrieved 20 August 2015 from: http://www.unep.org/pdf/PressReleases/UNEP-ForestsGreenEco-basse_def_version_normale.pdf

United Nations Environment Programme. (2011). *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication* [Report]. Retrieved 24 August 2015 from: <http://www.unep.org/greeneconomy/GreenEconomyReport/tabid/29846/language/en-US/Default.aspx>

United Nations Environment Programme. (2011). *UNEP Year Book 2011*. Retrieved 4 November 2015 from: http://www.unep.org/yearbook/2011/pdfs/UNEP_YEARBOOK_Fullreport.pdf

United Nations Environment Programme. (2015). *Forest Ecosystems in the Transition to a Green Economy and the Role of REDD+ in the United Republic of Tanzania* [Report]. Retrieved 20 July 2015 from: http://apps.unep.org/publications/index.php?option=com_pub&task=download&file=011738_en

United Nations Environment Programme. (2015). *Green Economy: About GEI* [Website]. Retrieved 24 August 2015 from: <http://www.unep.org/greeneconomy/AboutGEI/WhatIsGEI/tabid/29784/Default.aspx>

United Nations Environment Programme. (2015). *Medium-Term Strategy: 2014-2017*. Retrieved 23 October 2015 from: http://www.unep.org/pdf/MTS_2014-2017_Final.pdf

United Nations Environment Programme. (2015). *Policy Coherence of the Sustainable Development Goals: A Natural Resource Perspective* [Report]. Retrieved 20 July 2015 from: http://apps.unep.org/publications/index.php?option=com_publication&task=download&file=011737_en

United Nations Environment Programme. (2015). *UNEP Priorities* [Website]. Retrieved 18 August 2015 from: <http://www.unep.org/about/Priorities/tabid/129622/Default.aspx>

United Nations Environment Programme et al. (2009). *Vital Forest Graphics* [Report]. Retrieved 21 October 2015 from: http://www.unep.org/vitalforest/Report/VFG_full_report.pdf

United Nations Forum on Forests. (n.d.). *Capacity Development* [Website]. Retrieved 23 August 2015 from: <http://www.un.org/esa/forests/forum/capacity-development/index.html>

United Nations Forum on Forests. (n.d.). *UN Forest Instrument* [Website]. Retrieved 20 July 2015 from: <http://www.un.org/esa/forests/documents/un-forest-instrument/index.html>

United Nations Forum on Forests. (n.d.). *UN Forum on Forests* [Website]. Retrieved 20 July 2015 from: <http://www.un.org/esa/forests/forum/index.html>

United Nations, General Assembly. (1992). *Report of the United Nations Conference on Environment and Development, Annex III: Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (A/CONF.151/26 (Vol.III))*. Retrieved 20 August 2015 from: <http://www.un.org/documents/ga/conf151/aconf15126-3annex3.htm>

United Nations, General Assembly, Sixty-first session. (2006). *International Year of Forests, 2011 (A/RES/61/193)* [Resolution]. Adopted on the report of the Second Committee (A/61/422/Add.1 and Corr.1). Retrieved 21 August 2015 from: <http://undocs.org/A/RES/61/193>

United Nations, General Assembly, Sixty-second session. (2007). *Non-legally binding instrument on all types of forests (A/RES/62/98)* [Resolution]. Adopted on the report of the Second Committee (A/62/419 (Part I)). Retrieved 21 August 2015 from: <http://undocs.org/A/RES/62/98>

United Nations, General Assembly, Sixty-seventh session. (2013). *International Day of Forests (A/RES/67/200)* [Resolution]. Adopted on the report of the Second Committee (A/67/437). Retrieved 20 July 2015 from: <http://undocs.org/A/RES/67/200>

United Nations, General Assembly, Seventieth session. (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*. Retrieved 1 November 2015 from: <http://undocs.org/A/RES/70/1>

United Nations, Secretariat of the Convention on Biological Diversity. (2009). *Sustainable Forest Management, Biodiversity and Livelihoods: A Good Practice Guide*. Retrieved 4 November 2015 from: <https://www.cbd.int/development/doc/cbd-good-practice-guide-forestry-booklet-web-en.pdf>

University of British Columbia. (2015). *4th International Conference on Forests and Water in a Changing Environment* [Website]. Retrieved 4 November 2015 from: <http://www.forestandwater2015.com/>

World Wildlife Fund. (2015). *Forest Habitat* [Website]. Retrieved 3 November 2015 from: <http://www.worldwildlife.org/habitats/forest-habitat>



World Wildlife Fund. (2015). *Deforestation: Overview* [Website]. Retrieved 19 October 2015 from: <http://www.worldwildlife.org/threats/deforestation>

III. Plastic Debris in the World's Oceans

Introduction

At least 5.25 trillion plastic particles are currently distributed across the world's oceans.³²⁹ Collectively, they weigh 268,940 tons, although the vast majority of plastic particles are individually very small.³³⁰ At under 50 million tons per year during the 1970s, global plastic production has dramatically increased since 1980, with nearly 300 million tons of plastic produced in 2012 alone.³³¹ Around 50% of globally produced plastic is buoyant and many of the plastic particles in the oceans accumulate at subtropical gyres.³³² The plastic debris in the world's oceans originates from a variety of different sources, including ship- and platform-based sources of plastic litter (fishing and recreational ships, gas and oil platforms, shipping, cruise liners, and aquaculture spaces), as well as land-based sources (industrial waste, recreational areas, untreated sewage, wind-blown debris).³³³ Debris in the world's oceans can be distinguished by size into macro-debris (more than 20 mm in diameter), meso-debris (5-20 mm), and micro-debris or microplastics (less than 5mm).³³⁴ Many plastic products are very stable and durable; it may take thousands of years until they decompose.³³⁵ Other plastic components are subject to nano-fragmentation or biofouling, which means that they decay into very small pieces or start to decompose due to chemical processes, which has negative effects on marine life and ecosystems.³³⁶ Debris in the world's oceans threatens marine life, the entire environment, and the health of all humans.³³⁷ The financial damage of plastics to marine ecosystems exceeds \$13 billion a year.³³⁸ Consequently, the United Nations Environment Programme (UNEP), the United Nations General Assembly (GA), and other United Nations (UN) bodies have recognized the importance of reducing the amount of plastic debris in the world's oceans.³³⁹ Despite many international conventions and resolutions on this issue, the amount of plastic debris in the world's oceans is still increasing, which demands further action by the international community.³⁴⁰

International and Regional Framework

After global plastic production and pollution from ships increased and became an issue on the global agenda in the late 1960s, the *International Convention for the Prevention of Pollution from Ships* (MARPOL Convention) (1973) was adopted.³⁴¹ However, it did not enter into force until it was modified by the *Protocol of 1978*, which was initiated after a number of tanker accidents.³⁴² Both documents seek to control pollution from ships by regulating which and how much waste ships may discharge into the environment.³⁴³ Under Annex V of the MARPOL Convention, which entered into force in 1988, the disposal of plastics at sea is prohibited and governments are obliged to install facilities for garbage at ports and terminals.³⁴⁴ Despite the extensive legislation under the

³²⁹ Eriksen et al., *Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea*, 2014, p. 7.

³³⁰ Ibid.

³³¹ UNEP, *UNEP Year Book 2014*, 2014, p. 50.

³³² Cozar et al., *Plastic debris in the open ocean*, 2014, p. 10240; Eriksen et al., *Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea*, 2014, p. 7.

³³³ UNEP, *UNEP Year Book 2011*, 2011, p. 21.

³³⁴ Barnes et al., *Accumulation and fragmentation of plastic debris in global environments*, 2009, p. 1986.

³³⁵ Cozar et al., *Plastic debris in the open ocean*, 2014, p. 10239.

³³⁶ Barnes et al., *Accumulation and fragmentation of plastic debris in global environments*, 2009, p. 1986; Cozar et al., *Plastic debris in the open ocean*, 2014, p. 10239.

³³⁷ Ibid.

³³⁸ UNEP, *Annual Report 2014*, 2015, p. 5.

³³⁹ UN General Assembly, *Oceans and the law of the sea (A/RES/57/141)*, 2012, p. 9; UN General Assembly, *Oceans and the law of the sea (A/RES/69/245)*, 2014, p. 29; UNEP, *UNEP Year Book 2011*, 2011, p. 21; UNEP, *UNEP Year Book 2014*, 2014, p. 50.

³⁴⁰ UNEP, *UNEP Year Book 2011*, 2011, p. 29; UNEP, *UNEP Year Book 2014*, 2014, p. 49.

³⁴¹ UNEP, *UNEP Year Book 2011*, 2011, p. 50; UN IMO, *International Convention for the Prevention of Pollution from Ships (MARPOL)*, 2015; *Protocol of 1978 relating to the International Convention for the prevention of pollution from ships, 1973 (with annexes, final act and International Convention of 1973)*, 1983.

³⁴² UN IMO, *International Convention for the Prevention of Pollution from Ships (MARPOL)*, 2015.

³⁴³ UNEP, *UNEP Year Book 2011*, 2011, p. 29; UN IMO, *International Convention for the Prevention of Pollution from Ships (MARPOL)*, 2015; *Protocol of 1978 relating to the International Convention for the prevention of pollution from ships, 1973 (with annexes, final act and International Convention of 1973)*, 1983.

³⁴⁴ *Protocol of 1978 relating to the International Convention for the prevention of pollution from ships, 1973 (with annexes, final act and International Convention of 1973)*, 1983, pp. 72, 263.

MARPOL Convention, challenges concerning its enforcement exist since many ships ignore the prohibition against dumping plastic litter.³⁴⁵

While the MARPOL Convention did not enter into force until it was modified by the *Protocol of 1978*, the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter* (London Convention) (1972) was adopted in 1972 and entered into force in 1975, thus representing one of the first conventions on the protection of the world's oceans from human activities.³⁴⁶ It requires its 87 parties to prohibit the disposal of plastics and other non-biodegradable materials.³⁴⁷ The *Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter* (London Protocol) (1996), which came into force in 2006, builds on previous conventions, yet follows a completely different approach since many materials were not included in previous documents: instead of listing material which may not be dumped in the oceans, it prohibits dumping in general at sea, except for a few materials, including vessels and platforms or other structures, for which permits must be obtained.³⁴⁸ Only 45 Member States are party to the London Protocol.³⁴⁹

Unlike the London Convention and Protocol, the *United Nations Convention on the Law of the Sea* (UNCLOS) (1982) does not focus exclusively on dumping of waste into the oceans; instead, it is the more comprehensive result of the Third United Nations Conference on the Law of the Sea, which began its work in 1973 to regulate the world's oceans, especially regarding their potential for conflict.³⁵⁰ The convention has been ratified by 167 states and regulates all activities in the world's oceans.³⁵¹ Part XII lists a number of regulations for implementation by States Parties to “prevent, reduce, and control pollution from land-based sources, vessels, by dumping, and from or through the atmosphere.”³⁵² Land-based sources in this context are “rivers, estuaries, pipelines, and outfall structures.”³⁵³ The *Honolulu Strategy* (2011) contains non-binding proposals for international collaboration on reducing the impacts of marine debris.³⁵⁴ It presents goals to “reduce the amount and impact of land-based litter and solid waste introduced into the marine environment”; “sea-based sources of marine debris”; and “accumulated marine debris on shorelines, in benthic habitats, and in pelagic waters.”³⁵⁵ It seeks to provide a framework around which civil society organizations, private actors, and governments can cooperate and coordinate their work in reducing marine debris, as prior frameworks focused mainly on state actors, institutional arrangements, and regulations.³⁵⁶

The Sustainable Development Goals (SDGs), which will replace the Millennium Development Goals at the end of 2015, recognize the importance of the world's oceans for global sustainable development and call for focused actions to combat water pollution.³⁵⁷ SDG 14 seeks to “conserve and sustainably use the oceans, seas and marine resources for sustainable development” and thus contains important implications for the future situation of plastic

³⁴⁵ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 33.

³⁴⁶ UN IMO, *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, 2015.

³⁴⁷ UN 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*, 1997, p. 44; UNEP, *UNEP Year Book 2011*, 2011, p. 29.

³⁴⁸ UN IMO, *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, 2015; UN 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*, 1997, p. 11.

³⁴⁹ UN IMO, *Parties to the London Convention and Protocol*, 2014.

³⁵⁰ UN Division for Ocean Affairs and the Law of the Sea, *The United Nations Convention on the Law of the Sea (A historical perspective)*, 2012.

³⁵¹ UNEP, *UNEP Year Book 2011*, 2011, p. 29; UN Division for Ocean Affairs and the Law of the Sea, *Chronological lists of ratifications of, accessions and successions to the Convention and the related Agreements as at 3 October 2014*, 2015.

³⁵² *United Nations Convention on the Law of the Sea*, 1982, pp. 53-61.

³⁵³ UNEP, *UNEP Year Book 2011*, 2011, p. 29.

³⁵⁴ Marine Litter Network, *The Honolulu Strategy - A Global Framework for Prevention and Management of Marine Debris*, p. 2.

³⁵⁵ *Ibid.*

³⁵⁶ *Ibid.*

³⁵⁷ UN DPI, *Sustainable Development Summit 2015 – Home*, 2015; UN DPI, *We Can End Poverty – Millennium Development Goals and Beyond 2015 – Home*; UN General Assembly, *Transforming our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

debris in the world's oceans.³⁵⁸ Target 14.1 specifically states that marine pollution of all kinds should be prevented and significantly reduced by 2025.³⁵⁹

In general, many international conventions for the prevention of plastic debris exist; yet, not all states are parties to them, and the conventions lack enforcement mechanisms and adequate monitoring of their implementation.³⁶⁰

Role of the International System

UNEP generally seeks to assess “current environmental trends,” develop “international and national environmental instruments,” strengthen “institutions which deal with the environment,” and raise “awareness of issues of concern.”³⁶¹ It cooperates with other UN bodies, such as the International Maritime Organization (IMO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO), to monitor and reduce the amount of plastic debris in the world's oceans.³⁶² At its first session, the United Nations Environment Assembly adopted resolution 1/6 of 27 June 2014 on “Marine plastic debris and microplastics,” thereby strengthening UNEP's mandate to act.³⁶³ In this resolution, the body requests UNEP's Executive Director “to undertake a study on plastic debris and microplastics in the world's oceans” together with other institutions and to support countries with developing action plans against marine debris.³⁶⁴ On World Oceans Day, on 8 June 2015, UNEP recommended a ban of microplastics in cosmetics and promoted an online application that allows users to check which cosmetics contain microplastics.³⁶⁵

UNEP coordinates a number of sub-organizations, including the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) and the Global Partnership on Marine Litter.³⁶⁶ The GPA is the world's only intergovernmental global initiative that deals directly with the link between “terrestrial, freshwater, coastal, and marine ecosystems.”³⁶⁷ Its coordination office is hosted by UNEP and it provides conceptual and practical guidance for national and regional governments to prevent and reduce marine debris.³⁶⁸ Building on the *Honolulu Strategy*, the Global Partnership on Marine Litter is a mechanism between governments, civil society, international organizations, and individuals for cooperation on reduction and management of marine litter.³⁶⁹ Another organization which was initiated by UNEP in 1974 in order to address a variety of problems related to the increasing degradation of the oceans and coastal areas is the Regional Seas Programme (RSP).³⁷⁰ The RSP has launched 13 regional Action Plans engaging governments and civil society in more than 143 countries to protect the world's oceans from marine litter and other threats.³⁷¹

UNESCO, specifically through the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO), cooperates with UNEP to develop guidelines on monitoring marine litter.³⁷² IOC-UNESCO was established in 1960 and is the “only competent organization for marine science within the UN system.”³⁷³ Among other activities, it coordinates monitoring of the world's oceans through the Global Ocean Observing System (GOOS), which consists of numerous programs that seek to observe, monitor, and analyze the world's oceans.³⁷⁴ Sponsored by IOC-

³⁵⁸ UN General Assembly, *Transforming our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

³⁵⁹ *Ibid.*

³⁶⁰ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 33; UN General Assembly, *Oceans and the law of the sea (A/RES/62/215)*, 2007, p. 16; UN General Assembly, *Oceans and the law of the sea (A/RES/64/71)*, 2009, p. 20.

³⁶¹ UNEP, *About*; UNEP, *Annual Report 2014*, 2015, p. 3; UNEP, *Chemicals & Waste*.

³⁶² UNEP, *UNEP Year Book 2011*, 2011, p. 29.

³⁶³ UNEP, *Annual Report 2014*, 2015, p. 3; 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.

³⁶⁴ 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, p. 22.

³⁶⁵ UNEP, *On World Oceans Day, New UN Report Recommends Ban of Microplastics in Cosmetics*, 2015.

³⁶⁶ UNEP GPA, *About the GPA*, 2014; UNEP GPA, *What is the Global Partnership on Marine Litter?*, 2014.

³⁶⁷ UNEP GPA, *About the GPA*, 2014; UNEP, *UNEP Year Book 2011*, 2011, p. 28.

³⁶⁸ UNEP GPA, *About the GPA*, 2014.

³⁶⁹ UNEP, *Countries Adopt Manila Declaration to Strengthen Protection of Global Marine Environment*, 2012; UNEP, *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*, 2014, p. 4; UNEP GPA, *What is the Global Partnership on Marine Litter?*, 2014.

³⁷⁰ UNEP, *Regional Seas Programme: About*.

³⁷¹ *Ibid.*; UNEP, *Regional Seas Programme: Regional Activities*.

³⁷² UNEP, *UNEP Year Book 2011*, 2011, p. 29; UNESCO, *Intergovernmental Oceanographic Commission*, 2013.

³⁷³ UNESCO, *Intergovernmental Oceanographic Commission*, 2013.

³⁷⁴ UN GOOS, *What is GOOS?*.

UNESCO, UNEP, the World Meteorological Organization (WMO), and the International Council for Science (ICSU), GOOS constitutes a platform for international cooperation to observe the oceans, generate oceanographic products and services, and foster interaction between actors from science and civil society.³⁷⁵

IMO, a specialized agency of the UN and the global “authority for the safety, security and environmental performance of international shipping,” has put pressure on governments to improve facilities for garbage at local ports and terminals, which are mandatory according to Annex V of the MARPOL Convention.³⁷⁶ In accordance with the MARPOL Convention, IMO seeks to prevent and respond to the pollution caused predominantly by ships.³⁷⁷

While UNEP and other UN programs concentrate on concrete actions to reduce the amount of plastic debris in the oceans, the GA focuses on the broader framework in which these actions are embedded, makes general statements on the current situation, evaluates ongoing efforts, and creates new bodies.³⁷⁸ The GA has devoted increasing attention to the issue of marine pollution, particularly with respect to the impact thereof on Small Island Developing States (SIDS) and the need for international cooperation to protect the world’s oceans.³⁷⁹ GA resolution 60/30 of 29 November 2005, resolution 62/215 of 22 December 2007, and resolution 63/111 of 5 December 2008 emphasize the vulnerability of SIDS to the impact of marine pollution and ask for stronger cooperation concerning reducing and preventing pollution from ships and from land.³⁸⁰ GA resolutions 62/215 of 22 December 2007 and 64/71 of 4 December 2009 ask for cooperation with IMO to prevent pollution from ships and ask all states which are not yet parties to the London Protocol to join it.³⁸¹ In resolution 69/245 of 29 December 2014, the GA specifically addresses the negative impacts of plastic debris and microplastics on the world’s oceans.³⁸² It further decides that “as part of its deliberations on the report of the Secretary-General on oceans and the law of the sea, the Informal Consultative Process in 2016” shall focus on “Marine debris, plastics and microplastics.”³⁸³ GA resolution 57/141 of 12 December 2002 established a Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socio-Economic Aspects.³⁸⁴ The idea for this process emerged at the World Summit on Sustainable Development in Johannesburg, South Africa, in 2002 and the resolution took effect in 2004.³⁸⁵ It seeks to support decision-making by providing scientific information on the current state of the marine environment and thus also evaluates the amount and impact of debris in the oceans.³⁸⁶

In recent years, to fulfill obligations pursuant to international agreements, many countries have adopted legislation on the prevention, control, and reduction of marine debris.³⁸⁷ Many policies have proved very effective; for example, plastic bag use in Wales dropped 70% after stores began charging consumers a minimum of £0.05 per plastic bag.³⁸⁸ However, in many countries, effective legislation on this issue is still missing.³⁸⁹ Civil society actors, such as the Plastic Oceans Foundation and Greenpeace, are promoting international cooperation to assess, control, and reduce

³⁷⁵ UN GOOS, *What is GOOS?*.

³⁷⁶ UNEP, *UNEP Year Book 2011*, 2011, p. 29; UN IMO, *Introduction to IMO*, 2015.

³⁷⁷ UN IMO, *Prevention of Pollution by Garbage from Ships*.

³⁷⁸ UNEP, *Regional Seas Programme: About*; UN General Assembly, *Oceans and the law of the sea (A/RES/57/141)*, 2012; UN General Assembly, *Oceans and the law of the sea (A/RES/69/245)*, 2014; UN General Assembly, *Summary of the first global integrated marine assessment*, 2015, p. 36; United UN GOOS, *What is GOOS?*.

³⁷⁹ UN General Assembly, *Oceans and the law of the sea (A/RES/57/141)*, 2012; UN General Assembly, *Oceans and the law of the sea (A/RES/69/245)*, 2014; UN General Assembly, *Summary of the first global integrated marine assessment*, 2015, p. 36; United Nations World Ocean Assessment, *About*, 2015.

³⁸⁰ UN General Assembly, *Oceans and the law of the sea (A/RES/60/30)*, 2005, pp. 5, 10, 12; UN General Assembly, *Oceans and the law of the sea (A/RES/62/215)*, 2007, pp. 3, 16; UN General Assembly, *Oceans and the law of the sea (A/RES/63/111)*, 2008, pp. 7, 15.

³⁸¹ UN General Assembly, *Oceans and the law of the sea (A/RES/62/215)*, 2007, p. 16; UN General Assembly, *Oceans and the law of the sea (A/RES/64/71)*, 2009, p. 20.

³⁸² UN General Assembly, *Oceans and the law of the sea (A/RES/69/245)*, 2014, p. 29.

³⁸³ *Ibid.*, p. 48.

³⁸⁴ *Ibid.*, p. 9.

³⁸⁵ UN Division for Ocean Affairs and the Law of the Sea, *Regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects*, 2015.

³⁸⁶ UN General Assembly, *Summary of the first global integrated marine assessment*, 2015, p. 36; UN World Ocean Assessment, *About*, 2015.

³⁸⁷ UNEP, *UNEP Year Book 2011*, 2011, p. 28.

³⁸⁸ Morris, Plastic bag use down 70% in Wales since charges began, *The Guardian*, 2015.

³⁸⁹ UNEP, *UNEP Year Book 2011*, 2011, p. 28.

the amount and impact of plastic debris in the world's oceans.³⁹⁰ The Ocean Recovery Alliance is a non-profit organization that implements the Plastic Disclosure Project, which “asks the business world to measure, manage, reduce and benefit from plastic waste in order to create a world in which plastic adds value for consumers and businesses without negatively impacting the environment,” and the Plasticity Forum, which fosters discussions on how to reuse and recycle plastic and prevent it from entering the world's oceans.³⁹¹

Assessing the Impact of Plastic Debris

The plastic debris in the world's oceans poses an immediate, substantial threat to marine life.³⁹² Seabirds, sea turtles, and other animals can ingest small parts of plastic products that fill their stomachs, preventing them from absorbing enough food and possibly leading to obstructions.³⁹³ Microplastics, which often enter the oceans through sewage since they are found in many cosmetics, pose severe threats to small organisms upon ingestion, leading to intoxication and transfer of these substances throughout the food chain.³⁹⁴ The consumption of plastic particles can lead to chemical contamination and alteration of the community structure of organisms living in the sea.³⁹⁵ Marine animals can further be entangled in drifting plastic parts, such as nets or plastic bags, which can cause physical injury or death.³⁹⁶ Over 260 species have gotten tangled in plastic or have swallowed it.³⁹⁷ Plastic debris can thus have lethal effects on marine life and alter the structure of biodiversity (the variety of plants and animals), thereby disrupting entire complex ecosystems.³⁹⁸ By transporting small organisms to remote areas, plastic debris in the oceans has contributed to the dispersal of alien marine organisms in new habitats.³⁹⁹ Alien species, like the American comb jellyfish in the Black Sea, can affect biodiversity.⁴⁰⁰ Fragile ecosystems, such as coral reefs, can be damaged by plastic debris, which can also have consequences for biodiversity.⁴⁰¹

In addition to its direct impact on marine life, plastic debris in the world's oceans has broader implications for human development.⁴⁰² The detrimental effect of plastic debris on biodiversity may jeopardize the livelihoods of the world's poorest, who rely upon biological resources for up to 90% of their basic needs.⁴⁰³ Biodiversity provides many benefits, including the protection of water resources, food, medicine, recreation, and tourism.⁴⁰⁴ Manufacturing of plastic products uses approximately 8% of global oil production, as well as other resources including natural gas and water, which leads to increased carbon emissions that may accelerate climate change.⁴⁰⁵ Toxic chemical additives used to enhance plastic products may leach out into the environment, enter the food chain, and endanger human health.⁴⁰⁶ Plastic debris can have negative economic effects, including the loss of fishing opportunities and losses in tourism; for instance, in the area of Asia-Pacific, marine debris costs over \$1 billion a year.⁴⁰⁷

³⁹⁰ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006; Greenpeace, *The Trash Vortex*, 2014; Greenpeace, *Toolkits and Resources*; Ocean Recovery Alliance, *About*; Plastic Oceans, *About*.

³⁹¹ UNEP, *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*, 2014, p. 4; Plastic Disclosure Project, *Why the Plastic Disclosure Project?*, 2014; Plasticity Forum, *Plasticity Forum – Cascais, Portugal*, 2015.

³⁹² UNEP, *Annual Report 2014*, 2015, p. 3.

³⁹³ Cozar et al., *Plastic debris in the open ocean*, 2014, p. 10239.

³⁹⁴ UNEP GPA, *Plastics in Cosmetics – Are we Polluting the Environment through our Personal Care?*, 2015, p. 19; Wright et al., *The physical impacts of microplastics on marine organisms: A review*, 2013, p. 483.

³⁹⁵ UNEP, *UNEP Year Book 2011*, 2011, p. 25.

³⁹⁶ *Ibid.*

³⁹⁷ *Ibid.*

³⁹⁸ *Ibid.*; UN WHO, *Climate Change and Human Health – Biodiversity*, 2015.

³⁹⁹ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 22.

⁴⁰⁰ *Ibid.*

⁴⁰¹ UNEP, *Annual Report 2014*, 2015, p. 3.

⁴⁰² UNEP, *UNEP Year Book 2011*, 2011, p. 28.

⁴⁰³ Secretariat of the Convention on Biological Diversity, *Why is biodiversity important for development?*

⁴⁰⁴ Shah, *Why Is Biodiversity Important? Who Cares?*, *Global Issues*, 2014.

⁴⁰⁵ UNEP, *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*, 2014, p. 16.

⁴⁰⁶ *Ibid.*, p. 17.

⁴⁰⁷ UNEP, *UNEP Year Book 2011*, p. 28.

Addressing the Root Causes

The root causes of the plastic debris in the world's oceans, namely the high amount of plastic production, consumption, and dumping, can be tackled by economic instruments; international, national and regional legislation; effective implementation of existing policies; and monitoring of the sources of marine litter.⁴⁰⁸ These are often referred to as zero waste strategies and include waste reduction, reuse, recycling, and producer responsibility.⁴⁰⁹

Among the key factors for the plastic debris in the world's oceans is the high demand for plastic products, which has led to increasing production of plastics.⁴¹⁰ Although plastic products can be very useful for “preserv[ing] and protect[ing] food and medicine,” the majority of plastics currently in use could be replaced by biodegradable or reusable products.⁴¹¹ Many companies and organizations, such as Retap and Soulbottles, promote reusable bags, bottles, and other containers as alternatives to plastic products; however, their effectiveness depends on changing consumer habits.⁴¹² Many people severely underestimate the amount of plastic debris in the oceans and are not conscious of the importance of recycling.⁴¹³ Education and awareness campaigns can lead to changing attitudes and global ambassadors, including UNEP Goodwill Ambassador Jack Johnson, can serve as inspiring examples.⁴¹⁴

In addition to the high demand for plastic products, the attitude of companies towards alternatives for plastic products is important, since they ultimately decide on the supply of plastic products; yet, many actors from industries still ignore the negative consequences of plastic.⁴¹⁵ An equally important factor is recycling, which depends on consumer awareness and may be incentivized through legislative measures, such as deposits for plastic bottles.⁴¹⁶ The number of companies producing recycled clothes, bags, and other products is rising, and UNEP has recently supported research and development on converting waste plastics to fuel.⁴¹⁷ A number of companies and research institutes, such as Ecovative and Ecospan, are developing plant-based biodegradable products that demonstrate the same benefits as plastic and can be used for packaging, fishing nets, and various other purposes.⁴¹⁸ More research is needed to clarify how quickly these products will degrade and how they need to be constituted so they do not pose a threat to food production.⁴¹⁹ The viability of alternatives to plastic products has been demonstrated by plastic-free supermarkets, such as Original Unverpackt in Berlin, Germany and In.redients in Austin, Texas.⁴²⁰

Developing states are particularly affected by the consequences of plastic debris in the world's oceans since they often depend on fishing industries and tourism, which are vulnerable to marine pollution.⁴²¹ Frequently, developing states find it difficult to attract investments to fund construction of the appropriate infrastructure for waste management and cleaning the oceans.⁴²² Plastic production in developing countries is expected to increase in coming

⁴⁰⁸ UNEP, *UNEP Year Book 2011*, 2011, p. 28.

⁴⁰⁹ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 36; UNEP, *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*, 2014, p. 10.

⁴¹⁰ UNEP, *UNEP Year Book 2014*, 2014, p. 50.

⁴¹¹ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 8.

⁴¹² Retap, *About us*, 2015; Soulbottles, *About*, 2015.

⁴¹³ Barron, A close look at the Great Pacific Garbage Patch, *The Washington Post*, 2013; McLendon, What is the Great Pacific Ocean Garbage Patch?, *Mother Nature Network*, 2010; Parker, Plane Search Shows World's Oceans Are Full of Trash, *National Geographic*, 2014.

⁴¹⁴ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 33; UNEP, *Musician and Environmentalist Jack Johnson Designated UNEP Goodwill Ambassador on World Environment Day 2015*, 2015; UNEP, *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*, 2014, p. 18.

⁴¹⁵ UNEP, *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*, 2014, p. 18.

⁴¹⁶ UNEP, *UNEP Year Book 2011*, 2011, pp. 22, 32.

⁴¹⁷ UNEP, *Converting Waste Plastics to Fuels – Baseline Study Project*; VAUDE, *Eco-friendly products*.

⁴¹⁸ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 36; Ecovative, *Mushroom Materials*, 2015; Ecospan, *About*, 2015.

⁴¹⁹ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 36.

⁴²⁰ Borromeo, Berlin duo launch a supermarket with no packaging, *The Guardian*, 2014; In.redients, *How it works*, 2010; Original Unverpackt, *Über OU*.

⁴²¹ UNEP, *UNEP Year Book 2011*, 2011, p. 32; UN General Assembly, *Oceans and the law of the sea (A/RES/62/215)*, 2007, pp. 6, 12.

⁴²² UNEP, *UNEP Year Book 2011*, 2011, p. 32.

years, which requires appropriate infrastructure and programs for recycling plastic products.⁴²³ Developing states could benefit from developed states' knowledge and technology for reducing plastic debris.⁴²⁴ UNEP and other organizations contribute to transfer of technology; yet, large potential for strengthened efforts still exists.⁴²⁵

Monitoring, surveillance, and research on the plastic debris in the world's oceans are essential for successful prevention and reduction of plastic debris in the world's oceans.⁴²⁶ Some states and regional sea bodies have taken active measures to control the amount and impact of marine debris in the world's oceans and the Commission of the European Union is developing assessment methods for marine debris that should be available by 2020.⁴²⁷ Yet, according to UNEP, a comprehensive set of environmental, social, and economic indicators has been lacking.⁴²⁸ Routine offshore monitoring with traditional techniques is expansive and limited.⁴²⁹ Historically, scientists, civil society, and international organizations relied on the amount of plastic as found in the stomachs of birds or counting washed up plastic pieces at beaches, but in recent years they have been searching for cost-effective, quantitative techniques which are more efficient and reliable.⁴³⁰ According to the *Honolulu Strategy*, key aspects for monitoring and research on the status of marine debris include "identification and monitoring of hot spots where higher debris accumulation is predicted or observed"; standardized methodologies "to monitor marine debris"; and "characterization of sources, transport, and sinks of marine debris in the marine environment."⁴³¹

Cleaning the Oceans

While one part of the problem is prevention, another part of the problem is cleaning up the debris that is already in the ocean.⁴³² National, regional, and local governments; civil society; and individuals have contributed to cleaning the oceans from plastic debris, starting with cleaning local beaches.⁴³³ A great number of non-governmental organizations (NGOs), such as the International Coastal Cleanup, and governmental organizations, such as the National Oceanic and Atmospheric Administration in the United States, cooperate with UNEP to reduce the amount of plastic debris in the oceans.⁴³⁴ Many international programs also work together with UNEP, including the Clean Up the World program, which organizes 35 million volunteers from more than 130 countries every year to collect trash on beaches, raise public awareness, and conduct education campaigns.⁴³⁵ During the annually held Clean Up the World Weekend, World Water Day, and World Environment Day, cleanup activities take place where people collect trash on beaches and in other areas.⁴³⁶

Cleaning beaches and collecting plastic particles with nets or other instruments from the sea are rather costly and time-consuming mechanisms.⁴³⁷ Consequently, research in this area seeks to use natural movements of the oceans and gyres to develop more effective instruments.⁴³⁸ Gyres are subtropical convergence zones, which are areas where two ocean currents meet and interact.⁴³⁹ Debris tends to accumulate in gyres since it is transported and trapped there by ocean currents, often far from coastlines.⁴⁴⁰ One of the largest gyres is the North Pacific central gyre, which is the location of the Eastern Garbage Patch, constituting an area the size of Turkey.⁴⁴¹ Together, the Eastern Garbage

⁴²³ UNEP, *UNEP Year Book 2011*, 2011, p. 22.

⁴²⁴ UNEP Scientific and Technical Advisory Panel, *Marine Debris as a Global Environmental Problem*, 2011, p. 4.

⁴²⁵ UNEP, *UNEP Year Book 2011*, pp. 28-29.

⁴²⁶ *Ibid.*, p. 24.

⁴²⁷ *Ibid.*, p. 23; UNEP, *UNEP Year Book 2014*, 2014, p. 51.

⁴²⁸ UNEP, *UNEP Year Book 2011*, 2011, p. 23.

⁴²⁹ *Ibid.*, p. 24.

⁴³⁰ *Ibid.*, p. 24.

⁴³¹ Marine Litter Network, *The Honolulu Strategy - A Global Framework for Prevention and Management of Marine Debris*, p. 12.

⁴³² Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 34.

⁴³³ *Ibid.*

⁴³⁴ *Ibid.*

⁴³⁵ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 34; Clean Up the World, *About Clean Up the World*.

⁴³⁶ Clean Up the World, *Clean Up the World Weekend*; UNEP, *What is WED*, 2015; UN Water, *World Water Day 2015*, 2015.

⁴³⁷ Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 35.

⁴³⁸ *Ibid.*

⁴³⁹ UNEP, *UNEP Year Book 2014*, 2014, p. 49.

⁴⁴⁰ *Ibid.*; Alsopp et al., *Plastic Debris in the World's Oceans*, 2006, p. 28.

⁴⁴¹ Greenpeace, *The Trash Vortex*, 2015.

Patch and the Western Garbage Patch form the Great Pacific Garbage Patch, an area of 7.7 million square miles of marine debris in the Central North Pacific Ocean.⁴⁴²

Case study: The ‘Ocean Cleanup’ project

By concentrating on gyres and ocean currents, the Ocean Cleanup project “develops technology to extract, prevent, and intercept plastic pollution.”⁴⁴³ It was founded in 2013 by Boyan Slat, one of UNEP’s 2014 Champions of the Earth, and will start cleaning the oceans in 2020 by using the natural movement of ocean currents to collect marine litter with floating barriers.⁴⁴⁴ According to preliminary calculations, a 100-kilometer cleanup array, deployed for 10 years, could remove 42% of the litter in the Great Pacific Garbage Patch.⁴⁴⁵ Critics claim that the technology cannot distinguish microorganisms from microplastics since many of them are of similar sizes.⁴⁴⁶ Microorganisms, such as bacteria, are of high importance to marine life since they form critical links in food chains and play essential roles in marine ecosystems.⁴⁴⁷ Concurrently, great parts of the plastic debris in the world’s oceans are not buoyant and sink to the ocean floor, which makes it impossible for the existing technology of the Ocean Cleanup project to collect it.⁴⁴⁸ Despite its potential deficits, the Ocean Cleanup project represents a revolutionary initiative for large-scale cleanup of the plastic debris in the world’s oceans, but it will be successful only if accompanied by decreasing global plastic production and increasing environmental awareness and recycling.⁴⁴⁹

Conclusion

Despite many resolutions, conventions, and regional and national action plans on the plastic debris in the world’s oceans, the situation has not improved in recent years and the amount of marine litter is still increasing.⁴⁵⁰ Due to the fact that many actors do not always follow international agreements, monitoring and enforcement of existing regulations deserve more attention from the international community.⁴⁵¹ International cooperation and technology transfer, as well as research on alternatives to plastic products, play an equally important role.⁴⁵² Sustainable development will be of great importance in the future in order to reduce the amount of plastic debris in the oceans.⁴⁵³ A great number of global challenges, such as food insecurity, the spread of disease, and climate change, are strongly connected with global production and consumption of plastic products as well as plastic debris in the world’s oceans.⁴⁵⁴ UNEP has contributed to improving the situation by assessing and monitoring the amount and extent of plastic debris in the world’s oceans, providing states with information on policy options, and cooperating with other UN bodies and civil society organizations to strengthen international frameworks and conduct regional programs.⁴⁵⁵ In the future, UNEP could, among other actions, concentrate on raising awareness of the plastic debris in the world’s oceans, improving assessment and monitoring practices for the amount and impact of plastic debris, fostering programs and actions for recycling and developing alternatives to plastic products, cleaning up the oceans, and supporting states in developing policies on the prevention and reduction of plastic debris.⁴⁵⁶

Further Research

How can control and enforcement mechanisms for existing international agreements be improved? What can UNEP do to contribute to monitoring, controlling, and reducing plastic debris in the world’s oceans? How can UNEP foster international cooperation on this issue? What do alternatives to plastic look like and how can consumer and

⁴⁴² National Geographic Society, *Great Pacific Garbage Patch*.

⁴⁴³ The Ocean Cleanup, *About the Ocean Cleanup*.

⁴⁴⁴ Ibid.; The Ocean Cleanup, *The Technology*.

⁴⁴⁵ The Ocean Cleanup, *The Technology*.

⁴⁴⁶ Parker, *The Best Way to Deal With Ocean Trash*, *National Geographic*, 2014.

⁴⁴⁷ Carson et al., *The plastic-associated microorganisms of the North Pacific Gyre*, 2013, p. 126.

⁴⁴⁸ UNEP, *UNEP Year Book 2014*, 2014, p. 49.

⁴⁴⁹ The Ocean Cleanup, *The Technology*.

⁴⁵⁰ Eriksen et al., *Plastic Pollution in the World’s Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea*, 2014, p. 7.

⁴⁵¹ Alsopp et al., *Plastic Debris in the World’s Oceans*, 2006, p. 33.

⁴⁵² UNEP, *UNEP Year Book 2011*, 2011.

⁴⁵³ UN General Assembly, *Transforming our World: The 2030 Agenda for Sustainable Development (A/RES/70/1)*, 2015.

⁴⁵⁴ Ibid.

⁴⁵⁵ UNEP, *Regional Seas Programme: About*; UNEP, *UNEP Year Book 2011*, 2011; UNEP, *UNEP Year Book 2014*, 2014; UNEP, *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry*, 2014; UNEP, *What is WED*, 2015.

⁴⁵⁶ UNEP, *About*; UNEP, *Annual Report 2014*, 2015, p. 3; UNEP, *Chemicals & Waste*.



corporate attitudes and behaviors be changed to reduce and prevent marine debris? How can plastic products be recycled and what role does the conversion of plastic to fuel play? What is the role of states and how can they cooperate with civil society?

Annotated Bibliography

Alsopp, M., et al. (n.d.). *Plastic Debris in the World's Oceans*. Greenpeace International. Retrieved 20 July 2015 from: http://www.unep.org/regionalseas/marinelitter/publications/docs/plastic_ocean_report.pdf

This report was authored by Michelle Alsopp, Adam Walters, David Santillo, and Paul Johnston and published under the auspices of Greenpeace in 2006. The document first addresses the problem of plastic marine debris in general, proceeding in the next two sections to the negative consequences of debris for marine life and the allocation of marine debris in the world. Delegates could benefit in their research especially from the last section, which provides solutions on how to prevent and clean up marine debris in the future.

Eriksen, M., et al. (2014). Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea. *PLoS One*, 9: 1-15.

This article gives a detailed overview of current facts and figures concerning the plastic debris in the world's oceans. It describes the amount and composition of marine litter and analyzes the role of ocean gyres. Accordingly, this document constitutes a good starting point for further research and its bibliography provides a number of possibilities for finding further relevant studies.

Marine Litter Network. (n.d.). *The Honolulu Strategy – A Global Framework for Prevention and Management of Marine Debris*. Retrieved 19 August 2015 from:

http://www.marinelitternetwork.org/sites/default/files/honolulu_strategy_final.pdf

The Honolulu Strategy constitutes a framework for global efforts to reduce the amount and impact of marine debris in the world's oceans. The document provides readers with an understanding of the problem by explaining the impacts of marine debris. It further contains concrete goals and strategies to prevent and reduce the impacts of marine debris. Accordingly, this document constitutes a resource for analyzing existing strategies and developing future actions.

United Nations Convention on the Law of the Sea. (1982). Retrieved 13 September 2015 from:

http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf

The United Nations Convention on the Law of the Sea is a pivotal document on law and order in the world's oceans and seas. It contains rules governing the most important aspects of the uses of international waters and marine resources. Among other features, it cements national sovereignty over territorial seas and coastal regions. It further emphasizes that states must prevent and control marine pollution and "are liable for damage caused by violation of their international obligations to combat such pollution."

United Nations Environment Programme. (2011). *UNEP Year Book 2011: Emerging Issues in our Global Environment*. Retrieved 19 July 2015 from:

http://www.unep.org/yearbook/2011/pdfs/UNEP_YEARBOOK_Fullreport.pdf

The year book from 2011 includes an in-depth assessment of plastic debris in the world's oceans. Compared to later editions of the chapter on plastic debris in the world's oceans, the edition from 2011 is much more detailed and explains the root causes and consequences of this global issue as well as existing initiatives to improve the situation. It analyzes the impacts of plastic debris on marine life and ecosystems and elaborates on social and economic effects of plastic debris in the world's oceans. The chapter further gives a broad overview of existing international and regional frameworks and initiatives by NGOs. The fact that this book is from 2011 and still contains the most relevant information on the plastic debris in the world's oceans shows that the situation has not improved since and effective actions are urgently needed.

United Nations Environment Programme. (2014). *UNEP Year Book 2014: Emerging Issues in our Global Environment*. Retrieved 18 July 2015 from: http://www.unep.org/yearbook/2014/PDF/UNEP_YearBook_2014.pdf

The year book includes an entire chapter on plastic debris in the ocean. It describes the current situation of plastic in the marine environment and discusses the threat of microplastics to marine life. It further provides an overview of existing international, national, and regional agreements on the protection of the seas and the disposal of plastic at sea. On page 52, the chapter discusses how the inputs of plastic debris into the ocean could be reduced and thereafter the report concentrates on proposals to reduce the overall production of plastic. Last but not least, the

document lists a number of valuable sources for further research on plastic debris in the world's oceans and should therefore be regarded as one of the most important resources with which to start research on this topic.

United Nations Environment Programme. (2014). *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry* [Executive Summary]. Retrieved 24 August 2015 from: <http://www.unep.org/gpa/Documents/Publications/ValuingPlasticExecutiveSummaryEn.pdf>

After giving an overview about the current situation concerning plastic debris in the world's oceans, this document concentrates on analyzing how companies can contribute to reductions in the amount and impact of plastic debris. It formulates clear recommendations for companies and illustrates how they can benefit from these actions. Among other factors, it discusses changes in attitudes and behaviors as well as innovations in alternatives for plastic products.

United Nations, General Assembly, Sixty-fourth session. (2009). *Oceans and the law of the sea (A/RES/64/71)* [Resolution]. Adopted without reference to a Main Committee (A/64/L.18 and Add.1). Retrieved 20 July 2015 from: <http://undocs.org/A/RES/64/71>

As one of the most recent General Assembly resolutions on the law of the sea, this document contains valuable information on the international framework on the pollution of the world's oceans and seas. While the resolution does not specifically mention plastics, it addresses the severe impact of debris on marine life, ecosystems, and small island states. It expresses the General Assembly's appreciation of UNEP's initiatives to develop partnerships with states and civil societies in order to raise awareness on this issue. It further asks Member States to integrate the issue of marine debris into their national strategies. Accordingly, this document is a pivotal resource while analyzing the international legal framework on debris in the world's oceans.

United Nations, General Assembly, Sixty-ninth session. (2014). *Oceans and the law of the sea (A/RES/69/245)* [Resolution]. Adopted without reference to a Main Committee (A/69/L.29 and Add.1). Retrieved 20 July 2015 from: <http://undocs.org/A/RES/69/245>

General Assembly resolution 69/245 of 29 December 2014 on "Oceans and the law of the sea" implicitly endorses the twentieth anniversary of the entry into force of the United Nations Convention on the Law of the Sea. The resolution addresses a wide range of topics reaching from peaceful settlement of disputes to maritime safety and security, calls for enhanced capacity-building, and appeals to all Member States to become parties to the London Convention. In this resolution, the GA decided that the Informal Consultative Process on the report of the Secretary-General on oceans and the law of the sea in 2016 shall focus on the theme of "Marine debris, plastics and microplastics."

United Nations, 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 20 July 2015 from: <https://docs.imo.org/Documents/Detail.aspx?did=843>

The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) and the London Protocol are among the most important documents on marine pollution and contain essential information on the legal framework that governs plastic debris in the world's oceans. Among other highly relevant aspects, the London Convention defines the term "dumping" and calls for actions to prevent the pollution of the world's oceans. Subject to eight exceptions listed in Article 4, the London Protocol prohibits the dumping of all materials, including all substances containing plastics, into the world's oceans.

Bibliography

Alsopp, M., et al. (2006). *Plastic Debris in the World's Oceans*. Greenpeace International. Retrieved 20 July 2015 from: http://www.unep.org/regionalseas/marinelitter/publications/docs/plastic_ocean_report.pdf

Andrady, A. (2011). Microplastics in the marine environment. *Marine Pollution Bulletin*, 62: 1596–1605.



- Barnes, D., et al. (2009). Accumulation and fragmentation of plastic debris in global environments. *Philosophical Transactions of the Royal Society*, 364: 1985-1998.
- Barron, C. (2013, January 31). A close look at the Great Pacific Garbage Patch. *The Washington Post*. Retrieved 16 September 2015 from: https://www.washingtonpost.com/lifestyle/kidspost/a-close-look-at-the-great-pacific-garbage-patch/2013/01/31/49c3f0d0-3d60-11e2-a2d9-822f58ac9fd5_story.html
- Borromeo, L. (2014, September 16). Berlin duo launch a supermarket with no packaging. *The Guardian*. Retrieved 18 October 2015 from: <http://www.theguardian.com/sustainable-business/2014/sep/16/berlin-duo-supermarket-no-packaging-food-waste>
- Carson, H. S., et al. (2013). The plastic-associated microorganisms of the North Pacific Gyre. *Marine Pollution Bulletin*, 75: 126-132.
- Clean Up the World. (n.d.). *About Clean Up the World* [Website]. Retrieved 15 September 2015 from: <http://www.cleanuptheworld.org/en/About/about-cuw.html>
- Clean Up the World. (n.d.). *Clean Up the World Weekend* [Website]. Retrieved 15 September 2015 from: <http://www.cleanuptheworld.org/en/Activities/clean-up-the-world-weekend.html>
- Cole, M., et al. (2011). Microplastics as contaminants in the marine environment: A review. *Marine Pollution Bulletin*, 62: 2588–2597.
- Cozar, A., et al. (2014). Plastic debris in the open ocean. *Proceedings of the National Academy of Sciences of the United States of America*, 111: 10239–10244.
- Derraik, G. (2002). The pollution of the marine environment by plastic debris: a review. *Marine Pollution Bulletin*, 44: 842-852.
- Ecovative. (2015). *Mushroom Materials* [Website]. Retrieved 24 August 2015 from: <http://www.ecovativedesign.com/mushroom-materials/>
- Ecospan. (2015). *About* [Website]. Retrieved 24 August 2015 from: <http://ecospan.com/about-ecospan/>
- Eriksen, M., et al. (2014). Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea. *PloS One*, 9: 1-15.
- Greenpeace. (2014). *The Trash Vortex* [Website]. Retrieved 24 August 2015 from: <http://www.greenpeace.org/international/en/campaigns/oceans/fit-for-the-future/pollution/trash-vortex/>
- Greenpeace. (n.d.). *Toolkits and Resources* [Website]. Retrieved 24 August 2015 from: <http://www.greenpeace.org/international/en/campaigns/oceans/toolkits/>
- In.gredients. (2010). *How it works* [Website]. Retrieved 24 August 2015 from: <http://in.gredients.com/howitworks/>
- Johnson, B. (2015). *Zero Waste Home* [Website]. Retrieved 20 July 2015 from: <http://www.zerowastehome.com>
- Marine Litter Network. (n.d.). *The Honolulu Strategy – A Global Framework for Prevention and Management of Marine Debris*. Retrieved 19 August 2015 from: http://www.marinelitternetwork.org/sites/default/files/honolulu_strategy_final.pdf
- McLendon, R. (2010, February 24). What is the Great Pacific Ocean Garbage Patch?. *Mother Nature Network*. Retrieved 16 September 2015 from: <http://www.mnn.com/earth-matters/translating-uncle-sam/stories/what-is-the-great-pacific-ocean-garbage-patch>

Moore, J. C. (2008). Synthetic polymers in the marine environment: A rapidly increasing long-term threat. *Environmental Research*, 108: 131–139.

Morris, S. (2015, September 4). Plastic bag use down 70% in Wales since charges began. *The Guardian*. Retrieved 13 September 2015 from: <http://www.theguardian.com/environment/2015/sep/04/plastic-bag-use-down-70-wales-since-charges-began>

National Geographic Society. (n.d.). *Great Pacific Garbage Patch* [Website]. Retrieved 18 October 2015 from: <http://education.nationalgeographic.com/encyclopedia/great-pacific-garbage-patch/>

The Ocean Cleanup. (n.d.). *About the Ocean Cleanup* [Website]. Retrieved 22 August 2015 from: <http://www.theoceancleanup.com/about.html>

The Ocean Cleanup. (n.d.). *The Technology* [Website]. Retrieved 22 August 2015 from: <http://www.theoceancleanup.com/technology.html>

Ocean Recovery Alliance. (n.d.). *About* [Website]. Retrieved 24 August 2015 from: <http://www.oceanrecov.org/about/how-it-works.html>

Original Unverpackt. (n.d.). *Über OU* [Website]. Retrieved 24 August 2015 from: <http://original-unverpackt.de/ueber-original-unverpackt/>

Parker, L. (2014, April 14). Plane Search Shows World's Oceans Are Full of Trash. *National Geographic*. Retrieved 16 September 2015 from: <http://news.nationalgeographic.com/news/2014/04/140404-garbage-patch-indian-ocean-debris-malaysian-plane/>

Parker, L. (2014, April 16). The Best Way to Deal With Ocean Trash. *National Geographic*. Retrieved 22 August 2015 from: <http://news.nationalgeographic.com/news/2014/04/140414-ocean-garbage-patch-plastic-pacific-debris/>

Plastic Disclosure Project. (2014). *Why the Plastic Disclosure Project?* [Website]. Retrieved 22 August 2015 from: <http://www.plasticdisclosure.org/about/why-pdp.html>

Plastic Oceans. (n.d.). *About* [Website]. Retrieved 24 August 2015 from: <http://www.plasticoceans.net/index.php/the-foundation/>

Plasticity Forum. (2015). *Plasticity Forum – Cascais, Portugal* [Website]. Retrieved 22 August 2015 from: <http://www.plasticityforum.com>

Protocol of 1978 relating to the International Convention for the prevention of pollution from ships, 1973 (with annexes, final act and International Convention of 1973). Concluded at London on 17 February 1978. (1983). Retrieved 21 August 2015 from: <https://treaties.un.org/doc/Publication/UNTS/Volume%201340/volume-1340-I-22484-English.pdf>

Retap. (2015). *About* [Website]. Retrieved 24 August 2015 from: <http://www.retap.de>

Shah, A. (2014, January 19). Why Is Biodiversity Important? Who Cares? *Global Issues*. Retrieved 18 August 2015 from: <http://www.globalissues.org/article/170/why-is-biodiversity-important-who-cares>

Soulbottles. (2015). *About* [Website]. Retrieved 24 August 2015 from: <https://www.soulbottles.com/about/>

United Nations Convention on the Law of the Sea. (1982). Retrieved 13 September 2015 from: http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf

United Nations, Department of Public Information. (n.d.). *We Can End Poverty – Millennium Development Goals and Beyond 2015 – Home* [Website]. Retrieved 16 September 2015 from: <http://www.un.org/millenniumgoals/>

United Nations, Department of Public Information. (2015). *2015 – United Nations Sustainable Development Summit 2015* [Website]. Retrieved 16 September 2015 from: <http://www.un.org/sustainabledevelopment/>

United Nations, Division for Ocean Affairs and the Law of the Sea. (2012). *The United Nations Convention on the Law of the Sea (A historical perspective)* [Website]. Retrieved 15 September 2015 from: http://www.un.org/Depts/los/convention_agreements/convention_historical_perspective.htm#Historical%20Perspective

United Nations, Division for Ocean Affairs and the Law of the Sea. (2015). *Chronological lists of ratifications of, accessions and successions to the Convention and the related Agreements as at 3 October 2014*. Retrieved 15 September 2015 from: http://www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm#The%20United%20Nations%20Convention%20on%20the%20Law%20of%20the%20Sea

United Nations, Division for Ocean Affairs and the Law of the Sea. (2015). *Regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects* [Website]. Retrieved 20 August 2015 from: http://www.un.org/depts/los/global_reporting/global_reporting.htm

United Nations Educational, Scientific and Cultural Organization. (2013). *Intergovernmental Oceanographic Commission* [Website]. Retrieved 21 August 2015 from: <http://ioc-unesco.org>

United Nations Educational, Scientific and Cultural Organization. (2015). *About the Intergovernmental Oceanographic Commission (IOC)* [Website]. Retrieved 21 August 2015 from: <http://www.unesco.org/new/en/natural-sciences/ioc-oceans/about-us/>

United Nations Environment Programme. (n.d.). *About* [Website]. Retrieved 22 August 2015 from: <http://www.unep.org/chemicalsandwaste/>

United Nations Environment Programme. (n.d.). *Chemicals and Waste* [Website]. Retrieved 22 August 2015 from: <http://www.unep.org/chemicalsandwaste/>

United Nations Environment Programme. (n.d.). *Converting Waste Plastics to Fuel – Baseline Study Project* [Report]. Retrieved 22 August 2015 from: http://www.unep.org/ietc/Portals/136/Other%20documents/Waste%20Management/Waste%20Plastic/WP_4_2_SWMSystemsAndPractices_Cebu.pdf

United Nations Environment Programme. (n.d.). *Regional Seas Programme: About* [Website]. Retrieved 24 August 2015 from: <http://www.unep.org/regionalseas/about/default.asp>

United Nations Environment Programme. (n.d.). *Regional Seas Programme: Regional Activities* [Website]. Retrieved 12 September 2015 from: <http://www.unep.org/regionalseas/marinelitter/initiatives/unepregions/default.asp>

United Nations Environment Programme. (2011). *UNEP Year Book 2011: Emerging Issues in our Global Environment*. Retrieved 19 July 2015 from: http://www.unep.org/yearbook/2011/pdfs/UNEP_YEARBOOK_Fullreport.pdf

United Nations Environment Programme. (2012, January 12). *Countries Adopt Manila Declaration to Strengthen Protection of Global Marine Environment* [Press Release]. Retrieved 12 September 2015 from: <http://www.unep.org/newscentre/default.aspx?DocumentID=2666&ArticleID=9012>

United Nations Environment Programme. (2014). *Resolutions and decisions adopted by the United Nations Environment Assembly of the United Nations Environment Programme at its first session on 27 June 2014*. Retrieved 24 August 2015 from: http://www.unep.org/unea/UNEA_Resolutions.asp

United Nations Environment Programme. (2014). *UNEP Year Book 2014: Emerging Issues in our Global Environment*. Retrieved 18 July 2015 from: http://www.unep.org/yearbook/2014/PDF/UNEP_YearBook_2014.pdf

United Nations Environment Programme. (2014). *Valuing Plastics: The Business Case for Measuring, Managing and Disclosing Plastic Use in the Consumer Goods Industry* [Executive Summary]. Retrieved 24 August 2015 from: <http://www.unep.org/gpa/Documents/Publications/ValuingPlasticExecutiveSummaryEn.pdf>

United Nations Environment Programme. (2015, June 5): *Musician and Environmentalist Jack Johnson Designated UNEP Goodwill Ambassador on World Environment Day 2015* [Press Release]. Retrieved 24 August 2015 from: <http://www.unep.org/NewsCentre/default.aspx?DocumentID=26827&ArticleID=35174>

United Nations Environment Programme. (2015, June 8): *On World Oceans Day, New UN Report Recommends Ban of Microplastics in Cosmetics* [Press Release]. Retrieved 24 August 2015 from: <http://www.unep.org/NewsCentre/default.aspx?DocumentID=26827&ArticleID=35180&l=en>

United Nations Environment Programme. (2015). *Annual Report 2014*. Retrieved 24 August 2015 from: <http://www.unep.org/annualreport/2014/en/index.html>

United Nations Environment Programme. (2015). *What is WED* [Website]. Retrieved 15 September 2015 from: <http://www.unep.org/wed/about.asp>

United Nations Environment Programme, Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA). (2014). *About the GPA* [Website]. Retrieved 20 August 2015 from: <http://unep.org/gpa/About/about.asp>

United Nations Environment Programme, Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA). (2014). *Plastic in Cosmetics – Are we Polluting the Environment through our Personal Care?* [Report]. Retrieved 19 October 2015 from: http://apps.unep.org/publications/index.php?option=com_publication&task=download&file=011718_en

United Nations Environment Programme, Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA). (2014). *What is the Global Partnership on Marine Litter?* [Website]. Retrieved 20 August 2015 from: <http://unep.org/gpa/gpml/gpml.asp>

United Nations Environment Programme, Scientific and Technical Advisory Panel. (2011). *Marine Debris as a Global Environmental Problem*. Retrieved 24 August 2015 from: <http://www.thegef.org/gef/sites/thegef.org/files/publication/STAP%20MarineDebris%20-%20website.pdf>

United Nations, General Assembly, Fifty-seventh session. (2002). *Oceans and the law of the sea (A/RES/57/141)* [Resolution]. Adopted without reference to a Main Committee (A/57/L.48/Rev.1 and Add.1). Retrieved 20 August 2015 from: <http://undocs.org/A/RES/57/141>

United Nations, General Assembly, Sixtieth session. (2005). *Oceans and the law of the sea (A/RES/60/30)* [Resolution]. Adopted without reference to a Main Committee (A/64/L.22 and Add.1). Retrieved 20 July 2015 from: <http://undocs.org/A/RES/60/30>

United Nations, General Assembly, Sixty-second session. (2007). *Oceans and the law of the sea (A/RES/62/215)* [Resolution]. Adopted without reference to a Main Committee (A/64/L.27 and Add.1). Retrieved 20 July 2015 from: <http://undocs.org/A/RES/62/215>

United Nations, General Assembly, Sixty-third session. (2008). *Oceans and the law of the sea (A/RES/63/111)* [Resolution]. Adopted without reference to a Main Committee (A/64/L.42 and Add.1). Retrieved 20 July 2015 from: <http://undocs.org/A/RES/63/111>

United Nations, General Assembly, Sixty-fourth session. (2009). *Oceans and the law of the sea (A/RES/64/71)* [Resolution]. Adopted without reference to a Main Committee (A/64/L.18 and Add.1). Retrieved 20 July 2015 from: <http://undocs.org/A/RES/64/71>

United Nations, General Assembly, Sixty-ninth session. (2014). *Oceans and the law of the sea (A/RES/69/245)* [Resolution]. Adopted without reference to a Main Committee (A/69/L.29 and Add.1). Retrieved 20 July 2015 from: <http://undocs.org/A/RES/69/245>

United Nations, General Assembly, Seventieth session. (2015). *Summary of the first global integrated marine assessment (A/70/112)*. Retrieved 20 August 2015 from: <http://undocs.org/A/70/112>

United Nations, General Assembly, Seventieth session. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development (A/RES/70/1)*. Adopted without reference to a Main Committee (A/70/L.1). Retrieved 1 November 2015 from: <http://undocs.org/A/RES/70/1>

United Nations, Global Ocean Observing System. (n.d.). *What is GOOS?* [Website]. Retrieved 21 August 2015 from: http://www.ioc-goos.org/index.php?option=com_content&view=article&id=12&Itemid=26&lang=en

United Nations, International Maritime Organization. (n.d.). *Prevention of Pollution by Garbage from Ships* [Website]. Retrieved 24 August 2015 from: <http://www.imo.org/en/OurWork/Environment/PollutionPrevention/Garbage/Pages/Default.aspx>

United Nations, 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 20 July 2015 from: <https://docs.imo.org/Documents/Detail.aspx?did=843>

United Nations, International Maritime Organization. (2014). *Parties to the London Convention and Protocol*. Retrieved 21 August 2015 from: <http://www.imo.org/en/OurWork/Environment/LCLP/Documents/Map%20of%20Parties%20Sept%202014.pdf>

United Nations, International Maritime Organization. (2015). *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter* [Website]. Retrieved 21 August 2015 from: <http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/Convention-on-the-Prevention-of-Marine-Pollution-by-Dumping-of-Wastes-and-Other-Matter.aspx>

United Nations, International Maritime Organization. (2015). *Introduction to IMO* [Website]. Retrieved 13 September 2015 from: <http://www.imo.org/en/About/Pages/Default.aspx>

United Nations, Secretariat of the Convention on Biological Diversity. (n.d.). *Why is biodiversity important for development?* [Website]. Retrieved 18 October 2015 from: <https://www.cbd.int/development/about/important.shtml>

United Nations Water. (2015). *World Water Day – The 2015 Campaign* [Website]. Retrieved 15 September 2015 from: <http://www.unwater.org/worldwaterday/>

United Nations, World Health Organization. (2015). *Climate Change and Human Health – Biodiversity* [Website]. Retrieved 13 September 2015 from: <http://www.who.int/globalchange/ecosystems/biodiversity/en/>

United Nations World Oceans Assessment. (2015). *About* [Website]. Retrieved 20 August 2015 from: <http://rp.tokelau.grida.no/about.html#>

VAUDE. (n.d.). *Eco friendly products* [Website]. Retrieved 24 August 2015 from: <http://www.vaude.com/en-FI/Responsibility/Green-Shape/>

Wright, S. L., et al. (2013). The physical impacts of microplastics on marine organisms: A review. *Environmental Pollution*, 178: 483-492.