NMUN · NW
PORTLAND 2014

UNITED NATIONS ENVIRONMENTAL PROGRAMME
BACKGROUND GUIDE 2014

Written By: Kristina Mader, Director; Morgan Deters, Assistant Director

NATIONAL MODEL UNITED NATIONS

NATIONAL COLLEGIATE CONFERENCE association™

**Message from the Director-General Regarding Position Papers for the
2014 NMUN•Northwest Conference**

At the 2014 NMUN•Northwest Conference, each delegation or individual delegate submits one position paper for each committee assignment. The position paper reflects the state's overall policy and position within a particular committee. Therefore, the role that a state plays in a given committee should inform the writing of the paper.

Position papers should provide a concise review of each delegation's policy regarding the topic areas under discussion and establish precise policies and recommendations in regard to the topics before the committee. International and regional conventions, treaties, declarations, resolutions, and programs of action of relevance to the policy of your state should be identified and addressed. Making recommendations for action by your committee should also be considered. Position papers also serve as a blueprint for individual delegates to remember their country's position throughout the course of the Conference.

Please be forewarned, delegates must turn in material that is entirely original. NMUN/NCCA will not tolerate the occurrence of plagiarism. In this regard, the NMUN Secretariat would like to take this opportunity to remind delegates that although United Nations documentation is considered within the public domain, the Conference does not allow the verbatim re-creation of these documents. While quotes from UN or state documents are allowed and encouraged if clearly labeled as such, delegates may not use existing material to formulate their own policy within the committee. This plagiarism policy also extends to the written work of the Secretariat contained within the Committee Background Guides. Violation of this policy will be immediately reported to faculty advisors and may result in dismissal from Conference participation. Delegates should report any incidents of plagiarism to the Secretariat.

Position papers can be awarded as recognition of outstanding pre-Conference preparation. In order to be considered for a Position Paper Award, delegates must have met the formal requirements listed below. Please refer to the sample position paper below this message for a visual example of what your work should look like at its completion. All papers must be typed and formatted in the same manner as this example. The following format specifications are required for all papers:

- Length must not exceed two single-sided pages (use standard size for your home region: A4 or 8.5 x 11 inches - US letter size).

- Margins must be set at 1 inch or 2.54 centimeters, for the whole paper.

- Font must be Times New Roman sized between 10 pt. and 12 pt.

- Body of the paper must be single-spaced.

- Country name, school name, and committee name must be clearly labeled on the first page.

- Agenda topics must be clearly labeled in separate sections.

- National symbols (headers, flags, etc.) are deemed inappropriate for NMUN position papers.

To be considered for awards, position papers need to be submitted by email in .pdf or .doc formats by 1 February 2014. As proof of submission, include yourself as an email recipient. Please use the committee name, your assignment, and delegation/school name in both the email subject line and in the filename (example: CSustD_Canada_Jupiter University).

1. Send one complete set of all position papers for each of your country assignments to the Director-General at dirgen.nw@nmun.org.

Once the formal requirements outlined above are met, Conference staff use the following criteria to evaluate Position Papers:

- Overall quality of writing, proper style, grammar, etc.

- Citation of relevant resolutions/documents.

- General consistency with bloc/geopolitical constraints.

- Consistency with the constraints of the United Nations.

- Analysis of issues, rather than reiteration of the Committee Background Guide.

- Outline of official policy aims within the committee's mandate.

Should you have any questions please feel free to contact the Conference staff or myself. We are happy to answer any questions you may have, and are looking forward to working with you.

Sincerely,

Lucas Carreras
Director-General
NMUN•Northwest

Sample Position Paper

The following position paper is designed to be a sample of the standard format that an NMUN position paper should follow. Papers may be no longer than two single-sided pages. Only the first two pages of any submissions will be considered for awards.

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Delegation from   *Represented by*
Canada   **University of Jupiter**

Position Paper for the General Assembly Plenary

The topics before the General Assembly Plenary are: Breaking the Link between Diamonds and Armed Conflict; the Promotion of Alternative Sources of Energy; and the Implementation of the 2001-2010 International Decade to Roll Back Malaria in Developing Countries, Particularly in Africa. Canada is dedicated to collaborative multilateral approaches to ensuring protection and promotion of human security and advancement of sustainable development.

I. Breaking the Link between Diamonds and Armed Conflict

Canada endorses the Kimberley Process in promoting accountability, transparency, and effective governmental regulation of trade in rough diamonds. Canada believes the Kimberley Process Certification Scheme (KPCS) is an essential international regulatory mechanism and encourages all Member States to contribute to market accountability by seeking membership, participation, and compliance with its mandate. Canada urges Member States to follow the recommendations of the 2007 Kimberley Process Communiqué to strengthen government oversight of rough diamond trading and manufacturing by developing domestic legal frameworks similar to the Extractive Industries Transparency Initiative. Canada further calls upon participating states to act in accordance with the KPCS's comprehensive and credible systems of peer review to monitor the continued implementation of the Kimberley Process and ensure full transparency and self-examination of domestic diamond industries. The delegation of Canada draws attention to our domestic programs for diamond regulation including Implementing the Export and Import of Rough Diamonds Act and urges Member States to consider these programs in developing the type of domestic regulatory frameworks called for in General Assembly resolution 55/56. Canada recognizes the crucial role of non-governmental organizations (NGOs) in the review of rough diamond control measures developed through the Kimberley Process and encourages states to include NGOs, such as Global Witness and Partnership Africa Canada, in the review processes called for in General Assembly resolution 58/290. Canada urges Member States to act in accordance with General Assembly resolution 60/182 to optimize the beneficial development impact of artisanal and alluvial diamond miners by establishing a coordinating mechanism for financial and technical assistance through the Working Group of the Kimberley Process of Artisanal Alluvial Producers. Canada calls upon states and NGOs to provide basic educational material regarding diamond valuation and market prices for artisanal diggers, as recommended by the Diamond Development Initiative. Canada will continue to adhere to the 2007 Brussels Declaration on Internal Controls of Participants and is dedicated to ensuring accountability, transparency, and effective regulation of the rough diamond trade through the utilization of voluntary peer review systems and the promotion of increased measures of internal control within all diamond producing states.

II. The Promotion of Alternative Sources of Energy

Canada is dedicated to integrating alternative energy sources into climate change frameworks by diversifying the energy market while improving competitiveness in a sustainable economy, as

exemplified through the Canadian Turning Corners Report and Project Green climate strategies. Canada views the international commitment to the promotion of alternative sources of energy called for in the Kyoto Protocol and the United Nations Framework Convention on Climate Change (UNFCCC) as a catalyst to sustainable development and emission reduction. Canada fulfills its obligations under Article 4 of the UNFCCC by continuing to provide development assistance through the Climate Change Development Fund and calls upon Member States to commit substantial financial and technical investment toward the transfer of sustainable energy technologies and clean energy mechanisms to developing States. Canada emphasizes the need for Member States to follow the recommendations of the 2005 Beijing International Renewable Energy Conference to strengthen domestic policy frameworks to promote clean energy technologies. Canada views dissemination of technology information called for in the 2007 Group of Eight Declaration on Growth and Responsibility in the World Economy as a vital step in energy diversification from conventional energy generation. Canada calls upon Member States to integrate clean electricity from renewable sources into their domestic energy sector by employing investment campaigns similar to the Canadian $1.48 billion initiative ecoENERGY for Renewable Power. Canada encourages states to develop domestic policies of energy efficiency, utilizing regulatory and financing frameworks to accelerate the deployment of clean low-emitting technologies and calls upon Member States to provide knowledge-based advisory services for expanding access to energy in order to fulfill their commitments to Goal 1 of the Millennium Development Goals (MDGs). Canada urges states to address the concerns of the 2007 Human Development Report by promoting tax incentives, similar to the Capital Cost Allowances and Canadian Renewable and Conservation Expenses, to encourage private sector development of energy conservation and renewable energy projects. As a member of the Renewable Energy and Energy Efficiency Partnership, Canada is committed to accelerating the development of renewable energy projects, information sharing mechanisms, and energy efficient systems through the voluntary carbon offset system. We are dedicated to leading international efforts toward the development and sharing of best practices on clean energy technologies and highlight our release of the Renewable Energy Technologies Screen software for public and private stakeholders developing projects in energy efficiency, cogeneration, and renewable energy. Canada believes the integration of clean energy into state-specific strategies called for in the General Assembly Second Committee's report to the General Assembly Plenary on Sustainable development: promotion of new and renewable sources of energy (A/62/419/Add.9) will strengthen energy diversification, promote the use of cogeneration, and achieve a synergy between promoting alternative energy while allowing for competitiveness in a sustainable economy.

III. Implementation of the 2001-2010 International Decade to Roll Back Malaria in Developing Countries, Particularly in Africa

Canada views the full implementation of the treatment and prevention targets of the 2001-2010 International Decade to Roll Back Malaria in Developing Countries, Especially in Africa, as essential to eradicating malaria and assisting African states to achieve Target 8 of Goal 6 of the MDGs by 2015. Canada recommends Member States to cooperate with the World Health Organization to ensure transparency in the collection of statistical information for Indicators 21 and 22 of the MDGs. Canada reaffirms the targets of the Abuja Declaration and Plan of Action stressing regional cooperation in the implementation, monitoring, and management of malaria prevention and treatment initiatives in Africa. To fully implement General Assembly resolution 61/228, Canada believes developed states must balance trade and intellectual property obligations with the humanitarian objective of the Doha Declaration on the TRIPS Agreement and Public Health. We continue to implement Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health into our compulsory licensing framework through the Jean Chrétien Pledge to Africa Act. Canada urges Member States to support compulsory licensing for essential generic medication by including anti-malarial vaccines and initiating domestic provisions to permit export-only compulsory licenses to domestic pharmaceutical manufacturers, similar to Canada's Access to Medicines Regime. Canada calls upon Member States to establish advanced market commitments on

the distribution of pneumococcal vaccines to developing States in cooperation with PATH and the Malaria Vaccine Initiative. Canada emphasizes the need for greater membership in the Roll Back Malaria initiative to strengthen malaria control planning, funding, implementation, and evaluation by promoting increased investment in healthcare systems and greater incorporation of malaria control into all relevant multi-sector activities. Canada continues to implement the Canadian International Development Agency's (CIDA) New Agenda for Action on Health to reduce malaria infection rates among marginalized populations in Africa, increase routine immunizations rates, and reduce infection rates of other neglected infections. Canada will achieve the goal of doubling aid to Africa by 2008-2009 by providing assistance to the Global Fund to Fight Aids, Tuberculosis, and Malaria. We urge Member States to increase donations to intergovernmental organizations and NGOs that support malaria programming in Africa, exemplified by CIDA's contribution of $26 million to the Canadian Red Cross. We continue our efforts to provide accessible and affordable vector control methods to African States through the Red Cross' Malaria Bed Net Campaign and the African Medical Research Foundation Canada by supplying insecticide-treated mosquito nets and Participatory Malaria Prevention and Treatment tool kits.

Dear Delegates,

Welcome to the National Model United Nations•Northwest (NMUN•NW) Conference! We are pleased to serve on your dais for the United Nations Environment Programme (UNEP). Your Director, Kristina Mader, works for the NGO Working Group on Women, Peace and Security and lives in New York. She received her B.A. from Western Washington University in Political Science and is in the final stages of receiving her M.S. in Global Affairs at New York University. Currently, Kristina is serving as Deputy Secretary-General for NMUN•NY 2014 (Conference B) in her seventh year on staff at that conference, and previously she served as Director-General for Northwest Model United Nations. Morgan Deters, Assistant Director, has just completed her B.A. International Affairs and Economics at Lewis and Clark College. Morgan is in her fourth year staffing Northwest Model United Nations and her first year serving on staff at NMUN.

The topics under discussion for UNEP are:

   I.   Environment and Development: The Environment in the Post-2015 Development Agenda
  II.   Strengthening International Cooperation on the Environmental Aspects of Emergency Response and Preparedness in Humanitarian Response
 III.   Water Policy and Strategy: Trans-Boundary Waters

The United Nations Environment Programme plays a unique role within the United Nations, as a main organ tasked with discussing environmental issues and facilitating cooperation and international standard setting on challenges related to the environment and climate change. Its mandate, endowing a broad responsibility for a wide variety of activities, allows its work to address problems in a way that other bodies cannot by serving as a nexus in the middle of policy and practice and bridging scientific, business and environmental communities.

We hope you will find this Background Guide serves as an introduction to the topics listed. It is not meant to replace individual and further research and, as such, we hope you will find it useful as you delve into your country's policies. To help you gain a better understanding of your country and draft we encourage you to use the Annotated Bibliography and Bibliography as tools to further your knowledge of your country's unique position.

As you prepare for the conference, each delegation will submit a position paper. The position paper will allow you to present your delegation's positions and proposals on the topics before UNEP, and accordingly, it is important that it is substantive in content and provide real solutions to the issues that will be discussed in February. Information on the submission process can be found in the Background Guide. Please also employ the *Delegation Preparation Guide* as a useful tool for your preparation and regarding NMUN•NW procedures and policies. Please take special note of the NMUN policies on the website and in the *Delegate Preparation Guide* regarding plagiarism, codes of conduct/dress code/sexual harassment, awards philosophy/evaluation method, etc. Adherence to these guidelines is mandatory.

Thank you for your preparation over the coming months, and we look forward to working with you in February!

Sincerely,

Kristina Mader   **Morgan Deters**
Director   Assistant Director

Committee History

Introduction

The United Nations Environment Programme (UNEP) was established on the recommendation of the 1972 UN Conference on the Human Environment held in Stockholm, Sweden.[1] United Nations (UN) General Assembly (GA) resolution 2997, adopted on 15 December 1972, formally laid out the mandate and governance of the body, and since that point it has been the primary authority on all environment-related issues as recommended in the outcome to the1972 UN Conference on the Human Environment .[2] UNEP's mission statement is "to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations."[3] Its concrete duties include disseminating environmental information, coordinating all activities relating to the environment, developing regional programs, assisting states wishing to implement programs, and influencing international environmental law.[4] UNEP reports to the Economic and Social Council, providing advice on a wide range of sustainable development issues, and then is further considered by the GA and adopted as resolutions.[5]

Mandate and Structure

The governing structure of UNEP has changed drastically in more recent years. Up until mid-2013, the Governing Council (GC) was the main body of UNEP which reported to the Economic and Social Council (ECOSOC) and GA.[6] Membership was comprised of 58 state representatives and meetings took place yearly in Nairobi, Kenya to make policy decisions on all types of environmental issues.[7] The Council of Permanent Representatives, a subsidiary of the GC, implemented decisions and made recommendations.[8] In 1999, the GA called for an annual Global Ministerial Environment Forum (GMEF) to be held with the GC's sessions.[9] The Global Ministerial Environmental Forum consists of several ministers that come together to discuss environmental policy issues.[10]The first Global Ministerial Environment Forums led to the Malmo Declaration and subsequently at the Millennium Summit, a goal ensuring environmental sustainability.[11] Every year, a Governing Council session is held in conjunction with the Ministerial Forum to produce policy documents.[12]

As previously mentioned, the most dramatic change in the governance of UNEP occurred in 2012 and 2013. At the Rio +20 Conference, in an effort to strengthen the governing power of UNEP, the Governing Council was given universal membership, meaning every member of the United Nations was now a member of the primary governing body of the organization as opposed to the rotating 58 that it had had

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[1] United Nations Environment Programme, *UNEP Organizational Profile*.
[2] United Nations Environment Programme, *UNEP Organizational Profile*.
[3] United Nations Environment Programme, *UNEP Organizational Profile*.
[4] United Nations Environment Programme, *What UNEP Does* [Website].
[5] United Nations Environment Programme, *UNEP Organizational Profile*.
[6] United Nations Environment Programme, *UNEP Organizational Profile*.
[7] United Nations Environment Programme, *UNEP Organizational Profile*.
[8] United Nations Environment Programme, *UNEP Organizational Profile*.
[9] United Nations Environment Programme, *UNEP Organizational Profile.*
[10] United Nations Environment Programme, *Global Ministerial Environmental Forum, Malmo,* 2000.
[11] United Nations Environment Programme, *UNEP Organizational Profile*.
[12] United Nations Environment Programme, *GC.26/GMEF,* 2011.

previously.[13] The first session with universal membership took place in February 2013, at which they decided to rename the "Governing Council" to the "United Nations Environment Assembly of the UNEP" (UNEA), which was formally changed pursuant to by GA resolution 67/251 adopted on 13 March 2013.[14]

Another important function of UNEP is hosting the Secretariat, the Ozone Secretariat, of several important environmental conventions, specifically: the *Vienna Convention for the Protection of the Ozone Layer* (1985) and the *Montreal Protocol for Substances that Deplete the Ozone Layer* (1987). These conventions are both focused on protecting the ozone layer and led to the creation of the *UN Framework Convention on Climate Change* (1992), producing the *Kyoto Protocol* (1992).[15] The parties to the *Vienna Convention* meet every three years to administer the Convention with the support of the Ozone Secretariat.[16] The Ozone Secretariat, beyond facilitating annual meetings, additionally arranges meetings and implements programs relating to ozone depletion.[17] UNEP is also a part of the group that helped organize the UN Conference on Environment and Development (Rio +20).

Priorities

The work of UNEP is currently divided into six categories: climate change, disasters and conflicts, ecosystem management, environmental governance, harmful substances, and resource efficiency.[18] In each of these thematic areas, UNEP sponsors programs, works with partners, and releases reports in an effort to resolve a range of environmental challenges.[19] Given the multitude of environmental agreements in existence globally, one of the primary roles of UNEP is to help resolve the coordination problems between the plethora of organizations and secretariats that work toward a better environment.[20] Finally, UNEP is the main venue through which improvements to global, regional and national environmental governance challenges are made because of its organizational abilities and its influence on international environmental law.[21]

Recent Session

The most recent session of UNEP was also the first universal session of its Governing Council (now UNEA) and was held from the 18 - 22 February 2013 in Nairobi, Kenya.[22] The decisions made in this session were heavily influenced by the outcome of the UN Conference on Sustainable Development (Rio +20) entitled *The Future We Want* (A/66/288).[23] Rio +20 was held from 20 – 22 June 2012, as a follow-up to the UN Conference on Environment and Development, in Rio de Janeiro, Brazil in 1992.[24] The two main themes of the conference were the institutional framework (also referred to as global governance) of sustainable development and ways in which to shift to a green economy in the context of sustainable development and poverty eradication.[25] Policy issues discussed during the conference included the state of the environment, international environmental governance, coordination and cooperation within the UN

[13] United Nations Environment Programme. *Governance Structure* [Website], 2013.
[14] United Nations Environment Programme. *Governance Structure* [Website], 2013.
[15] *The Montreal Protocol on Substances that Deplete the Ozone Layer*, 1987.
[16] *The Montreal Protocol on Substances that Deplete the Ozone Layer*, 1987.
[17] *The Montreal Protocol on Substances that Deplete the Ozone Layer*, 1987.
[18] United Nations Environment Programme, *2012 Annual Report,* 2012.
[19] United Nations Environment Programme, *2012 Annual Report,* 2012.
[20] United Nations Environment Programme, *2012 Annual Report,* 2012.
[21] United Nations Environment Programme, *Environmental Governance*, 2013.
[22] UNEP, *Proceedings of the GC/Global Ministerial Environment Forum at its first universal session (UNEP/GC.27/17)*, 2013.
[23] UNEP, *Proceedings of the GC/Global Ministerial Environment Forum at its first universal session (UNEP/GC.27/17)*, 2013.
[24] United Nations Conference on Sustainable Development, *About the Rio +20 Conference*, 2011.
[25] United Nations Conference on Sustainable Development, *About the Rio +20 Conference*, 2011.

system on environmental matters, coordination and cooperation with major groups, and environment and development.[26] Several decisions were adopted of relevance to UNEP: the first of the new rules of procedure, the second of which was a change of designation so that at the next session, they will be referred to as the UNEA.[27] The body also made decisions on thematic topics, some of which include international water quality guidelines, oceans, green economy in the context of sustainable development and poverty eradication, and climate technology center and network.[28]

Conclusion

UNEP offers delegates a unique opportunity to advance issues in both policy and practice – developing global norms on the most urgent environmental challenges of our time, while operationalizing those values in programming which can have an immediate impact on lives around the world. UNEP has the responsibility of creating "policies and programmes that will benefit all people – and especially those most at risk from environmental degradation and climate change."[29] This entails collaboration, cooperation and compromise in order to build a strong foundation for the future the world needs and deserves.[30] UNEP has had a profound influence on the world and will continue to be relevant as the world faces growing environmental crisis and seeks to build a sustainable future.[31]

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[26] UNEP, *Proceedings of the GC/Global Ministerial Environment Forum at its first universal session (UNEP/GC.27/17)*, 2013.

[27] UNEP, *Proceedings of the GC/Global Ministerial Environment Forum at its first universal session (UNEP/GC.27/17)*, 2013.

[28] UNEP, *Proceedings of the GC/Global Ministerial Environment Forum at its first universal session (UNEP/GC.27/17)*, 2013.

[29] United Nations Secretary-General, *Message to the 27th Session of the UNEP Governing Council and Global Ministerial Environmental Forum*, 18 February 2013.

[30] United Nations Secretary-General, *Message to the 27th Session of the UNEP Governing Council and Global Ministerial Environmental Forum*, 18 February 2013.

[31] United Nations Secretary-General, *Message to the 27th Session of the UNEP Governing Council and Global Ministerial Environmental Forum*, 18 February 2013.

I. Environment and Development: The Environment in the Post-2015 Development Agenda

"Sustainability, broadly defined, should serve as a fundamental principle for all aspects of development and for all societies. It represents the key challenge for a transformative agenda: how to reduce global greenhouse gas emissions and achieve more equitable and sustainable management and governance of natural resources while promoting dynamic and inclusive economic and human development."[32]

Introduction

In 2011, the Secretary-General reported that it was time to look past the Millennium Development Goals (MDGs) 2015 deadline and see what could be done beyond, and there began the process of determining the post-2015 development agenda.[33] In 2015, the MDGs, set in 2000 at the Millennium Summit, will reach their expiry.[34] The goal of development is to give all citizens of the world a similar quality of life economically and socially in a way that does not easily diminish.[35] The goals of the MDGs include eradicating poverty, reducing maternal and child mortality, increasing education, eliminating HIV/AIDS, and environmental sustainability.[36] Development often focuses on the economy because developing countries are typically poor and lack the resources for development.[37] Other than the economy is a social aspect, relating to quality of life and equality among groups.[38] As developing countries reach certain links in the value added chain, they grow in industries that tend to produce much more waste without the resources like those of the developed countries to reduce that waste.[39] Because of the increased pollution from certain forms of production, developing countries often face a decision on what they find more important between economic growth and environmental sustainability.[40]

Although protecting the environment and building a strong economy tend to considered counter to each other, states are aiming to address both promoting "green growth" and the development of a "green economy." The Organization for Economic Cooperation and Development subscribes to the concept of green growth as "developing economically in a way that is environmentally sustainable."[41] Green technology and confidence in the global economy are both essential attributes of green growth, however, issues still arise in the implementation of green growth in real situations, and more broadly how green growth and sustainability can be mutually reinforcing and further how that effort can be reflected in the post-2015 development framework.[42]

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[32] UN Task Team, *Realizing the Future We Want for All: Report to the Secretary-General*, 2012, p. 25.

[33] UN General Assembly, *Accelerating progress towards the Millennium Development Goals: options for sustained and inclusive growth and issues for advancing the United Nations development agenda beyond 2015 (A/67/257)* [Resolution], 2012.

[34] United Nations, *Millennium Development Goals* [Website].

[35] United Nations, *Millennium Development Goals* [Website].

[36] United Nations, *Millennium Development Goals* [Website].

[37] Panayotou, *Economic Instruments for Environmental Management and Sustainable Development*, 1994.

[38] Panayotou, *Economic Instruments for Environmental Management and Sustainable Development*, 1994.

[39] Kogut, *Designing Global Strategies: Comparative and Competitive Value-Added* Chains, 1985.

[40] Panayotou, *Economic Instruments for Environmental Management and Sustainable Development*, 1994.

[41] Organization for Economic Cooperation and Development, *Towards Green Growth*, 2011.

[42] Organization for Economic Cooperation and Development, *Towards Green Growth*, 2011.

International Framework

In order to create a framework for the post-2015 development agenda, groups use the work of those before them to determine what is considered important, relevant or unresolved. The documents in this section reflect how environmental sustainability have been integrated into development goals in the past and could serve as an example of how environmental sustainability can be integrated into the forthcoming development goals.

Millennium Development Goals (MDGs)

The goals came from a range of development topics and are numbered specifically as follows: Goal 1 (Eradicate extreme poverty and hunger), Goal 2 (Universal primary education), Goal 3 (Gender equality), Goal 4 (Reduce child mortality), Goal 5 (Improve maternal health), Goal 6 (Combat HIV/AIDS, malaria, and other diseases), Goal 7 (Environmental sustainability), and Goal 8 (Global partnership for development).[43] Targets for some of the goals, such as extreme poverty reduction, universal primary education and environmental sustainability have been met or are on track for the 2015 deadline, but most are unlikely to be reached.[44] Because some of the goals will not be realized, sights have been set past 2015 and the possibilities that lie ahead.[45]

As stated previously, the MDGs were established following the adoption of the *Millennium Declaration*, which resulted from the Millennium Conference in 2000.[46] The MDGs were an ambitious set of objectives meant to make strides in global development with unprecedented vigor.[47] The 2005 World Summit was attended by 170 countries and reaffirmed the determination to implement the decisions of the Millennium Summit, including the MDGs, in a cooperative, multilateral manner.[48] The other topics that they discussed, which are linked to development, were peace and collective security, human rights and rule of law, and strengthening the United Nations (UN).[49] More recently, from 20-22 September 2010, the High-level Plenary Meeting of the General Assembly, also referred to as the "MDG Summit," resulted in a global action plan called *Keeping the Promise: United to Achieve the Millennium Development Goals*.[50] Coming off of the global financial crisis and the dwindling time left for the MDGs that had mixed success, those attending the summit made a push to make concrete improvements in the progress of the targets that were not on track.[51] In February of 2013, several leaders met in Bogotá, Colombia for the 2013 Global MDG Conference.[52] Along with the last ditch effort to get results even on goals that would not be met, discussion started on the post-2015 development agenda.[53]

Most relevant to the topic of discussion is Goal 7 of the MDGs, which is to ensure environmental sustainability. Goal 7 has four targets: integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources, reduce biodiversity loss, halve the proportion of the population without sustainable access to drinking water and basic sanitation, and by

[43] United Nations, *Millennium Development Goals* [Website].
[44] United Nations, *Millennium Development Goals* [Website].
[45] UNDP, *2013 Global MDG Conference – Making the MDGs Work*, 2013.
[46] United Nations, *Millennium Development Goals Background*, 2013.
[47] United Nations, *Millennium Development Goals Background,* 2013.
[48] UN General Assembly, 2005 *World Summit Outcome (A/RES/60/1),* 2005.
[49] UN General Assembly, *2005 World Summit Outcome (A/RES/60/1),* 2005.
[50] United Nations, *Millennium Development Goals* [Website].
[51] UN General Assembly, *Keeping the promise: united to achieve the Millennium Development Goals*, 2010.
[52] UNDP, *2013 Global MDG Conference – Making the MDGs Work*, 2013.
[53] UNDP, *2013 Global MDG Conference – Making the MDGs Work*, 2013.

2020 significantly improve the lives of at least 100 million slum dwellers.[54] The latter two targets have already been reached ahead of schedule.[55] About 200 million slum dwellers have received significant improvements in quality of life, including safe drinking water, sanitation, and more durable housing.[56] The population without safe drinking water and basic sanitation was halved between 1990 and 2010, but people still remain without improved drinking water and sanitation, especially in sub-Saharan Africa.[57] Biodiversity loss continues despite the increase in protected areas and deforestation still happens at a high rate.[58] Country policies and programs seem to be moving in the desired direction by implementing principles of sustainable development, largely thanks to Rio +20.

Our Common Future

The report, *Our Common Future*, was published in 1987 by the World Commission on Environment and Development, which was established by the General Assembly pursuant to resolution 38/161 upon the suggestion by the UNEP Governing Council.[59] Chapter 2 of *Our Common Future* is titled "Towards Sustainable Development" and focuses on the necessity of growth, and how that interacts with ecological concerns.[60] The report states that the quality of growth should change by looking at ecological capital, where, for example, the degradation of forest would be a loss of capital for the timber industry when they overcut.[61] The report urges the international community to consider inter-sectoral linkages as opposed to each industry in isolation.[62] In the end, the report finds that sustainable development requires effective political, economic, social, production, technological, international, and administrative systems. [63]

United Nations Conference on Sustainable Development (Rio +20)

In 1992, the UN Conference on Environment and Development (UNCED) took place in Rio de Janeiro.[64] Out of the conference came Agenda 21, the Rio Declaration on Environment and Development, and the statement of principles for the Sustainable Management of Forests as well as the Commission on Sustainable Development (CSD).[65] Ten years later, the effort was continued at the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, which was dedicated to the full implementation of Agenda 21.[66] Celebrating the twentieth anniversary of UNCED, the Rio +20 Conference took place in Rio de Janeiro in June of 2012.[67]

The Outcome Document of UNCSD is entitled, *The future we want* (A/[68] The common vision of the attendees of the conference is largely set on poverty eradication as a major step in development along with sustainability.[69] Those in attendance also recognize the importance of peace and security, human

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[54] United Nations, *Goal 7: Ensure Environmental Sustainability* [Website].
[55] United Nations, *Goal 7: Ensure Environmental Sustainability* [Website].
[56] United Nations, *Goal 7: Ensure Environmental Sustainability* [Website].
[57] United Nations, *Goal 7: Ensure Environmental Sustainability* [Website].
[58] United Nations, *Goal 7: Ensure Environmental Sustainability* [Website].
[59] UNEP, *Sustainable Development Conferences* [Website].
[60] UN GA, *Report of the World Commission on Environment and Development: "Our Common Future" (A/42/427)*, 1987, Ch. 2.
[61] UN GA, *Report of the World Commission on Environment and Development: "Our Common Future" (A/42/427)*, 1987, Ch. 2.
[62] UN GA, *Report of the World Commission on Environment and Development: "Our Common Future" (A/42/427)*, 1987, Ch. 2.
[63] UN GA, *Report of the World Commission on Environment and Development: "Our Common Future" (A/42/427)*, 1987, Ch. 2.
[64] UN DESA, *Sustainable Development Knowledge Platform: Agenda 21, UNCED* [Website].
[65] UN DESA, *Sustainable Development Knowledge Platform: Agenda 21, UNCED* [Website].
[66] UN DESA, *Sustainable Development Knowledge Platform: Agenda 21, UNCED* [Website].
[67] UN DESA, *Conference on Sustainable Development: About the Rio +20 Conference*, 2011 [Website].
[68] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16)*, 2012, p. 1.
[69] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16)*, 2012, p. 1.

rights and rule of law.[70] The states document their commitment to working together and urgently to achieve sustainable development.[71] The document also reaffirmed many of the major steps in sustainable development such as the MDGs and the Rio Principles.[72]

One of the principles discussed at Rio +20 was the idea of the "green economy."[73] Several models and methods exist for the creation of a green economy, but it is considered a significant step in sustainable development by eradicating poverty as well as enhancing the ability to manage natural resources.[74] Those present at Rio +20 described a green economy as being consistent with international law, enabling political institutions, and fostering economic growth by innovation.[75] Otherwise, the properties of a green economy are left to the imagination of each individual state in attempting to implement a green economy policy.[76]

Sustainable development is seen as having three dimensions: economic, social, and environmental.[77] The institutional framework for implementation reflects these three dimensions by looking to organizations on the global, regional, national and local levels.[78] As far as the environmental dimension, the leaders from Rio +20 found it necessary to strengthen environmental governance and, therefore, made changes to UNEP and stressed the contribution of multilateral environmental agreements.[79]

Role of the UN System

Many bodies in the UN system are currently working towards the post-2015 agenda in their own specialized ways. These groups produce the results for the MDGs and will also be major contributors in the post-2015 goals.

United Nations Environmental Programme

UNEP is the most active body and the leading authority in the topic of environment and development. In addition to hosting the UN Conference on Sustainable Development in 1992 and 2012 and World Summit (2002), it adopted the World Conservation Strategy in 1980, which popularized the concept of sustainable development.[80] UNEP is also responsible for the creation of the World Commission on Environment and Development, which produced *Our Common Future.* Along with hosting conferences and summits related to sustainable development, UNEP makes disseminates information about the global environment, coordinates action on environmental issues, and assists countries and regional organizations.[81] Essentially, UNEP is the main source of environmental governance, keeping countries headed in the direction of environmental sustainability and the motto is "environment for development."[82]

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[70] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 2.
[71] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 3
[72] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 3.
[73] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 10.
[74] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 10.
[75] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 11.
[76] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 13.
[77] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 14.
[78] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 15.
[79] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 15.
[80] United Nations Environment Programme, *Sustainable Development Conferences* [Website].
[81] United Nations Environment Programme, *What UNEP Does* [Website], 2012.
[82] United Nations Environment Programme, *UNEP* [Website], 2013.

United Nations Framework Convention on Climate Change

The *United Nations Framework Convention on Climate Change* (UNFCCC) (1992) is the global response to climate change and is responsible for the *Kyoto Protocol* (1992), which urges countries to reduce carbon emissions by 2020.[83] Article 12 of the *Kyoto Protocol* (1992) established the Clean Development Mechanism (CDM) where developed countries can earn emission reduction credits by sponsoring emission reduction projects in the developing world. [84] The CDM has produced more than 1,650 projects to accomplish two objectives: sustainable development and emissions reduction.[85] Christopher Sutter and Juan Carlos Parreño argue in 2006 that typically these projects fail to accomplish both objectives, but more typically do accomplish one or the other.[86]

United Nations Development Group

The UN Development Group (UNDG), established in 1997 by the Secretary-General, is a group of UN agencies that coordinates the UN development efforts and agenda.[87] The strategic priorities for UNDG from 2013 to 2016 are MDG/Internationally Agreed Development Goals (IADG) Achievement, Post-2015 Agenda, Crisis/Post-Crisis Transition, and National Capacity Development and Development Effectiveness.[88] The UNDG has documented the progress of the MDGs and has also begun to synthesize the results of consultations with various groups on what should be included in the post-2015 agenda.[89] It has put together what it calls the Global Conversation on the Post-2015 Development Agenda.[90] A major theme of the conversation is the importance of the MDGs; the MDGs are seen as the standard for development and will likely continue to be that standard post-2015.[91] States are also looking for a broader array of goals to reflect strengthened public accountability, equity, human rights and the changes that have occurred since 2000.[92] The UNDG also reports on a new perception of the environment in development; growth-led models of development are no longer the standard and people are taking into consideration environmental degradation and inequalities into the development model.[93] As one of the ways to widen the agenda, people are also widely asking for more emphasis on environmental sustainability, specifically regarding natural resource scarcity, disaster risk reduction, climate change, waste reduction and government accountability.[94]

UN System Task Team on the Post-2015 United Nations Development Agenda

The United Nations Task Team on the Post-2015 UN Development Agenda (UNTT) was established by the Secretary-General and consists of over 60 organizations and UN entities.[95] In May 2012, the UNTT

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[83] UNFCCC, *Background on the UNFCCC: The international response to climate change* [Website], 2013.
[84] UNFCCC, *Clean Development Mechanism (CDM)* [Website], 2013.
[85] UNFCCC, *Clean Development Mechanism (CDM)* [Website], 2013.
[86] Sutter & Parreno, *Does the current Clean Development Mechanism (CDM) deliver its sustainable development claim? An Analysis of officially registered CDM projects*, 2007, p. 75.
[87] UNDG, *About the UNDG* [Website].
[88] UNDG, *UNDG Strategic Priorities for 2013-2016*, 2013, p. 2.
[89] UNDG, *The Global Conversation Begins: Emerging Views for a New Development Agenda*, 2013, p. 1.
[90] UNDG, *The Global Conversation Begins: Emerging Views for a New Development Agenda*, 2013, p. 1.
[91] UNDG, *The Global Conversation Begins: Emerging Views for a New Development Agenda*, 2013, p. 11.
[92] UNDG, *The Global Conversation Begins: Emerging Views for a New Development Agenda*, 2013, p. 20.
[93] UNDG, *The Global Conversation Begins: Emerging Views for a New Development Agenda*, 2013, p. 32.
[94] UN Development Group, *The Global Conversation Begins: Emerging Views for a New Development Agenda*, 2013, p. 32.
[95] UN DESA, *Preparing for the Development Agenda beyond 2015*, n.d.

released a report to the Secretary-General titled *Realizing the Future We Want for All.*[96] The report states that it is still too early to define concrete goals and targets, but Rio +20 provides some insights for the framework.[97] It also gives trends that the agenda should respond to, vision, and suggestions for how to shape the agenda.[98] The UNTT also identifies environmental sustainability as an important challenge to which the post-2015 agenda should respond.[99]

Key Issues

The following section discusses key issues that are likely to be within the post-2015 development framework based on their inclusion in the MDGs or the discussions of the UN Task Team. These issues are directly related to development because they disproportionately affect those that are in most need of development. Though this list is not comprehensive, it is meant to provide some perspective on some of the development indicators that UNEP can approach when discussing the implementation of the new development goals.

Biodiversity

Biodiversity is an important aspect of managing ecosystems.[100] Keeping species alive keeps the food web in check and ensures that an ecosystem can provide services to humans.[101] Some effort has been made to protect areas under the first target of MDG 7, but this has done little to reduce biodiversity loss.[102] Biodiversity refers to genetic differences among organisms, whether or not of the same species.[103] In agriculture, biodiversity is lost when clones of the same organism are used in planting;[104] Losses in biodiversity typically affect the rural poor most because the rural poor benefit most from the regulation of environmental conditions that special ecosystems perform.[105] Those people would benefit economically from preservation of biodiversity.[106] Biodiversity is likely to be included in the post-2015 development agenda because of the benefits it has for the rural poor, but current programs are proving unsuccessful.[107] Reworking or creating new, more successful biodiversity programs would be something UNEP can do to implement a biodiversity goal.

Climate Change

Climate change has become one of the most prominent issues related to the environment.[108] With the adoption of the Kyoto Protocol, states have been working to reduce climate change caused by emissions.[109] Climate change presents a challenge to development because it is suspected to cause natural disasters and land degradation like desertification.[110] Desertification, land degradation and drought affect

[96] UN DESA, *Preparing for the Development Agenda beyond 2015*, n.d.

[97] UN Task Team,, *Realizing the Future We Want for All: Report to the Secretary-General*, 2012, p. 1.

[98] UN Task Team,, *Realizing the Future We Want for All: Report to the Secretary-General*, 2012, p. 11.

[99] UN Task Team,, *Realizing the Future We Want for All: Report to the Secretary-General*, 2012, p. 16.

[100] United Nations Environment Programme, *Chapter 5: Biodiversity*, 2007, p. 162.

[101] United Nations Environment Programme, *Chapter 5: Biodiversity*, 2007, p. 162.

[102] United Nations Environment Programme, *Chapter 5: Biodiversity*, 2007, p. 164.

[103] United Nations Environment Programme, *Chapter 5: Biodiversity*, 2007, p. 165.

[104] United Nations Environment Programme, *Chapter 5: Biodiversity*, 2007, p. 167.

[105] United Nations Environment Programme, *Chapter 5: Biodiversity*, 2007, p. 173.

[106] United Nations Environment Programme, *Chapter 5: Biodiversity*, 2007, p. 173.

[107] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16)*, 2012, p. 38.

[108] UNFCCC, *Background on the UNFCCC: The international response to climate change*, 2013.

[109] UNFCCC, *Background on the UNFCCC: The international response to climate change*, 2013.

[110] United Nations Environment Programme, *Coordinating global action to combat desertification*, 3 March 2011.

about a third of the world population, 90% of which are among the world's poor.[111] Developing countries also face the problem that development along the value added chain includes production processes that typically produce a lot of greenhouse gases, which makes it much harder for them to cut emissions.[112] UNEP partners frequently with the UNFCCC to steadily resolve issues of climate change and a goal combatting climate change would employ that partnership.[113] Like biodiversity, this issue requires a balance between the typical methods of development (i.e. factory production) and the notion of preventing climate change.

Natural Disasters

Natural disasters prevent development in a fairly obvious way: they destroy capital and threaten human security. Earthquakes, tsunamis, mudslides all destroy people's homes, farms, factories, etc. UNEP offers disaster risk reduction specifically to curb some of the destruction.[114] People, however, still consider natural disasters to be one of the largest barriers to development.[115] Preventing natural disasters is practically impossible; however, it is possible to prepare and mitigate their effects. The poor are disproportionately susceptible to the destruction because of their living conditions and inability to pay for either the preparation before a disaster or the rebuilding after the disaster.[116]

Human Rights and Security

Human rights and peace and security are included in the development agendas separately from the environment, but environmental sustainability is also a key to ensuring human rights and security.[117] All areas of development are inextricably linked together, and this is no exception. Scarcity of natural resources is a common reason for conflict, especially food scarcity.[118] Insecurity can also be caused by human rights violations like lack of safe drinking water, sanitation, or durable housing; all of which are consequences of living in slums.[119] Human rights and security goals can be implemented by UNEP by addressing environmental sources of conflict like natural resources and quality of life issues.

Conclusion

The MDGs have not only contributed to the advancement of human development worldwide, but they've also served as an effective stepping stone for a future development agenda. The goal has been to create development goals that have all three dimensions, social, economic and environmental, in mind. The world has also changed since 2000, requiring consideration in formulating an agenda after the MDGs. The duty that UNEP holds is to implement the post-2015 goals in the best way it can. Concerns for the environment are reflected both directly and indirectly in many parts of the new development agenda, leaving UNEP with almost endless possibilities in how they can approach them. This might require improving on current efforts, or proposing a creative solution that appeals to the goals in a different way. Either way, the time to make a concrete plan for implementation is now, so that it can all be set into motion in time for 2015.

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[111] United Nations Environment Programme, *Coordinating global action to combat desertification*, 3 March 2011.

[112] Kirby, *Least developed countries agree to cut greenhouse gas emissions*, 3 April 2013.

[113] United Nations Environment Programme, *Climate Change Partners*, 2013.

[114] United Nations Environment Programme, *Disasters and Conflicts Introduction*, 2013.

[115] UN Development Group, *The Global Conversation Begins: Emerging Views for a New Development Agenda,* 2013, p. 32.

[116] Center for the Study of Traumatic Stress, *Disasters and Poverty: Natural Disasters Disproportionately Affect the World's Poor.*

[117] United Nations, *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16),* 2012, p. 2.

[118] Brinkman and Hendrix, *Food Insecurity and Violent Conflict: Causes, Consequences, and Addressing the Challenges*, p. 2.

[119] UN Development Group, *Thematic Paper on MDG 7: Environmental Sustainability*, p. 26.

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Panayotou, J. (1994, December). *Economic Instruments for Environmental Management and Sustainable Development.* International Environment Program Harvard Institute for International Development Harvard University.

> *Written as an article for UNEP, this document goes into detail on the dichotomy between the environment and economics. This paper will be very useful for the beginning section explaining that sometimes development comes at the expense of the environment. This also might lead to the correct combination of the two.*

Sutter, C. & J. Parreno. (2007) Does the current Clean Development Mechanism (CDM) deliver its sustainable development claim? An Analysis of officially registered CDM projects . *Climatic Change,* 84: 75-90.

> *The article addresses the Clean Development Mechanism and the current efforts to increase sustainable development in other countries. This article explains what the CDM is and gives an analysis of how successful it is. I will probably need to temper its arguments with other sources to make sure that it is not my only analysis source.*

United Nations. (2012, June). *Realizing the Future We Want for All: Report to the Secretary-General .* UN System Task Team on the Post-2015 UN Development Agenda. Retrieved 22 June 2013 from: http://www.un.org/millenniumgoals/pdf/Post_2015_UNTTreport.pdf

> *Similar to other documents for the UN Task Team, this document will inform the section on the Task Team as well as the ideals sections. The report emphasizes the need to have a format based in the MDGs while changing a lot about the current system. This document is far more detailed than the others as far as the post-2015 agenda is concerned, keeping in mind the vision, key considerations and proposed road map.*

United Nations. (2012, June 22). *Report of the United Nations Conference on Sustainable Development (A/CONF.216/16) .* Retrieved 22 June 2013 from: http://undocs.org/A/CONF.216/16

> *This is the outcome document of the Rio Meeting in 2012. Not only does it lay out the ideals of the conference, but also the organizational framework of the conference. Many of the important themes are covered in this document, bringing these topics to the attention of the delegates. This will definitely inform the Rio +20 section of the Background guide.*

Vandemoortele, J. (2012). *Advancing the global development agenda post-2015: some thoughts, ideas and practical suggestions .* Retrieved 22 June 2013 from: http://www.un.org/millenniumgoals/pdf/jan_vandemoortele_Aug.pdf

> *This article from the UN System Task Team on the Post-2015 UN Development Agenda describes the goals for development after 2015 as well as how the process should be designed and carried out by the UN system. It also suggests a role for the High Level Panel of Eminent Persons. Because it is written by a UN body, it contains a perspective that is useful for delegates, who are expected to take the advice of such bodies. This article will likely be used throughout, but mostly in the part about the UN Task Team.*

UN General Assembly. (2011). *Accelerating progress towards the Millennium Development Goals: options for sustained and inclusive growth and issues for advancing the United Nations development agenda beyond 2015 (A/67/257)* [Report]. Retrieved 18 July 2013, from: http://undocs.org/A/67/257

> *This report of the Secretary-General is a seminal document in post-2015 development; it is the first time the Secretary-General mentions the need to look past 2015. After this report, the Secretary-General created groups devoted to what the priorities for development would be after the time for the MDGs ran out. This is great for the introduction and even in the framework sections of the guide.*

Kogut. (1985). *Designing Global Strategies: Comparative and Competitive Value-Added Chains*. Retrieved 18 July 2013, from: http://sloanreview.mit.edu/article/designing-global-strategies-comparative-and-competitive-valueadded-chains/

> *To discuss environment and development, it is also important to discuss development, an important theory of which is the value added chain, where countries will move up a chain of specific industries on the path of development starting with labor and energy intensive industry and moving towards more advanced technology. This is also important in explaining why environmental concerns and economic concerns tend to be at odds with each other.*

United Nations. (n.d.). *Goal 7: Ensure Environmental Sustainability* [Website]. United Nations Gateway to the UN System's Work on the MDGs http://www.un.org/millenniumgoals/environ.shtml.

> *The MDG website has been a valuable tool in describing the MDGs and their role in the current development framework. The most applicable goal to the topic of environment and development is certainly goal 7, which is about environmental sustainability. This page summarizes the targets of the goal and what progress has or has not been made. Knowing what has not been accomplished is helpful in determining what needs to be addressed again in 2015.*

United Nations Environment Programme. (2007). *Global Environmental Outlook 4, Section B, Chapter 5: Biodiversity* [Report]. Retrieved 19 July 2013, from: http://www.unep.org/geo/geo4/report/05_Biodiversity.pdf

> *Biodiversity is an important theme for environmental sustainability; biodiversity loss remains a problem unresolved by the MDGs. Species are still dying off at a very high rate. This little lesson on biodiversity explains what it is why it is so important, and what its biggest threats are. Biodiversity is something that really should be included in the development framework after 2015, and this document makes that clear.*

Organization for Economic Cooperation and Development. (2011). *Towards Green Growth*. Retrieved 18 July 2013, from: http://www.oecd.org/greengrowth/48224539.pdf

> *Although this might be difficult to fit into the guide, it deserves some attention because it is an idea as to how a sustainable environmental policy and economic growth can work together. The OECD makes a suggestion as to how a country can build its economy in a way that will not harm the environment, which serves as a potential idea for a development framework.*

II. Strengthening International Cooperation on the Environmental Aspects of Emergency Response and Preparedness in Humanitarian Response

Introduction

An emergency can be defined as "an extraordinary situation, or present or imminent, in which there are serious and immediate threats to human life, dignity and livelihoods."[120] An emergency is addressed over the course of several broad phases, which overlap and reinforce each other, with response and preparedness particularly important in the context of emergencies requiring a humanitarian response.[121] Over the past two decades, more than two billion people have been directly impacted by natural hazards (often used interchangeably with disasters) and major conflicts.[122] These events have a catastrophic impact on not only lives and infrastructure, but they also "fundamentally undermine human security and tear apart the fabric of sustainable development."[123] In 2012 alone, more than 110 million people were impacted by cyclones, floods, droughts, earthquakes and conflict amounting to a cost over \$8.78 billion in humanitarian assistance.[124] The increase in frequency and severity of these disasters "have serious impacts on lives, livelihoods and the environment," causing environmental emergencies in addition to all the other impacts.[125]

According to the United Nations Environment Programme (UNEP), environmental emergencies are defined as:

> "Sudden-onset disasters or accidents resulting from natural, technological or human-induced factors, or a combination of these, that causes or threatens to cause severe environmental damage as well as loss of human lives and property. The term includes secondary consequences from natural hazards such as earthquakes, storms, floods, tsunamis, wild land fires, landslides and/or man-made disasters such as industrial accidents, transport accidents, chemical spills, oil spills and a multitude of other types of emergencies."[126]

To expand upon this definition: there are three distinct ways that the environment is impacted by emergencies. The first is direct impact, which physically damages the natural environment, such as in Afghanistan, where the destruction of thousands of acres of forest over the course of decades of conflict has caused irreparable damage.[127] The second type of impact is secondary impact, which includes impact on human infrastructure, such as buildings, dams, and infrastructure.[128] Examples of a secondary emergency includes in 1999, the conflict in Kosovo which caused chemical contamination at multiple

[120] Catholic Relief Services, *Emergency Preparedness & Response Handbook*, 2002.

[121] Catholic Relief Services, *Emergency Preparedness & Response Handbook*, 2002, p. 24.

[122] IPCC, *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change*, 2012; UNISDR, *Environment and disaster risk: emerging perspectives*, 2007.

[123] UNEP, *Disasters and Conflicts Sub-programme*, 2012.

[124] OCHA, *Year in Review* [Website], 2013.

[125] Wilton Park, *Environmental emergencies: strengthening the multilateral humanitarian and environmental response*, 2011; UN GA, *International cooperation on humanitarian assistance in the field of natural disasters, from relief to development: Report of the Secretary-General (A/67/363)*, 2012.

[126] UN JEU, *Keeping up with Megatrends: The Implications of Climate Change and Urbanization for Environmental Emergency Preparedness and Response*, 2012; UNEP, *Further Improvement of Environmental Emergency Prevention, Preparedness, Assessment, Response and Mitigation: Note by the Executive Director (UNEP/GC.22/INF/5)*, 2003.

[127] UN JEU, *Humanitarian Action and the Environment: Essential Guidance for Humanitarian Actors*, 2009.

[128] UN JEU, *Humanitarian Action and the Environment: Essential Guidance for Humanitarian Actors*, 2009.

industrial hot spots, threatening health.[129] The third type of impact is from the relief and recovery operations themselves, examples of which include in Bosnia and Herzegovina, where the humanitarian aid included over 17,000 tons of "expired drugs and medical supplies," which are now having to be disposed via an "incinerator," in order to properly remove in an environmentally sound manner.[130]

Capacity at local and national levels to "respond appropriately to environmental emergencies – such as chemical and oil spills, earthquakes, floods and forest fires – are often overstretched, particularly in the poorest and most vulnerable nations, which are disproportionately affected by disasters, as they often have insufficient resources to invest in appropriate preparedness measures."[131] As a result, bilateral and multilateral support from the international community is often sought. At an international and multilateral level, he Joint UNEP/OCHA Environment Section, a partnership between the UN Environment Programme (UNEP) and the UN Office for the Coordination of Humanitarian Affairs (OCHA), "acts as the focal point for the coordination and mobilization of international assistance."[132] Further, UNEP is the "focal point for the cross-cutting issue of environment within the humanitarian response system, as part of the Inter-Agency Standing Committee (IASC) cluster approach," and also the lead on "environmental needs assessments as part of the inter-agency Post-Disaster and Post-Conflict Needs Assessment processes."[133]

This topic focuses on ways to strengthen international cooperation on two important and overlapping issues: the way in which countries prepare for and respond to the environmental dimensions of natural and man-made disasters and the environmental implications of humanitarian response efforts. Thus we are looking at not only the actual environmental emergency that can occur in the aftermath of a natural or man-made disaster, but also the risk to the environment that the broader humanitarian response can cause.

International Framework

The framework of international agreements, declarations and conventions which drive this topic draw from both humanitarian assistance and environment-focused scholarship. Importantly, on this topic, there isn't one integrated framework for international action, which is in itself a challenge moving forward for the international community.

Although a wide range of international and regional bodies work on this topic, the United Nations General Assembly has adopted several resolutions that are of importance on this topic as they serve as a guiding framework on each issue and also represent a turning point for the international community.

The first was adopted in 1991 and focuses on humanitarian assistance. General Assembly resolution 46/182 on "Strengthening the coordination of humanitarian emergency assistance of the United Nations," created a framework and set of principles for humanitarian assistance, representing "a fundamental

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[129] UN JEU, *Humanitarian Action and the Environment: Essential Guidance for Humanitarian Actors*, 2009.
[130] UN JEU, *Humanitarian Action and the Environment: Essential Guidance for Humanitarian Actors*, 2009, p. 5.
[131] UN JEU, *Implementing the UNEP Governing Council Decision on Strengthening International Cooperation on the Environmental Aspects of Emergency Response and Preparedness: Information Note (EU/AG/63)*, 2011.
[132] UN JEU, *Implementing the UNEP Governing Council Decision on Strengthening International Cooperation on the Environmental Aspects of Emergency Response and Preparedness: Information Note (EU/AG/63)*, 2011.
[133] UN JEU, *Implementing the UNEP Governing Council Decision on Strengthening International Cooperation on the Environmental Aspects of Emergency Response and Preparedness: Information Note (EU/AG/63)*, 2011.

turning point for the humanitarian community."[134] The resolution established the Inter-Agency Standing Committee (IASC) in collaboration with the United Nations Disaster Relief Coordinator and the Central Emergency Relief Fund (CERF) under the office of the United Nations Secretary-General.[135] It also provides a policy guide for natural disaster prevention, preparedness, and leadership between United Nations entities, governments and other international organizations.[136] This resolution, among other things, laid out the role of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) as the lead entity which coordinates "inter-agency response to natural disasters and other emergencies."[137]

The second important resolution, General Assembly resolution 44/224, adopted in 1989, is focused on environmental emergencies. The resolution was borne out of an increased awareness generated in the 1980's regarding the need to establish an "intervention mechanism in the case of emergencies likely to have serious consequences for the environment."[138] The resolution "recognizes the need for strengthened international cooperation for monitoring, assessing, and anticipating environmental threats," encompassing all "potential environmental disasters, whether natural, accidental or caused by human beings."[139] This served as a basis for UNEP's continued exploration of this topic and efforts to improve "the capacity of the United Nations system to respond to such emergencies."[140] This resolution helped launch the "International Decade for Natural Disaster Reduction," which was called for in General Assembly resolution 44/236; laying the groundwork for concerted, international attention on this topic.[141]

Looking at the environmental aspect of humanitarian response, the *Malmö Ministerial Declaration* (2000), the *Hyogo Declaration*, the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*, the outcome documents from past World Conferences on Disaster Reduction all are relevant to this topic and provide a foundational moving forward.[142] These documents can provide reference for the broader context of the way in which policies thus far have been drafted, and illuminate opportunities for ongoing codification and clarification as to the legal and operational aspects of addressing environmental emergencies.

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[134] UN GA, *Strengthening of the coordination of humanitarian emergency assistance of the United Nations (A/RES/46/182)*, 1991; Fiscale, *The coordination of actors intervening in crisis following natural disasters: the issues arising in the emergency-development transition: The case of Haiti*, 2012.

[135] UN GA, *Strengthening of the coordination of humanitarian emergency assistance of the United Nations (A/RES/46/182)*, 1991.

[136] UN GA, *Strengthening of the coordination of humanitarian emergency assistance of the United Nations (A/RES/46/182)*, 1991.

[137] UN GA, *Strengthening of the coordination of humanitarian emergency assistance of the United Nations (A/RES/46/182)*, 1991; Nijenhuis and Bruch, *Brief 6: Environmental Emergencies: Challenges and Lessons for International Environmental Governance*, 2012.

[138] Council of Europe, *International Organizations and Major Hazard Management (AP/CAT (2003))*, 2003, p. 17.

[139] UN GA, *International co-operation in the monitoring, assessment and anticipation of environmental threats and in assistance in cases of environmental emergency (A/RES/44/224)*, 1989; Nijenhuis & Bruch, *Brief 6: Environmental Emergencies: Challenges and Lessons for International Environmental Governance*, 2012; Merani, *The International Decade for Natural Disaster Reduction,* 1991, p. 36.

[140] Council of Europe, *International Organizations and Major Hazard Management (AP/CAT (2003))*, 2003, p. 17.

[141] Merani, N. *The International Decade for Natural Disaster Reduction,* 1991.

[142] Global Ministerial Environment Forum, *Malmö Ministerial Declaration*, 31 May 2000; UN JEU, *Humanitarian Action and the Environment: Essential Guidance for Humanitarian Actors*, 2009, p. 24; UNEP, *Report of the twenty-second session of the Governing Council/Global Ministerial Environment Forum, 3-7 February 2003*, 2003; IFRC, *Code of Conduct for the ICRC Movement and NGOs in Disaster Relief*, 1994; WCDR, *Hyogo Declaration*, 2005; WCDR, *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*, 2005.

Additional standards, guidelines and tools for actors on this issue include: the *Sphere Humanitarian Charter and Minimum Standards in Disaster Response* (2004), *Environmental Guidelines for Refugee Operations* (2005), *Handbook on the Safe Management of Wastes from Health-Care Activities* (1999), *Framework for Assessing, Monitoring and Evaluating the Environment in Refugee-Related Operations* (2005), *Rapid Environmental Impact Assessment in Disaster Response* (2005), the *Flash Environmental Assessment Tool (FEAT)* (2007), and the *UNEP Environmental needs assessment for early recovery* (2007).[143] Finally, the *Code of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Relief*, endorsed by more than 400 civil society organizations (also referred to as non-governmental organizations), articulates that they will "pay particular attention to environmental concerns in the design and management of relief programmes."[144]

UN System and Regional Engagement

Committees

The United Nations General Assembly addresses issues related to this topic under its Agenda item 70 entitled "Strengthening of the coordination of humanitarian and disaster relief assistance of the United Nations, including special economic assistance: strengthening of the coordination of emergency humanitarian assistance of the United Nations."[145] Within this topic, the General Assembly adopts resolutions on issues ranging from humanitarian personnel safety and security; coordination between development and humanitarian relief; and coordination of emergency humanitarian assistance.[146] Further, the General Assembly receives annual reports along with the Economic and Social Council pursuant to resolutions 46/182, 67/87, and 67/231 on all three primary sub-topics.[147]

The United Nations Economic and Social Council addresses humanitarian coordination on an annual basis, and of relevance has regularly addressed natural disasters under the topic "Special economic, humanitarian and disaster relief assistance," with a specific focus on "strengthening coordination of emergency humanitarian assistance of the United Nations."[148] Further, every year, ECOSOC has a segment of its annual session entirely focused on humanitarian affairs. The most recent segment had as its focus, "The future of humanitarian affairs: towards greater inclusiveness, coordination, interoperability and effectiveness."[149] The segment provides a "platform for discussing the activities and issues related to strengthening the coordination of the humanitarian assistance of the United Nations," which in turn "enables Member States to engage with the UN and non-UN humanitarian and development community,

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[143] Sphere Project, *Humanitarian Charter and Minimum Standards in Disaster Response*, 2004; UNHCR, *Environmental Guidelines for Refugee Operations*, 2005; WHO, *Handbook on the Safe Management of Wastes from Health-Care Activities*, 1999; UNHCR, *Framework for Assessing, Monitoring and Evaluating the Environment in Refugee-Related Operations*, 2005; Benfield Hazard Research Centre, et. al., *Rapid Environmental Impact Assessment in Disaster Response*, 2005; UN JEU, *Flash Environmental Assessment Tool*, 2007; UNEP, *UNEP Environmental needs assessment for early recovery*, 2007.

[144] Barrett, *Mainstreaming the Environment into Humanitarian Response: An Exploration of Opportunities and Issues*, 2007, p. 1.

[145] IFRC, *Code of Conduct for the ICRC Movement and NGOs in Disaster Relief*, 1994.

[146] UN GA, *Safety and security of humanitarian personnel and protection of United Nations personnel (A/RES/67/85)* [Resolution], 2012; UN GA, *Participation of volunteers in the activities of the United Nations in the field of humanitarian relief, rehabilitation and technical cooperation for development (A/RES/67/84)* [Resolution], 2013.

[147] UN GA, *Strengthening of the coordination of emergency humanitarian assistance of the United Nations: Report of the Secretary-General (A/68/84)*, 2013; UN GA, *International cooperation on humanitarian assistance in the field of natural disasters, from relief to development: Report of the Secretary-General (A/68/89)*, 2013.

[148] UN Economic and Social Council, *Proposed basic programme of work of the Council for 2013 and 2014: Note by the Secretary-General (E/2013/1)*, 21 December 2012.

[149] UN Economic and Social Council, *Humanitarian Affairs Segment* [Website], 2013.

the private sector, affected people and other actors from a range of geographic groups on current humanitarian challenges."[150] The report of the Secretary-General, prepared by OCHA, which was used as the basis for discussions in 2013 articulates that environmental hazard management that addresses technological and industrial hazards is an essential part of disaster risk reduction and thus fundamental to the "resilience" approach which is widely used within the humanitarian community.[151]

Specialized Agencies, Programmes and Funds

The United Nations Environment Programme and the United Nations Office for the Coordination of Humanitarian Affairs are the primary entities within the UN system which address this issue in terms of programming and policy norm setting.

The United Nations Environment Programme has addressed this topic on a policy and programmatic level. In terms of policy, the Governing Council of the UNEP has adopted several resolutions under the subject heading "Strengthening international cooperation on the environmental aspects of emergency response and preparedness," including resolution 26/15 on 24 February 2011, and resolutions 21/17 of 9 February 2001 and 22/8 of 7 February 2003. The 2001 UNEP *Strategic Framework on Emergency Prevention, Preparedness, Assessment, Mitigation and Response* is part of the overall long and medium-term response to environmental emergencies, helping to frame UNEP's activities and provide guidance which is preventative.[152] The framework lays out the following goals: to "reinforce the importance of environmental concerns in emergency prevention, preparedness, assessment, mitigation and response," as well as to "integrate environmental concerns" into humanitarian and development processes, and "bring to the attention of the United Nations and its partners and national governments the transnational and global environmental aspects of emergencies."[153]

On this topic, the primary actors involved in humanitarian affairs, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) and UNEP work in partnership to prevent and manage the environmental aspects of humanitarian response through the Joint UNEP / OCHA Environment Unit (JEU).[154] The JEU is particularly active during the emergency phase of a response, with the UNEP Post-Conflict and Disaster Management Branch.[155]

The JEU, located within the OCHA Emergency Services Branch, is the mechanism that mobilizes to "coordinate emergency assistance to countries affected by environmental emergencies and natural disasters with significant environmental impact."[156] Established in 1993 following the adoption of United Nations General Assembly resolution 44/224 several years prior, the JEU is described as a combination of "UNEP's technical expertise" and "OCHA's strong humanitarian response coordination structure," which allows an "integrated approach in responding to environmental emergencies," which can result from a natural disaster, conflict, or technological and industrial accident.[157] The JEU provides direct support to

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[150] UN Economic and Social Council, *Humanitarian Affairs Segment* [Website], 2013.

[151] UN GA, *Strengthening of the coordination of emergency humanitarian assistance of the United Nations: Report of the Secretary-General (A/68/84),* 2013.

[152] UNEP, *Environmental Management and Disaster Preparedness: Building a multi-stakeholder partnership,* 2005.

[153] UNEP, *Environmental Management and Disaster Preparedness: Building a multi-stakeholder partnership,* 2005.

[154] UN OCHA, *Environmental Emergencies* [Website].

[155] UNEP, *Environmental Management and Disaster Preparedness: Building a multi-stakeholder partnership,* 2005.

[156] UN OCHA, *Environmental Emergencies* [Website]; UN Joint UNEP/OCHA Environment Unit, *Guidelines for Environmental Emergencies*, Vol. 1, 2009, p. 4.

[157] UN JEU, *Guidelines for Environmental Emergencies*, Vol. 1, 2009, p. 4.

Member States by "coordinating international efforts and mobilizing partners to aid affected countries requesting assistance."[158]

One of the JEU's functions is to serve as the secretariat to the International Advisory Group on Environmental Emergencies (AGEE), which is a forum held every two years comprised of policy makers and experts from governments, academic institutions, industry and civil society, that aims to "improve prevention, preparedness, response and overall resilience to environmental emergencies."[159] In 2013, the AGEE had its 10th meeting, attended by over 120 participants.[160]

Regional

On a regional level, there are multiple organizations engaged on this topic, with regional entities in the Asia-Pacific region setting the standard for coordination and cooperation, particularly following the earthquake and tsunami of 26 December 2004. The Association of Southeast Asian Nations (ASEAN), for example, adopted the *Agreement on Disaster Management and Emergency Response* to provide a "framework for the development of operational procedures to respond collectively and expeditiously to disasters."[161] Similarly, the Asia Pacific Economic Cooperation Ministerial Meeting in 1997 led to the adoption of the *APEC Framework for Capacity Building Initiatives on Emergency Preparedness*.[162] Additional relevant entities include the Centre for Risk Management of Natural Disasters established by the Economic Cooperation Organization in 2006; and the Pacific Islands Forum Regional Natural Disaster Relief Fund.

In Africa, the Economic Community of West African States (ECOWAS) has been the primary channel for "communicating the importance of greater preparedness for environmental emergencies in the West African region, and advocating formal policy development and implementation in this area."[163] The Regional Committee for Disaster Management in West Africa (GECEAO) is managed by ECOWAS and focuses on strengthening coordination within the region.[164] Additional regional organizations active include African Union and the New Partnership for Africa's Development (NEPAD) and the *Africa Regional Strategy for Disaster Risk Reduction* (2004); the Southern African Development Community (SADC) and a comprehensive disaster management strategy.

In Latin America and the Caribbean, the relevant organizations and policy frameworks include the Organization of American States (OAS) and the *Inter-American Convention to Facilitate Disaster Assistance* (1991); the *Agreement Establishing the Caribbean Disaster Emergency Response Agency* (CDERA) (1991); the Coordination Centre for Natural Disaster Prevention in Central America (CEPRE-DENAC).[165] Further guidance can be found in the *Agreement between Member States and Associate*

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[158] UN JEU, *Joint UNEP/OCHA Environment Unit: Preparedness, Response & Environment in Humanitarian Action* [Note], 2013; UN JEU, *Environmental Emergencies Section (EES)* [Note], 2013.

[159] UN JEU, *Environmental Emergencies: Events [Website]*.

[160] UN Environmental Emergencies Centre, *Advisory Group on Environmental Emergencies Forum starts today* [Article], 2013.

[161] UN Environmental Emergencies Centre, *Global Community* [Website], 2013; ASEAN, *Agreement on Disaster Management and Emergency Response*, 2005.

[162] IFRC, *Law and legal issues in international disaster response: a desk study*, 2007.

[163] UN Environmental Emergencies Centre, *Global Community* [Website], 2013.

[164] Panapress, *West Africa: ECOWAS emergency disaster management meeting,* 2013; Jimoh, *NEMA DG elected president, ECOWAS committee on disaster management*, 20 June 2013.

[165] OAS, *Inter-American Convention to Facilitate Disaster Assistance*, 1991; CARICOM, *Agreement Establishing the Caribbean Disaster Emergency Response Agency*, 1991; SICA, *Coordination Centre for Natural Disaster Prevention in Central America (CEPRE-DENAC)*.

Members of the Association of Caribbean States for Regional Cooperation on Natural Disasters (1999); and the Andean Committee for the Prevention and Response to Disasters (CAPRADE).[166]

International support for capacity-building and awareness raising

Capacity-building and awareness raising are important components of addressing this issue – and a central area of focus for the international community. There are several different opportunities for international cooperation: local capacity building; strengthening regional systems; conducting training; and institutionalizing technical assistance and capacity-building.[167]

There is a concerted effort within the international community to strengthen regional systems for responding to environmental emergencies in order to better respond to emergencies should they occur. There are several approaches to doing this, some of which has been taken on by the JEU and called for by the UNEP Governing Council, including creating "a more robust and sustainable network" of "readily-available pool of diverse
experts; equipment to support operations; and excellent bilateral and multilateral cooperation."[168] This is complemented by ongoing calls to create "a worldwide donor network that is more equitable and more distributed (decentralised)," and in addition efforts to partner with a range of organizations across academia, civil society and the private sector.[169] One major policy gap, in line with this is a lack of formalization – the UN can provide formal organization and coordination for regional efforts to address environmental emergencies and this is one area which UNEP can have an important and long lasting influence.[170]

The second area of action includes conducting training and raising awareness, which has the has the overall goal of increasing the awareness of "stakeholders and encourage their engagement in environmental emergency preparedness and response through increased communication and advocacy activities."[171] Examples of efforts which can be scaled up and reinforced by UNEP include the successful "Green Star Awards" which is a "peer recognition forum to increase awareness," and "raise the profile of environmental emergencies, and to underline the connection between environmental impacts of natural disasters, technological accidents and complex emergencies, and their consequences for affected populations and providers of humanitarian assistance."[172] Other opportunities for action on this include supporting and scaling up training on managing and addressing environmental emergencies, as has been carried out by JEU over the past several years.[173]

The final area of activity on this sub-topic and a gap in current efforts is the instutionalization of technical assistance and capacity-building through the creation, codification and promotion of guidance materials and training. Examples of past activities in this regard include: the Hazard Identification Tool (HIT); the Flash Environmental Assessment Tool (FEAT); and the Environmental Assessment Module (EAM).[174]

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[166] ACS, *Agreement between Member States and Associate Members of the Association of Caribbean States for Regional Cooperation on Natural Disasters,* 1999; Andean Community, *Andean Committee for the Prevention and Response to Disasters (CAPRADE).*
[167] Nightingale, *Building the future of humanitarian aid: Local capacity and partnerships in emergency assistance*, 2012.
[168] UN JEU, *Regional Approaches: Note by the Secretariat (EU/AG/64)*, 2011, p. 2.
[169] UN JEU, *Regional Approaches: Note by the Secretariat (EU/AG/64)*, 2011, p. 2.
[170] UN JEU, *Regional Approaches: Note by the Secretariat (EU/AG/64)*, 2011, p. 2.
[171] UN JEU, *International Environmental Emergency Response: Major Activities 2007-2009,* 2009, p. 42.
[172] UN JEU, *International Environmental Emergency Response: Major Activities 2007-2009,* 2009, p. 43.
[173] UN JEU, *Advisory Group on Environmental Emergencies: Proposed Workplan: Note by the Secretariat,* 2011.
[174] UN JEU, *International Environmental Emergency Response: Major Activities 2007-2009,* 2009, p. 28.

Now that these tools have been created, the ongoing revision and updating is necessary as is the continued gathering of good practice – this presents an opportunity for future efforts as the collection of information on any topic as technical as this is essential in building capacity.[175] The role of UNEP in providing a space for the development of standard operating procedures and management plans is essential. Ideally, should such a plan be developed, it would include:

Emergency preparedness and contingency planning

Emergency preparedness has the goal of strengthening capacity at multiple levels – local, national and global – in order to minimize the impact of a crisis or conflict – on the population, both in terms of loss of life and livelihoods.[176] Activities encompassed in emergency preparedness are ones that aim to "protect lives and property from an immediate threat, to promote rapid reaction in the immediate aftermath of a disaster, and to structure the response to both the emergency and longer-term recovery operations."[177] An emergency preparedness plan – regardless if focused on the environment or not – must have the following elements: political resolve and support; defined partner agencies and partnerships; strong legal framework; mechanisms for rapid decision-making; resources (financial, human and material); internal management mechanisms; and defined contingency plans.[178]

Some of the key gaps and challenges in this area remain a lack of coordination and capacity at a local and national level in terms of how best to develop such a plan, but also, on an operational level – response plans often fail to provide for proper notification procedures, "ambiguous ownership" of environmental emergency management, and lack of clear responsibilities and overarching governance.[179] While these issues all are central to an effective response – these questions must be answered first in any emergency plan in order to ensure its comprehensiveness and effectiveness when the time comes to implement it. This is an opportunity for delegates moving forward.

Mainstreaming the environment in humanitarian response

Relief and recovery operations undertaken as part of humanitarian response can have a negative impact on the environment, undermining the recovery process, and cause "additional loss of life, displacement, aid dependency and increased vulnerability."[180] Addressing the environmental element across all sectors of humanitarian response – or mainstreaming – is therefore critical in order to comprehensively address this issue both in the short term, but also in the long term, as part of sustainable development.[181]

International coordination of the emergency response process has led to the development of a "cluster approach" which divides up the work of humanitarian organizations, both UN and non-UN, into groups based around the main sectors of humanitarian action, as defined by the Inter-Agency Standing Committee (IASC).[182] At present, the clusters are as follows: health; food security; emergency

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[175] UN JEU, *Advisory Group on Environmental Emergencies: Proposed Workplan: Note by the Secretariat,* 2011.

[176] UN OCHA, Coordination to Save Lives: History and Emerging Challenges, 2012.

[177] Catholic Relief Services, *Emergency Preparedness & Response Handbook*, 2002, p. 36; UN OCHA, *Coordination to Save Lives: History and Emerging Challenges*, 2012.

[178] UN JEU, *Establishing a National Environmental Emergency Response Mechanism*, 2001; Catholic Relief Services, *Emergency Preparedness & Response Handbook*, 2002, p. 36.

[179] UN JEU, *Implementing the UNEP Governing Council Decision on Strengthening International Cooperation on the Environmental Aspects of Emergency Response and Preparedness: Information Note (EU/AG/63),* 2011.

[180] UNICEF, *Global Nutrition Cluster: Cross-cutting issues* [Website].

[181] Barrett, *Mainstreaming the Environment into Humanitarian Response: An Exploration of Opportunities and Issues*, 2007.

[182] UN OCHA, *What is the Cluster Approach?* [Website].

telecommunications; education; early recovery; camp coordination and camp management; water, sanitation and hygiene; shelter; protection; nutrition; and logistics.[183] There are additionally, cross-cutting issues that impact all sectors – including gender, and the environment – which is led by UNEP.[184]

Opportunities for UNEP in terms of mainstreaming the environment in humanitarian response includes strengthening coordination within the humanitarian sector on the environment, ranging from developing capacity and expertise to raising awareness on the relationship between humanitarian action and the environment. An additional area that is gaining increasing attention is the role of the private sector in humanitarian response, and thus the ways in which to minimize environmental impact in the activities of the business community is an important new area of policymaking and potential area for partnerships.[185] The experience that businesses have in terms of a wide range of "skills, experience and technological innovation to address the environmental impacts of their operations and their suppliers," could be harnessed by the international community, which would not only strengthen their engagement in emergency situations, but also provide an "opportunity for 'greening' private sector involvement."[186]

Case Study: Mainstreaming the Environment into Refugee and Resettlement Operations

Environment-related impacts of refugee operations include natural resources degradation, irreversible impacts on natural resources, impacts on the health of the refugee population, and strain on social relations with the host community.[187] The Office of the High Commissioner for Refugees (UNHCR) has a long history of engagement on this issue. They established an Environment Unit in 1995 with the goal of monitoring environmental activities in relation to their work with refugees and returnees.[188] The environment is relevant to many aspects of camp management. In the selection of displacement camp locations, it is important that environmental sustainability is taken into consideration in terms of the available natural resource base and risk of depletion, as well as potential friction with host communities over natural resources.[189] If, for instance, food and water are not available readily without causing environmental degradation or due to degradation or contamination as a result of the emergency, that must be taken into consideration.[190] In developing livelihood opportunities for displaced persons, efforts should be made to ensure the livelihoods are sustainable and positively impact the environment, for example reforestation programs, which can lead to the added benefit of assisting in preventing future human-made disasters.[191] Developing appropriate waste management services in camps – specifically in regards to the disposal site – is critical in order to prevent pollution.[192] The size of the camp population itself is an issue

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[183] IASC, *Guidance Note on Using the Cluster Approach to Strengthen Humanitarian Response*, 2006; Barrett, *Mainstreaming the Environment into Humanitarian Response: An Exploration of Opportunities and Issues*, 2007.

[184] UNEP, *Key things to Know About Environment as a "Cross Cutting" Issue In Early Recovery*; 2008; UNICEF, *Global Nutrition Cluster: Cross-cutting issues* [Website].

[185] Kelly, *Mainstreaming environment into humanitarian interventions – A synopsis of key organisations, literature and experience*, 2013.

[186] Kelly, *Mainstreaming environment into humanitarian interventions – A synopsis of key organisations, literature and experience*, 2013.

[187] UNHCR, *Environment: Looking After the Land* [Website]; UNHCR, *Refugee Operations and Environmental Management: A Handbook of Selected Lessons Learned from the Field*, 2002.

[188] Barrett, *Mainstreaming the Environment into Humanitarian Response: An Exploration of Opportunities and Issues*, 2007; UNHCR and CARE, *Module I - FRAME Toolkit: Framework for Assessing, Monitoring and Evaluating the environment in refugee-related operations*, 2009.

[189] Brookings Institution et. al., *IASC Framework on Durable Solutions for Internally Displaced Persons*, 2010, p. 18-19;

[190] Brookings Institution et. al., *IASC Framework on Durable Solutions for Internally Displaced Persons*, 2010, p. 32; Norwegian Refugee Council, *The Camp Management Toolkit*, 2008.

[191] Brookings Institution et. al., *IASC Framework on Durable Solutions for Internally Displaced Persons*, 2010, p. 30.

[192] Norwegian Refugee Council, *The Camp Management Toolkit,* 2008, p. 4.

which has an impact on the environment both in terms of physical space but also energy consumption; an ideal camp size sits at under 20,000.[193]

Good practice in managing the environment in camp operations include the development of an environmental management plan through an inclusive and consultative process; undertaking a rapid environmental assessment prior to camp selection; ongoing implementation of an environmental management plan; coordination with and support from the national and local authorities, with assistance from the international community for ongoing capacity building.[194] Opportunities for the international community on this topic include scaling up and supporting good practice, strengthening collaboration between various departments and agencies within the UN system on this topic to avoid duplication, ensuring the policy framework is strong and integrated within all humanitarian assistance guidelines, and supporting the ongoing development of technical expertise.

Conclusion

Capacity at local and national levels to "respond appropriately to environmental emergencies – such as chemical and oil spills, earthquakes, floods and forest fires – are often overstretched, particularly in the poorest and most vulnerable nations, which are disproportionately affected by disasters, as they often have insufficient resources to invest in appropriate preparedness measures."[195] UNEP has the opportunity to focus on ways to strengthen international cooperation on two important and overlapping issues: the way in which countries prepare for and respond to the environmental dimensions of natural and man-made disasters and the environmental implications of humanitarian response efforts. Thus it is essential to look not only at the actual environmental emergency that can occur in the aftermath of a natural or man-made disaster, but also the risk to the environment that the broader humanitarian response can cause.

Remaining questions for delegates to consider include: How can UNEP provide support for capacity-building and awareness raising? What opportunities are there for building local capacity-building through existing partnerships? How can UNEP facilitate the organization of regional networks of stakeholders focused on preventing and responding to environmental emergencies? What gaps can UNEP fill in terms of institutionalizing technical assistance and capacity-building? Where is there still room for improvement in providing guidance and support on emergency preparedness and contingency planning? What can UNEP do to better mainstream the environment in humanitarian response by advancing the existing normative framework? How can partnering with the business community, civil society and other non-traditional entities advance the integration of the environment into humanitarian action?

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[193] Norwegian Refugee Council, *The Camp Management Toolkit,* 2008, p. 3; UNHCR, *Handbook of Experiences in Energy Conservation and Alternative Fuels: Cooking Options in Refugee Situations*, 2002.
[194] Norwegian Refugee Council, *The Camp Management Toolkit,* 2008, p. 57.
[195] UN JEU, *Implementing the UNEP Governing Council Decision on Strengthening International Cooperation on the Environmental Aspects of Emergency Response and Preparedness: Information Note (EU/AG/63)*, 2011.

Annotated Bibliography

Barrett, E., S. Murfitt, and P. Venton. (2007, November). *Mainstreaming the Environment into Humanitarian Response: An Exploration of Opportunities and Issues*. Environmental Resources Management. Retrieved 1 August 2013, from:
http://postconflict.unep.ch/humanitarianaction/documents/01_01-03.pdf

> *This publication is the result of a cross-disciplinary research project which aimed to explore the multiple opportunities and issues associated with mainstreaming the environment into humanitarian response activities. The core findings were explored, broken into several sections: linkages and benefits; challenges; and summary and next steps. Delegates will find the section on recommendations particularly relevant as it provides elements of policies that can be drafted in committee.*

Council of Europe. (2003). *International Organisations and Major Hazard Management (AP/CAT (2003))*. Retrieved 1 October 2013 from:
http://www.coe.int/t/dg4/majorhazards/ressources/Apcat2003/APCAT-2003-12-e.pdf

> *This document is a comprehensive overview over the major programs and activities that are undertaken by international organizations both regionally and globally in the field of hazard response. Published by the Council of Europe in 2003, although it is a decade old, it is extremely thorough in its review and thus helpful for delegates. Of particular relevance is the section on regional organizations as it provides delegates with concrete examples of relevant entities that can be partnered with in enhancing international and regional cooperation.*

International Federation of Red Cross and Red Crescent Societies. (2007). *Law and legal issues in international disaster response: a desk study*. Retrieved 1 August 2013 from:
http://www.ifrc.org/PageFiles/41194/113600-idrl-deskstudy-en.pdf

> *The International Federation of Red Cross and Red Crescent Societies produced this document as part of its work on researching and providing guidance on existing international laws and norms in order to allow stakeholders to ensure better implementation of said norms. The publication is a comprehensive survey of related laws and legal issues in the field of international disaster response which not only provides details on the legal framework from multiple fields, but also provides helpful context. Delegates will find the section on "Regional law and norms" particularly useful as it will help provide context for the existing obligations each state has and the ways in which they can take that good practice forward.*

United Nations, General Assembly, Forty-forth session. (1989, December 22). *International co-operation in the monitoring, assessment and anticipation of environmental threats and in assistance in cases of environmental emergency (A/RES/44/224)* [Resolution]. Retrieved 1 August 2013 from:
http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/44/224

> *The United Nations General Assembly adopted resolution 44/224 on 2 December 1989 by consensus in order to advance the work of the United Nations and the greater international community in terms of how they address environmental emergencies. The resolution underlined the need to strengthen international cooperation and also ensure there is sufficient capacity to monitor environmental threats and further respond in the case of emergencies. Delegates will find the resolution helpful as a foundational document for this topic and also find it illuminative in terms of what the General Assembly has historically requested from UNEP.*

United Nations, General Assembly, Forty-sixth session. (1991, December 19). *Strengthening of the coordination of humanitarian emergency assistance of the United Nations (A/RES/46/182)* [Resolution]. Retrieved 1 August 2013 from: http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/46/182

> *The United Nations General Assembly adopted resolution 46/182 on 19 December 1991 as a way to strengthen the role of the United Nations as the entity providing coherence and coordination in times of humanitarian emergencies. The resolution contains specific provisions for the ways in which national and local resources should be used in cases of emergencies and lays out elements of emergency preparedness and response strategies. This would be particularly helpful for delegates in order to understand cornerstone of the most recent reforms in the area of humanitarian assistance.*

Nijenhuis, R. and C. Bruch. (2012). *Brief 6: Environmental Emergencies: Challenges and Lessons for International Environmental Governance*. Governance and Sustainability Issue Brief Series, Paper 6. Retrieved 1 August 2013 from: http://scholarworks.umb.edu/cgs_issue_brief_series/6

> *This brief examines existing instruments and institutions, and assesses for strengths and weaknesses in order to identify gaps in efforts to improve coordination in the context of environmental emergencies. The result of a collaboration between two experts in the field as part of a series of governance and sustainability focused issue briefs published by University of Massachusetts, Boston, there are some interesting analytical points made by the authors, particularly in terms of what are the main gaps are and what lessons can be drawn. Delegates will find this extremely helpful as it lays out policy proposals and provides clear options for action which can be undertaken by any international actor, but particularly by UNEP.*

United Nations Environment Programme, Governing Council, Twenty-second session. (2002, November 13). *Further Improvement of Environmental Emergency Prevention, Preparedness, Assessment, Response and Mitigation: Note by the Executive Director (UNEP/GC.22/INF/5).* Nairobi, 3-7 February 2003. Retrieved 2 August 2013 from: http://www.unep.org/gc/gc22/Document/k0263253.pdf

> *This document was produced by the Executive Director of the UN Environment Programme in 2003 as requested in UNEP Governing Council decision 21/17 on environmental emergencies. The document reviews UNEP action on environmental issues and reflects on the way that UNEP can strengthen efforts in this regard. Although a decade old, delegates will find it helpful to review the way UNEP views its role in addressing environmental emergencies and thus formative for the way that the topic is approached in committee.*

United Nations, General Assembly, Sixty-seventh session. (2012). *International cooperation on humanitarian assistance in the field of natural disasters, from relief to development: Report of the Secretary-General (A/67/363).* Retrieved 8 August 2013 from: http://www.un.org/ga/search/view_doc.asp?symbol=A/67/363

> *This is the most recent report of the Secretary-General under this agenda item, and provides an overview of recent "natural hazards" over the previous year. Of particularly focus is the idea of "resilience" and how humanitarian and other actors contribute to strengthening the resilience of communities. Delegates will find it helpful as it is a comprehensive snapshot of the humanitarian field and provides concrete recommendations that, if relevant, can be taken on by UNEP.*

United Nations, Joint UNEP/OCHA Environment Unit. (2012). *Keeping up with Megatrends: The Implications of Climate Change and Urbanization for Environmental Emergency Preparedness and*

Response. Retrieved 1 October 2013 from:
https://docs.unocha.org/sites/dms/Documents/Keeping%20up%20with%20Megatrends.pdf
> *This report, published by the Joint UNEP/OCHA Environment Unit, focuses on two important global trends affecting environmental emergency preparedness and response: climate change and urbanization. The document frames recommendations as "opportunities," which is extremely useful for delegates in identifying concrete policy options on this topic. The document is considered essential reading in the field of environmental emergencies and thus a "must-read" for delegates.*

United Nations, Joint UNEP/OCHA Environment Unit. (2013). *Joint UNEP/OCHA Environment Unit: Preparedness, Response & Environment in Humanitarian Action* [Information Note]. OCHA Emergency Services Branch. Retrieved 1 August 2013 from:
http://www.humanitarianresponse.info/system/files/documents/files/JEU%20info%20sheet.pdf
> *This short information sheet, published by the Joint UNEP/OCHA Environment Unit, provides an overview of the relationship between the environment and humanitarian assistance. Although it is brief, the document provides an overview of the key actors on this topic and some salient concepts and definitions. Delegates will find this information note relevant as a starting off point for future research.*

Wilton Park. (2011). *Conference report: Environmental Emergencies: strengthening the multilateral humanitarian and environmental response, 12-15 September 2011, Held in Glion sur Montreux, Switzerland.* Retrieved 3 July 2013 from: https://www.wiltonpark.org.uk/wp-content/uploads/wp1093-report.pdf
> *Wilton Park held a meeting from 12 – 15 September 2011 focused on the ways in which to strengthen the multilateral humanitarian and environmental response in advance of the Rio+20 conference. The report of the meeting reviews lessons learnt from past emergencies and discusses emerging themes in this field, including the role of the private sector and long-term emergency preparedness. Delegates will find this resource helpful as it brings together threads of discourse from across a wide range of fields and thus is helpful in identifying what the current important issues are as potential areas for action.*

IV.   Water Policy and Strategy: Addressing Transboundary Waters

"Inaction on transboundary waters can carry a high price. Tensions can hurt regional integration, trade, and stability, thereby limiting the potential for sustainable development. However, when the management of shared water is handled with the right tools and done through cooperation, tolerance, and mutual respect, it can pave the way toward sustainable and peaceful development from every angle: political, social, economic, cultural, and ecological."[196]

Introduction

Currently, there are 1.2 billion people live in areas with water scarcity and 500 million more people in a state of extreme insecurity verging on scarcity.[197] A further 1.6 billion people presently live in countries that do not have adequate infrastructure to efficiently manage the water supply.[198] By 2020, it is estimated that the number of people at risk worldwide due to water scarcity or other related issues will be between 0.4 billion and 1.7 billion.[199] The number at risk continues to increase and by 2080, between 1.1 billion and 3.2 billion people will be impacted.[200]

Partially a result of climate change and partially a result of human-induced means, according to the Intergovernmental Panel on Climate Change (IPCC), water scarcity can be aggravated by four factors: 1) population growth; 2) increased urbanization; 3) high consumption levels; and 4) climate change which shrinks resources and has other detrimental impacts.[201] Addressing this crisis requires dealing with a range of issues, including insufficient quantity of fresh water; poor quality water that is saline or heavily polluted; and competing political demands on the same water sources.[202]

As water grows scarcer, the challenge of managing water becomes more important. For almost 40% of the population, this challenge is made even more difficult due to the fact that their rivers and lake basins are shared between two or more countries.[203] The 263 transboundary lakes and river basins identified globally provide almost 60% of the world's freshwater for almost 145 countries partially, and 30 countries entirely.[204] For the 2 billion people who depend on groundwater, 300 of these aquifer systems are transboundary.[205] These sources are referred to as "transboundary water sources." Transboundary waters are "rivers, lakes, other surface freshwater bodies, and groundwater aquifers that overlap political

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[196] UNDP Water Governance Facility, *The World Water Forum: High Level Roundtables – Transboundary Waters*, 2012, p. 1; UNESCO, *Water: A Shared Responsibility* [Report], 2006.

[197] UN Security Council, *Maintenance of international peace and security: Impact of climate change (S/PV.6587)* [Meeting], 2011.

[198] UN Security Council, *Maintenance of international peace and security: Impact of climate change (S/PV.6587)* [Meeting], 2011.

[199] UN Security Council, *Climate change and its possible security implications: Report of the Secretary-General (A/64/350)*, 2009.

[200] UN Security Council, *Climate change and its possible security implications: Report of the Secretary-General (A/64/350)*, 2009.

[201] Bates, *Climate Change and Water*, 2008; UNESCO, *Water: A Shared Responsibility* [Report], 2006.

[202] Brooks, *Fresh Water in the Middle East and North Africa: Source of Conflict/Base for Cooperation*, 2007, p. 34-5; UNESCO, *Water: A Shared Responsibility* [Report], 2006.

[203] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report], 2008, p. 1.

[204] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report], 2008, p. 1; UNESCO, *Water: A Shared Responsibility* [Report], 2006.

[205] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report], 2008, p. 1.

boundaries."[206] Usually, "the term is used to refer to national boundaries between countries, but it may also refer to state or community level jurisdictions."[207]

Countries that share transboundary waters with neighboring states "face increasing water demand, hydrological variability, unilateral basin development and, in some cases, increased tensions as well," which is compounded by, on a national level, "few institutions which promote joint management of shared water resources and dispute resolution."[208] If institutions do exist, "they are often ad-hoc, disparate, and poorly financed," and further, on an international level, lack a common "global platform to advance joint management of transboundary waters and a lack of coordinated approaches among development partners."[209] By not taking action on managing transboundary waters, tension can rise between countries, damaging stability regionally, and limiting trade and integration, thus limiting the potential for full, inclusive and sustainable development.[210]

The challenge for the international community, including UNEP, is to situate the conversation on transboundary water in alignment with three important issues: 1) strengthening international cooperation and agreements on transboundary water sources; 2) the role of water in the post-2015 development framework and sustainable development processes; and 3) addressing transboundary water issues in the context of climate change. UNEP has the ability to develop normative frameworks and establish programmes in partnership with a wide array of organizations that drive the conversation on this topic, providing a strong opportunity for concrete change.

International and Regional Framework

There are several important international agreements and policy documents that frame this topic, including the *Convention on the Law of the Non-Navigational Uses of International Watercourses* (1997), General Assembly resolution 63/124, which contains the *Law of Transboundary Aquifers*, and the UN Economic Commission for Europe's *Convention on the Protection and Use of Transboundary Watercourses and International Lakes (*1992), also referred to as the "Water Convention."[211]

The UN Economic Commission for Europe's *Convention on the Protection and Use of Transboundary Watercourses and International Lakes (*1992), also referred to as the "Water Convention", promotes "cooperation on transboundary surface and ground waters and strengthens their protection and sustainable management."[212] The Convention has, since its adoption, "played a crucial role in the pan-European region in supporting the establishment and strengthening of cooperation," and served as a platform for academic, scientific and programmatic work on this topic for the last two decades.[213] Originally, the Water Convention was only regional in focus, but as of February 2013 it is a global instrument as per a recent amendment that allowed non-UNECE members to accede to the Convention.[214]

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[206] Global Water Forum, *Topics: Transboundary* [Website], 2013.
[207] Global Water Forum, *Topics: Transboundary* [Website], 2013.
[208] UNDP, *The World Water Forum: High Level Roundtables – Transboundary Waters* [Report], 2012, p. 1.
[209] UNDP, *The World Water Forum: High Level Roundtables – Transboundary Waters* [Report], 2012, p. 1.
[210] UNDP, *The World Water Forum: High Level Roundtables – Transboundary Waters* [Report], 2012, p. 1.
[211] UN-Water, *Promoting Water Cooperation Legal frameworks and institutional arrangements: Information brief*, 2013.
[212] UN-Water*, Promoting Water Cooperation Legal frameworks and institutional arrangements: Information brief*, 2013.
[213] UNECE, *UNECE convenes first workshop of the global network of river basins on climate change adaptation* [Press Release], 3 July 2013.
[214] UN-Water, *Promoting Water Cooperation Legal frameworks and institutional arrangements: Information brief*, 2013.

The *Convention on the Law of the Non-navigational Uses of International Watercourses* (1997) was adopted by the United Nations General Assembly as an annex to resolution 51/229 on 21 May 1997 and is still several ratifications short of coming into force.[215] The Convention laid out three main principles for countries to follow in the context of shared watercourses: "equitable and reasonable use, the obligation to prevent significant harm to neighbors, and the obligation of cooperation."[216] Following on this, in May 2008, the United Nations International Law Commission drafted articles on the "law of transboundary aquifers," which were forwarded on to the General Assembly.[217] This led to General Assembly resolution 63/124, which contains the *Law of Transboundary Aquifers* as an annex and was adopted on 11 December 2011.[218] The resolution "calls for cooperation among States to prevent, reduce and control pollution of shared aquifers and could offer the basis for a future binding legal instrument on transboundary aquifers."[219]

Additional important frameworks on this issue include the *Rio Declaration on Environment and Development, Agenda 21*, the *Programme for the Further Implementation of Agenda 21*, the *Johannesburg Declaration on Sustainable Development*, *Plan of Implementation of the World Summit on Sustainable Development* ("Johannesburg Plan of Implementation") and the outcome document of the High-level Plenary
Meeting of the General Assembly on the Millennium Development Goals.[220]

Role of the United Nations System

The United Nations (UN) System is highly engaged on this topic in several ways. Broadly, UN system activities are framed in the context of the "International Decade for Action 'Water for Life'" which began in 2005 and will continue to 2015, as laid out in UN General Assembly resolution 58/217.[221] Transboundary waters were the focus of World Water Day in 2009 under the theme "Shared Waters, Shared Opportunities," and more significantly, 2013 was declared the "International Year of Water Cooperation," pursuant to General Assembly resolution 65/154.[222]

Water has been a primary focus for UNEP since its inception.[223] In 1992, the United Nations Conference on Environment and Development served as a catalyst for a stronger focus institutionally on freshwater resources management, triggering conversations on freshwater in not only UNEP, but also the Millennium Development Goals process, the World Summit on Sustainable Development and the Commission on Sustainable Development, among others.[224] UNEP's Water Policy and Strategy

[215] UN General Assembly, *Convention on the Law of the Non-navigational Uses of International Watercourses (A/RES/51/229)*, 21 May 1997.
[216] UN-Water, *Promoting Water Cooperation Legal frameworks and institutional arrangements: Information brief*, 2013; UN General Assembly, *Convention on the Law of the Non-navigational Uses of International Watercourses (A/RES/51/229)*, 1997; UNESCO, *UN General Assembly Resolution adopts resolution on the Law of Transboundary Aquifers,* 2011.
[217] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 5.
[218] UN General Assembly, *The law of transboundary aquifers (A/RES/63/124)* [Resolution], 15 January 2009.
[219] UN-Water, *Promoting Water Cooperation Legal frameworks and institutional arrangements: Information brief*, 2013; UN General Assembly, *The law of transboundary aquifers (A/RES/63/124)* [Resolution], 15 January 2009.
[220] UN General Assembly, *Report of the United Nations Conference on Environment and Development (A/CONF.151/26 (Vol. I),* 12 August 1992. UN General Assembly, *Report of the United Nations Conference on Environment and Development (A/CONF.151/26 (Vol. I),* 12 August 1992.
[221] UN DESA and UN-Water, *International Decade for Action 'Water for Life' 2005-2015* [Website], 2013.
[222] UN-Water, *International Year of Water Cooperation* [Website], 2013; UN-Water, *About World Water Day* [Website], 2009.
[223] UNEP, *Updated water policy and strategy of the United Nations Environmental Programme (GC/24/16)*, 9 February 2007; UNEP, *Governing Council Decisions on Water* [Website]; UNEP, *Water Policy & Strategy* [Website].
[224] UNEP, *Updated water policy and strategy of the United Nations Environmental Programme (GC/24/16)*, 9 February 2007.

document, reapproved in 2007 drives the organization's water-focused programming.[225] Within the Water Policy and Strategy, transboundary water resources management falls under the promotion of ecosystem-based approaches strategic approach.[226] Generally, UNEP advocates for "integrated water resources management with a focus on environmental aspects," specifically focusing on "appropriate adaptation measures to climate change, and mitigation and management of water-related disasters."[227] At present, UNEP's program on transboundary water includes: developing methodologies for assessing and sustaining transboundary waters.[228] Regionally, UNEP supports initiatives for exchanging information and experiences on transboundary waters and establishing agreements focused on transboundary basins.[229]

UN-Water is the system-wide mechanism, established by the UN System Chief Executive Board for Coordination in 2004, with the mandate to "coordinate relevant agencies and programmes involved with water-related issues," including the activities of the Decade.[230] From its inception, "transboundary water issues," was defined as a thematic initiative of focus for UN-Water.[231] The UN-Water Task Force on Transboundary Waters serves as a platform for "coherence and coordination of activities by UN-Water members and partners in the area of transboundary waters."[232] The Task Force is coordinated by the UN Economic Commission for Europe and UNESCO and consists members ranging from UN programmes to independent research institutions.[233]

The United Nations Education, Social and Cultural Organization (UNESCO) also plays an important role on the topic of water cooperation and water issues generally. Through its Natural Sciences Sector, UNESCO implements the key international programmes on freshwater, marine, ecological, earth and basic sciences, with the focus on water within its International Hydrological Programme (IHP). The IHP is a "scientific cooperative programme for water research and water resources management, education and capacity-building," which has two specific programs focused on transboundary waters: "From Potential Conflict to Cooperation Potential" (PCCP) which contributes to the World Water Assessment Programme (WWAP), by facilitating "multi-level and interdisciplinary dialogue to foster peace, cooperation and development of shared water resources management."[234] The second program, the International Shared Aquifer Resources Management (ISARM) program is working to establish a "network of specialists and experts to compile a global inventory of transboundary aquifers and develop wise practices and guidance tools for shared groundwater resources management."[235]

The final important entity of note is the United Nations Office to support the International Decade for Action "Water for Life" (UNO-IDfA) is the office established to coordinate activities under the umbrella

[225] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 15; UNEP, *Governing Council Decisions on Water* [Website]; UNEP, *Water Policy & Strategy* [Website].
[226] UNEP, *Updated water policy and strategy of the United Nations Environmental Programme (GC/24/16)*, 9 February 2007.
[227] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 15.
[228] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 15; UNEP, *Governing Council Decisions on Water* [Website].
[229] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 15.
[230] UN General Assembly, *Actions taken in organizing the activities of the International Decade for Action, "Water for Life", 2005-2015: Report of the Secretary-General (A/60/158)*, 25 July 2005.
[231] UN General Assembly, *Actions taken in organizing the activities of the International Decade for Action, "Water for Life", 2005-2015: Report of the Secretary-General (A/60/158)*, 25 July 2005.
[232] UN-Water, *UN-Water Activities: Task Force on Transboundary Waters* [Website].
[233] UN-Water, *UN-Water Activities: Task Force on Transboundary Waters* [Website].
[234] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 15.
[235] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 16.

of the International Decade, and is housed within UN-Water.[236] This office works in conjunction with the UN-Water Decade Programme on Capacity Development (UNW-DPC).[237]

Additional UN system entities which contribute to addressing transboundary water at an international and regional level include: the United Nations Development Programme (UNDP), the Global Environment Facility (GEF), the United Nations Department of Economic and Social Affairs (DESA), the Food and Agriculture Organization (FAO), the United Nations University (UNU), the World Health Organization (WHO), the World Meteorological Organization (WMO), the United Nations Economic and Social Commission for Western Asia (ESCWA), the United Nations Economic Commission for Europe (UNECE), the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), and the United Nations Economic Commission for Africa (ECA).[238]

Recent events of relevance include World Water Week, hosted by the Stockholm International Water Institute, focused this year on "Water Cooperation-Building Partnerships," the outcome of which is the *2013 Stockholm Statement*, and is focused on sustainable development and water.[239] Following this conference, from 8-11 October 2013, the Budapest Water Summit was held in the context of discussing water as part of the post-2015 development agenda.[240] Alongside the forthcoming World Water Summit in 2014, these represent some of the most recent gatherings of policymakers on water policy, with a focus on cooperation and therefore importance in the conversation on transboundary water.

Water cooperation at the international, regional and sub-regional level

Cooperation at the international, regional and sub-regional levels is an important strategy for addressing transboundary water resources in order to ensure both optimal and sustainable use of water resources.[241] The importance of this is emphasized with the declaration that 2013 is the "International Year of Water Cooperation," by the UN General Assembly in resolution 65/154.[242] Some of the primary opportunities for cooperation include (1) focusing on shared or cooperative management strategies as part of overall "integrated water resource management;" (2) establishing enforcement and monitoring mechanism; (3) widening the focus of the agreements; and (4) situating water cooperation within overall conflict prevention and peace promotion efforts.

Although there is a "proliferation" of both bi-lateral and multilateral agreements on transboundary water management, at present, 158 of 263 international river basins and transboundary aquifer system "lack any type of cooperative management framework," meaning only roughly 41% of these basins are covered.[243] This highlights some of the existing weaknesses in current agreements – they often don't sufficiently "promote integrated water resources management," and have "inadequate management structures and weak capacities to implement the agreements."[244]

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[236] UN-Water, *Water for Life Decade: News Archives for 2009* [Website]*,* 2009; UN-Water, *Water for Life Decade: Frequently Asked Questions (FAQs)* [Website].
[237] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 15.
[238] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 12-15.
[239] Stockholm International Water Institute, *2013 Stockholm Statement*, 2013.
[240] Budapest, *Overview of the Budapest Water Summit* [Website], 2013.
[241] Institute for Security & Development Policy, *Summary of the Asia Forum "Transboundary Water Resources: Why are they Important and how can they be processed?"*, 4 June 2013.
[242] UN General Assembly, *International Year of Water Cooperation, 2013 (A/RES/65/154),* 11 February 2011.
[243] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 6; UN-Water, *Promoting Water Cooperation Legal frameworks and institutional arrangements: Information brief*, 2013; Gerlak, *Regional Water Governance and Institutional Arrangements around Transboundary Waters*, 2007.
[244] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 6.

Some of the most important recommendations for strengthening existing agreements include the need to take into consideration issues such as: water quantity and quality, hydrological events, shifting basin dynamics, societal values and also the potential impacts of climate change.[245] Further recommendations include the incorporation of dispute resolution mechanism, various ways in which to share the benefits of the water, allocation of water and development of consistent water-quality standards.[246] Agreements should also include provisions for joint monitoring, "information exchange and public participation as well as mutual assistance in case of extreme events," ways to factor in risk and uncertainty (for example related to climate change), for encouraging water-related joint economic development activities (e.g. cost-sharing arrangements).[247] Other shortcomings include "inadequate integration of aspects such as the environment, the lack of enforcement mechanisms, limited - sectoral – scope and non-inclusion of important riparian States)."[248] This is a diverse array of issues and components, but the primary point is that agreements must be more robust and broader in scope and not just address limited aspects of the situation at hand.

UNEP's role in this conversation is one of developing an overarching framework for key components of water agreements, and further developing programs that strengthen the capacity of organizations on the ground to draft, negotiate, and implement these agreements. Further, UNEP has the potential to serve as a clearinghouse for information and an organizational focal point for monitoring of relevant agreements.

Addressing transboundary water issues in the post-2015 development framework

Water has long been recognized as an essential "ingredient" for development. Through the achievement of improvement management of water resources via an integrated approach, development goals would be more attainable, communities would be healthier and more secure, and countries would be able to provide the support needed by their population for basic needs.[249]

Water is an important component of the ongoing discussion feeding into the establishment of a framework for development after 2015 upon the expiration of the Millennium Development Goals (MDGs), as well as within the Sustainable Development Goal (SDG) consultation process. First, water is discussed in the context of the outcome of the United Nations Conference on Sustainable Development (Rio +20) in terms of the way water and sanitation are reflected in the SDGs which are feeding into the eventual overarching post-2015 development framework.[250] Broadly, there is a push for a stand-alone water goal, shaped by Rio +20, in order to "ensure that water is managed" in a way which contributes to "poverty eradication, gender equality and universal human development, while conserving Earth's finite and vulnerable water resource base for current and future generations."[251] The second way in which water is broadly part of the conversation around the future development framework is in the thematic consultation on water, led by UN-Water, as part of the UN Development Group's consultations entitled

[245] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 6.
[246] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 6.
[247] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 6.
[248] UN-Water, *Transboundary Waters: Sharing Benefits, Sharing Responsibilities* [Report]*,* 2008, p. 6.
[249] Global Water Partnership, *National stakeholder consultations on water: supporting the post-2015 development agenda*, 2013.
[250] UN-Water, *Water in the post-2015 process* [Website], 2013.
[251] Harlin, *Emerging UN-Water Advice Regarding a Potential Global Goal on Water*, 2013.

the "World We Want 2015," where transboundary waters arose as a common theme in both country and global consultations.[252]

The priorities for the post-2015 development framework in the context of transboundary waters centered on the establishment of and compliance with bi-lateral and multilateral agreements between countries that share basins and aquifers.[253] Further, effective resource management and information exchange were also highlighted as important issues.[254] The post-2015 development agenda should have water as an integral portion of all relevant parts, ranging from energy to food security.[255] As a result of the "centrality" of water to individuals and communities, "water is a powerful tool for cooperation across borders, sectors and communities. A dedicated goal on water is necessary for a world where all people can live in safety and dignity."[256] Exploring options for ways to ensure water, and transboundary water is addressed in the development conversation is an exciting opportunity for UNEP to highlight its relevance in the global conversation surrounding these processes.

Adaptation to Climate Change in Transboundary Basins and Aquifers

The negative impact of climate change on water resources is already visible: increasingly frequency and intensity of floods and droughts, worsening water scarcity, erosion and sedimentation, reduction of glaciers and snow covers, a rise in sea level and damage to water quality and ecosystems.[257] As mentioned earlier, it is critical to act now to address the impact of climate change on water – but almost half of the world's total land surface is comprised of international river basins, which result in complex interdependencies within regions.

In response to this concern, this issue is being addressed within existing intergovernmental mechanisms, primarily by parties to the UNECE *Convention on the Protection and Use of Transboundary Watercourses and International Lakes* and other regional frameworks. Within UNECE, not only is an existing Working Group on Integrated Water Resources Management discussing this topic, but further a task force has been established to serve as "a network of basins working on adaptation to climate change in transboundary basins."[258] The task force was established as an outcome of the sixth World Water Forum and met for the first time in September 2013. [259] The main goal of the network is to share information and compare approaches in order to "foster exchange of experience and promote a shared vision between the participating basins," and operates within the context of the UNECE Water Convention's 2013-2015 programme of work.[260]

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[252] UN-Water, *Water in the post-2015 process* [Website], 2013; Global Water Partnership, *National Stakeholder Consultations on Water,* 2013; Gesti, *The Water Thematic Consultation & The JMP Proposal for Post-2015 WASH Targets and Indicators,* 2013.

[253] Global Water Partnership, *National stakeholder consultations on water: supporting the post-2015 development agenda*, 2013.

[254] Global Water Partnership, *National stakeholder consultations on water: supporting the post-2015 development agenda*, 2013.

[255] Stockholm International Water Institute, *2013 Stockholm Statement*, 2013.

[256] Stockholm International Water Institute, *2013 Stockholm Statement*, 2013.

[257] UNECE, *Guidance on Water and Adaptation to Climate Change,* 2009.

[258] UNECE, *UNECE convenes first workshop of the global network of river basins on climate change adaptation* [Press Release], 3 July 2013.

[259] UNECE, *Concept note on the collection of good practices and lessons learned on water and adaption to climate change in transboundary basins (ECE/IMP.WAT/WG.1/2013/3)*, 2013.

[260] UNECE, *UNECE convenes first workshop of the global network of river basins on climate change adaptation* [Press Release], 3 July 2013; UNECE, *Concept note on the collection of good practices and lessons learned on water and adaption to climate change in transboundary basins (ECE/IMP.WAT/WG.1/2013/3)*, 2013.

In the context of climate change, building capacity at a local and regional level is essential in order to ensure that national capacity aligns with the need for concrete cooperation on transboundary waters.[261] Outcomes of recent studies on the topic concluded that:

> "effective transboundary cooperation depends upon national capacity to give effect to the obligations of international law and agreements between riparian countries. Processes to facilitate cooperation between riparian countries must therefore involve targeted national institutional capacity building initiatives to 'level the playing field' and ensure national alignment with the prerequisites for effective transboundary cooperation."[262]

Although this is the same for transboundary cooperation at any time, in the context of climate change – the urgency is great for strengthening national capacity to address this issue in a constructive way – the opportunity for conflict grows as water supply dwindles. UNEP's role in this aspect is one of direct capacity-building, education and training, partnering across a range of projects and aiming to scale-up existing good practice.[263]

Case Study: Middle East

The Middle East in particular faces significant challenges in dealing with the water crisis, as it is the region that has the fewest natural renewable freshwater resources of any region in the world, an amount that will be halved by 2050 according to the World Bank.[264] An additional factor complicating resource management includes the fact that around "60% of the region's water flows across international borders."[265] The reason this complicates the situation is that water sources, which are transboundary, require an agreement and management by multiple countries. Recent projections related to the water resource implications of climate change highlight that by the end of the 21st century, the present day "Fertile Crescent" would lose "its current shape and could disappear altogether," which would have devastating effects on the entire region.[266] Related to this is the projection that in that same time period, the annual discharge of the Euphrates River will "decrease significantly (29%-73%), as will the stream-flow in the Jordan River," which will make dealing with water shortages extremely difficult.[267]

The distribution of water resources within the region serves as important context that allows us to understand the landscape of water politics in the Middle East. There are three broad categories which countries can fall into based on their "primary water management challenges."[268] First, the "variability" group, Iran, Lebanon and the West Bank, are countries or territories which have an adequate quantity of renewable water, however there is variation within the country and over time and primarily concern themselves with ensuring their internal distribution is equal.[269] Second, the "hyper-aridity" group, Gaza Strip, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, and Yemen, are countries or territories which have "consistently low levels of renewable water resources," and thus rely on

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[261] Bigas, et. asl. *High-Level Roundtable Discussion on "Water, Peace and Security,"* 2012.
[262] INBO & GWP, *The Handbook for Integrated Water Resources Management in Transboundary Basins of Rivers, Lakes and Aquifers,* 2012.
[263] UNECE, *Progress report of the pilot projects on climate change adaptation in transboundary basins (WGIWRM/2013/Inf.3),* 2013.
[264] World Bank, *Making the Most of Scarcity: Accountability for Better Water Management Results in MENA*, 2007, p. xxi.
[265] World Bank, *Making the Most of Scarcity: Accountability for Better Water Management Results in MENA*, 2007, p. xxi.
[266] Trondalen, *Climate Changes, Water Security and Possible Remedies for the Middle East*, 2009, p. 8.
[267] Trondalen, *Climate Changes, Water Security and Possible Remedies for the Middle East*, 2009, p. 9.
[268] World Bank, *Making the Most of Scarcity: Accountability for Better Water Management Results MENA*, 2007, p. 7.
[269] World Bank, *Making the Most of Scarcity: Accountability for Better Water Management Results MENA*, 2007, p. 7.

"nonrenewable groundwater" and desalination processes.[270] Third, and finally, the "transboundary water" group comprised of Egypt, Iraq and Syria, all have a "sizeable share of their water resources coming" from external sources.[271] These countries are therefore greatly affected by the decision-making processes of other countries, and thus international agreements are critical.[272] One other important fact is that three-quarters of the Middle East's fresh water is located in Iran, Iraq and Syria, which illuminates the important role these countries play in conversations regarding water management.[273]

The principal sources of the water supply in the region are the Jordan, the Nile, the Tigris and Euphrates rivers.[274] Over the past several decades, disagreement over control of water resources has sprung up, particularly in regards to the Jordan River. In terms of water policy, most governments in the Middle East have focused on the supply-side of the "water equation" in an effort to meet rising demand; however the result is that the "regulatory" aspect of water use, which includes establishing institutional mechanisms to monitor use and allocate the scarce resources, has been neglected.[275]

Focusing specifically on Israel's occupation of Palestine, water is a fundamental issue that is at the heart of the ongoing conflict. Second only to Kuwait, the Gaza Strip is poorest in terms of water resources of any other country or territory globally, while simultaneously is also one of the most densely populated areas in the world.[276] Palestinians living in these areas share all water sources with Israel, and their access to those resources has been tightly controlled since 1967.[277] The primary water resources available to the West Bank and the Gaza Strip are groundwater resources which are transboundary. For the West Bank, they share the Mountain Aquifer with Israel, and the Gaza Strip shares the Coastal Aquifer with Israel.[278] The Jordan River, additionally, should be legally accessible to residents of the West Bank; however Palestinians have been denied access to the water resources through physical barriers and diversion of the flow of the tributaries for decades.[279]

The amount of water allowed to Palestinians, according to most major human rights organization, environmental groups, and regional actors, "does not meet [Palestinian] needs and does not constitute a fair and equitable share of the shared water resources."[280] In 2010, the Arab Water Council calculated that Israel uses 89% of all water from the aquifer, while the remaining 11% is used by Palestinians in the West Bank and Gaza.[281] Residents of the Gaza Strip, which is home to 1.5 million Palestinians, 80% of whom live below the poverty line, are also only able to drink 5-10% of water available to them, partially due to the occupation which prevents the development of water and wastewater infrastructure.[282] The 2.3 million Palestinians living in the West Bank use only 20% of the water extracted from their primary water source, while Israel extracts up to 1.8 times its share of the aquifer.[283] A portion of this water, as well as all of the

[270] World Bank, *Making the Most of Scarcity: Accountability for Better Water Management Results MENA*, 2007, p. 7.

[271] Roudi-Fahimi, *Finding the Balance: Population and Water Scarcity in the Middle East and North Africa*, 2002.

[272] Roudi-Fahimi, *Finding the Balance: Population and Water Scarcity in the Middle East and North Africa*, 2002.

[273] Brooks, *Fresh Water in the Middle East and North Africa: Source of Conflict/Base for Cooperation*, 2007, p. 36.

[274] Brooks, *Fresh Water in the Middle East and North Africa: Source of Conflict/Base for Cooperation*, 2007, p. 37.

[275] Middle East Economic Survey, *Water: A Strategic Middle East Resource*, 2011, p. 11.

[276] Gray, et. al., *Water and Security for Palestine: The water crisis in the Palestinian Territories: challenges and opportunities for development*, 2007, p. 109.

[277] Amnesty International, *Troubled Waters – Palestinians Denied Fair Access to Water*, 2009, p. 12.

[278] Gray, et. al., *Water and Security for Palestine: The water crisis in the Palestinian Territories: challenges and opportunities for development*, 2007, p. 100.

[279] Amnesty International, *Troubled Waters – Palestinians Denied Fair Access to Water*, 2009, p. 12.

[280] Amnesty International, *Troubled Waters – Palestinians Denied Fair Access to Water*, 2009, p. 4.

[281] Palestinian Water Authority, *An overview of water and sanitation in the Opt (PWA.2011)*, 2011.

[282] World Bank, *Assessment of Restrictions on Palestinian Water Sector Development*, 2009, p. v.

[283] World Bank, *Assessment of Restrictions on Palestinian Water Sector Development*, 2009, p. v.

available resources from the Jordan River which are denied Palestinians, are diverted to the 450,000 settlers living in the West Bank.[284]

As a result of Israel's policies dealing with natural resources management, Palestinians are not allowed to dig new wells in order to accommodate population growth, which exacerbates the already grave water crisis.[285] Thus the water crisis is caused by not only the restrictions on the amount of water accessible to Palestinians, but also the minimal investment in water infrastructure.[286] In order to protect Israeli settlers from water supply issues, during the summer, "the Israeli water company Mekorot closes the valves which supply Palestinian towns and villages so as not to affect Israeli supplies."[287] This allows Israeli settlers to have their "swimming pools topped up and lawns watered while Palestinians living next to them, on whose land the settlements are situated, do not have enough water for drinking and cooking."[288]

Over the past several years, across the West Bank, settlers have begun to attack Palestinian villages, targeting specifically water supply. Examples include the community of Yanoun, Nablus governorate, located next to the Itamar settlement, where in October 2002, "masked settlers charged into the village with dogs and caused significant damage to the water network, several roof tanks, and the local spring, which is considered to be the main source of water for the community."[289] Further, "the main line supplying water to the community from the main spring, as well as the pump, reservoir, fittings and valves were all damaged by settlers," which forced residents of the community to "buy water from tankers from the neighboring community, however tanker access was very difficult due to Israeli closures and checkpoints as well as settler threats and terror which included shootings, beatings, and harassment."[290] In recent years, in the village of Madama, which is 50 km north of Jerusalem, "settlers from Yizhar settlement have repeatedly vandalized the villager's only source of water," by pouring concrete into it and vandalizing "the connecting pipes and even dropped disposable diapers and other hazardous waste into the springs," and further attacked villagers when repairs were attempted.[291]

Water thus serves as an issue that is a prerequisite for peace and stability in the region, which if it goes unaddressed will not only contribute to further deterioration of the political situation, but will also continue to deprive Palestinians of their right to water and thus have a destructive and long lasting impact on the human security of the population. Although the conflict between Israel and Palestine is much more complex than simply a fight over water resources, without addressing and settling the water conflict, peace between the two countries will not be achieved. This is illustrative of the centrality of natural resources to a country's own identity and sense of sovereignty – and also indicative of the lengths to which countries will go to protect what they believe to be theirs, and take action, diplomatic or even military, if they feel they are threatened. This is even more the case in *transboundary* water sources, which represent opportunities for both conflict and cooperation.

Within the broader context of the situation, ultimately the situation will not be resolved until Israel ends their occupation of Palestine, as called for within multiple General Assembly resolutions. However, in the

[284] Amnesty International, *Troubled Waters – Palestinians Denied Fair Access to Water*, 2009, p. 5.

[285] Amnesty International, *Troubled Waters – Palestinians Denied Fair Access to Water*, 2009, p. 5.

[286] Gray, et. al., *Water and Security for Palestine: The water crisis in the Palestinian Territories: challenges and opportunities for development*, 2007, p. 100; B'Tselem, *The Shared Water Sources and the Control over Them*, 2010.

[287] Joseph, *A Peace of Water for Gaza: Bringing Palestine's RO project to life*, 1 March 2013.

[288] PHG, *Water For Life: Israeli Assault on Palestinian Water, Sanitation and Hygiene During the Intifada*, 2004.

[289] PHG, *Water For Life: Israeli Assault on Palestinian Water, Sanitation and Hygiene During the Intifada*, 2004; Hass, *Liquid asymmetry: How the PA is forced to support water projects for West Bank settlements*, 2013.

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context of water issues there are some opportunities for making traction, specifically in encouraging cooperation on mutual interests, such as agricultural development and production; technology sharing and capacity-building on water related technology; training and education for local communities on the role of water in conflict resolution efforts; and reestablishing joint water committees to provide a framework for cooperation.[292] Development of local knowledge of the water sector is particularly important in the context of the Middle East, and further promotion of the use of desalination, which UNEP has publically supported, is a boon to situations where that is the only option.[293] UNEP, the World Bank and the UN Children's Fund have partnered on developing that capacity and knowledge.[294] The situation in Israel and Palestine represent the range most negative aspect of transboundary waters – and also the challenges associated with managing them.[295]

Conclusion

The challenge for the international community, including UNEP, is to situate the conversation on transboundary water in alignment the broader international conversation on strengthening international water cooperation, development of a post-2015 development framework and addressing climate change. UNEP has the ability to develop normative frameworks and establish programmes in partnership with a wide array of organizations that drive the conversation on this topic, providing a strong opportunity for concrete change.

Remaining questions for delegates to consider, include: Are there existing UNEP programs that can be scaled up to address some of the challenges related to transboundary waters? What existing organizations can UNEP partner with to address facets of this issue? Where is the gap in policy – is it in organization or existing frameworks, lack of monitoring, and follow-up, or all of the above and how can UNEP fill that gap? What concrete programs can be implemented to address the relationship between climate change and transboundary waters? How can UNEP support capacity-building on water cooperation at a local, national and regional level?

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[292] Udasin, *Israel and PA to resume agricultural cooperation after 13-year hiatus,* 2013; FOE-ME, *July Environmental Peacemaking Newsletter,* 2013; Bryant, *How water could bring Israelis, Palestinians together*, 2012; The Economist, *Boosting the West Bank's economy*, 2013.
[293] Joseph, *A Peace of Water for Gaza: Bringing Palestine's RO project to life*, 1 March 2013.
[294] Joseph, *A Peace of Water for Gaza: Bringing Palestine's RO project to life*, 1 March 2013.
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>   *This report was published by the United Nations Development Programme Global Environment Facility (UNDP-GEF) as part of its project entitled "Good Practices and Portfolio Learning in GEF Transboundary Freshwater and Marine Legal and Institutional Frameworks." It is comprehensive and reviews the legal and institutional frameworks that are currently applied to 28 international water bodies. Although it is broken up by specific water body, and thus represents a case study approach, for delegates interested in potential water bodies that are relevant for their country it is enormously helpful. Further, from a regional perspective, delegates can examine which agreements are in effect in their region and draw good practice that can contribute to policy development.*

United Nations Educational, Scientific and Cultural Organization, World Water Assessment Programme. (2006). *Water: A Shared Responsibility.* United Nations World Water Development Report No. 2. Retrieved 4 July 2013 from: http://unesdoc.unesco.org/images/0014/001454/145405e.pdf

>   *The World Water Assessment Programme (WWAP) releases its flagship publication "World Water Development Report," annually, which provides a comprehensive picture of water resources through a particular topic focus. This report is focused on transboundary water in particular, and identifies the way in which water-related development goals have been met and the challenges facing countries around the world. Particularly helpful for delegates due to its wide-ranging scope, the recommendations and conclusions can also be viewed as a starting point for developing concrete policy proposals.*

United Nations, General Assembly, Sixty-third session. (2009, January 15). *The law of transboundary aquifers (A/RES/63/124)* [Resolution], Retrieved 1 October 2013 from: http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/63/124

>   *The Law of Transboundary Aquifers was adopted by consensus in the annex of UN General Assembly resolution 63/124, following years of work by various UN entities on the topic. The law has 19 articles and was prepared largely by UNESCO's International Hydrological Programme and the UN International Law Commission, following extensive consultation with experts over several years in an attempt to develop common language to be used in the formulation of future laws at an international, regional and local level on shared water resources. The law provides delegates with a starting point for the way the international community envisions sustainable and peaceful management of transboundary aquifers and is an essential document for all delegates in this committee.*

United Nations, General Assembly, Fifty-first session. (1997, May 21). *Convention on the Law of the Non-navigational Uses of International Watercourses (A/RES/51/229)*. Retrieve 1 October 2013 from: http://untreaty.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf

The Convention on the Law of Non-navigational Uses of International Watercourses was adopted in the annex to General Assembly resolution 51/229 on 21 May 1997 and represents an important milestone in the elaboration of international law on water governance. Drafting the convention began in 2008, led by the International Law Commission, and focuses on ways in which to conserve waters that are transboundary in the context of increasing demands for water globally. The convention has not yet entered into force, however once it does, it will oblige all parties to consider the way in which they utilize water resources which are shared.

United Nations Environment Programme.(2007, February 9). *Water Policy and Strategy of UNEP*. Retrieved 1 October 2013 from:
http://www.unep.org/Themes/freshwater/Documents/Water_Policy_Strategy.pdf
This document is the guiding framework for UNEP's action on water and as such one of the most important resources for delegates on this topic. The document provides an overview of UNEP's mandate on water and its conceptual and operational principles alongside core goals and objectives. The document then breaks down UNEP's work on water into several thematic sections. This is a must-read for delegates and an excellent jumping off point on this topic.

UN-Water. (n.d.). Transboundary Waters. *International Decade for Action 'Water for Life' 2005-2015* [Website]. Retrieved 4 July 2013 from:
http://www.un.org/waterforlifedecade/transboundary_waters.shtml
The web page entitled "Transboundary Waters," is contained on the general web site for the "International Decade for Action 'Water for Life' 2005-2015 and is managed by UN-Water and the UN Department for Economic and Social Affairs. This page provides a helpful overview of the key concepts and data related to transboundary waters and a substantive list of key documents published recently on this particular issue from across the UN system and from a variety of perspectives. This page will be a very helpful initial source for delegates as they begin exploring this topic – particularly due to the inter-agency nature of the site and the diversity of UN entities represented in the authors of the reports that are presented on the site, resulting in an excellent picture of the multi-faceted nature of this issue.

UN-Water. (2010, May). *Transboundary Water Cooperation Reader*. UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC). Retrieved 4 July 2013 from:
http://www.un.org/waterforlifedecade/pdf/05_2010_reader_transboundary_waters_eng.pdf
This "reader" is one of the most helpful documents produced on this topic and is illustrative of the coherent and organized fashion in which this topic is approached within the UN system and particularly by UN-Water. This document is essentially a long annotated bibliography of key resources on this topic – from general international frameworks to specific sub-topics, such as biodiversity. From this document, delegates can access almost any other major document published on this topic and in that sense is an absolute must-read.

UN-Water. (2013). *Water Cooperation: Making it Happen: Conference summary report*. International Annual UN-Water Zaragoza Conference 2012/2013 "Preparing for the 2013 International Year. Retrieved 20 July 2013 from:
http://www.un.org/waterforlifedecade/water_cooperation_2013/pdf/water_cooperation_in_action_approaches_tools_processes.pdf

The annual UN-Water conference was held in Zaragoza, Tajikistan, in preparation for the 2013 International Year of Water Cooperation, which was declared by the General Assembly in 2011. The document provides a comprehensive overview of the concept of water cooperation, with a particular focus on how this looks in practice. As water cooperation between countries is undertaken as a result of transboundary waters, this report provides delegates with helpful background on what is an essential element of dealing with shared water resources.

UN-Water. (2013). *2013: International Year of Water Cooperation* [Website]. Retrieved 20 July 2013 from: http://www.unwater.org/water-cooperation-2013

This website serves as the focal point for the United Nations' activity surrounding recognition of the 2013 International year of Water Cooperation. A range of resources, including reports and brochures, as well as interactive areas for users to find relevant events and activities, are provided. Delegates will find the information in the resources section most useful as it is updated regularly and is a great starting point for research on this topic.

UN-Water, Task Force on Transboundary Waters. (2008). *Transboundary Waters: Sharing Benefits, Sharing Responsibilities*. Retrieved 4 July 2013 from: http://www.unwater.org/downloads/UNW_TRANSBOUNDARY.pdf

Published by UN-Water's Task Force on Transboundary Waters, this document is essential reading on this topic as it lays out the primary benefits of transboundary water cooperation and what characteristics of the cooperation lead to long-term and sustainable use of shared resources. Additionally, the document introduces the various UN entities that engage on this topic, presenting a helpful map of key stakeholders and helpful sources of additional material on this topic. This document is absolutely fundamental for any delegate's research and should be the starting point for additional in-depth examination of this issue.

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