



# UNITED NATIONS ENVIRONMENT ASSEMBLY

## *70th* SESSION ISSUES BOOK

PROMOTING SUSTAINABLE AND ENVIRONMENTALLY SOUND URBANIZATION

STRENGTHENING CAPACITY-BUILDING AT NATIONAL  
AND LOCAL LEVELS TO ADDRESS ENVIRONMENTAL CONCERNS

ADDRESSING MARINE POLLUTION IN LIGHT OF SDG NUMBER 14

MODEL UNITED NATIONS OF THE FAR WEST



# MODEL UNITED NATIONS OF THE FAR WEST

70TH ANNUAL SESSION

THE SUSTAINABLE DEVELOPMENT GOALS: LEAVE NO ONE BEHIND

UNEA's functions include setting the global environmental agenda; providing overarching policy guidance and defining policy responses to address emerging environmental challenges; undertaking policy review, dialogue and exchange of experiences; setting strategic guidance on the future direction of UNEP; organizing multi-stakeholder dialogue; and fostering partnerships for achieving environmental goals and resources mobilization. The Assembly reports to the General Assembly through ECOSOC.

Since the establishment of the universal membership in 2013, all 193 UN Member States have been members of the Environment Assembly.

(UN Handbook, 2017-18)

THE UNITED NATIONS ENVIRONMENT ASSEMBLY BOOK WAS PREPARED BY THE STUDENTS OF WESTERN OREGON UNIVERSITY FOR THE 70TH SESSION OF MODEL UNITED NATIONS OF THE FAR WEST



# MODEL UNITED NATIONS OF THE FAR WEST

## UNITED NATIONS ENVIRONMENT ASSEMBLY ISSUES BOOK

1. Promoting sustainable and environmentally sound urbanization
2. Strengthening capacity-building at national and local levels to address environmental concerns
3. Addressing marine pollution in light of SDG number 14

THE UNITED NATIONS ENVIRONMENT ASSEMBLY ISSUES BOOK WAS PREPARED BY THE STUDENTS OF WESTERN OREGON UNIVERSITY FOR THE 70TH SESSION OF MODEL UNITED NATIONS OF THE FAR WEST

## **STRENGTHENING CAPACITY-BUILDING AT NATIONAL AND LOCAL LEVELS TO ADDRESS ENVIRONMENTAL CONCERNS**

Jenny Rooper, Western Oregon University  
MUNFW 70<sup>th</sup> Session – UN Environment Assembly

Climate change, defined by the United Nations (UN) in 1992, is "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods."<sup>1</sup> Climate change is an existential threat to all living creatures on the Earth. Even after almost three decades of international negotiations to address the crisis there have been no substantive improvements. The average global temperature of the Earth's atmosphere is rising, and there is warming of the oceans, shrinking of ice sheets, glacial retreat, decreased snow cover, rising sea level, declining arctic sea ice, ocean acidification, and extreme natural disasters exacerbated by the warming atmosphere.<sup>2</sup> It is necessary for all Member States to understand the climate crisis and take action to mitigate climate change as well as to prepare to adapt to the threat climate change presents. It is essential that Member States focus their attention on building the capacity of all states to mitigate and adapt to the climate crisis in order to reduce vulnerability and increase resilience.

As Member States negotiate further efforts to address this topic, we must recognize that while all states will be affected, some states will suffer greater consequences. Currently, many island nations face the hazard of non-existence due to rising sea levels. The Marshall Islands are being challenged on whether to relocate or elevate themselves as their beaches are eroding, and their land and drinking water is salinized by sea water. It is projected that within 80 years, islands such as the Solomon Islands, Maldives, Palau, Micronesia, Fiji, Tuvalu, Seychelles, Kiribati, the Cook Islands, French Polynesia, Tangier Island (Virginia, USA), Shishmaref (Alaska, USA), and the Marshall Islands will be underwater.<sup>3</sup>

---

<sup>1</sup> United Nations. "United Nations Framework Convention on Climate Change." *United Nations Framework Convention on Climate Change*. UNFCCC.

[unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/conveng.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf).

<sup>2</sup> "Climate Change Evidence: How Do We Know?" Edited by Holly Shaftel. *NASA*, 30 Sept. 2019. [climate.nasa.gov/evidence/](https://climate.nasa.gov/evidence/).

<sup>3</sup> Mettler, Lyn. "13 Islands That Will Disappear in the Next 80 Years." *Reader's Digest*, 2019. [www.rd.com/advice/travel/islands-will-disappear-80-years/](https://www.rd.com/advice/travel/islands-will-disappear-80-years/).

Alongside this threat, as rates of climate change increase, so do the severity of specific natural disasters. While hurricanes, typhoons and cyclones are not caused by climate change, the warming of the atmosphere and the oceans is creating new mega storms that are larger and stronger than seen before. The United States has faced drastic effects due to hurricanes striking Florida, Louisiana, Texas and North Carolina with storm surges, flooding from extreme rainfall, and erosion of coastal areas. In addition, many areas in the United States are facing a constant cycle of floods and droughts due to the changing climate. Events such as Typhoon Hagibis in Japan, and Hurricane Dorian and Hurricane Katrina in the United States can threaten the lives of those directly hit, and importantly negatively damage the economies present. Hurricane Katrina was recorded as being the "most destructive natural disaster in U.S. history, costing over \$125 billion supplied in repairs and reconstruction.<sup>4</sup> Other states highly affected by these disasters include India, China, Ethiopia, Malawi, Somalia, Vietnam, the Philippines, and Haiti—all which experience high fatality rates alongside high destruction rates.<sup>5</sup>

All states will need to build their capacity to respond to climate change. However, many developing states are more vulnerable to the effects of climate change because they do not have the infrastructure and economic means to adapt to the threats posted by climate change. The Netherlands, for example, has built extensive infrastructure to withstand storm surge. In contrast, Tuvalu does not have the economic strength to build the capacity to withstand rising sea levels, and more frequent and stronger storms.<sup>6</sup>

## **UN ACTIONS, SUSTAINABLE DEVELOPMENT GOAL 13, AND UNEA**

The UN has held numerous conferences to address climate change, including the creation and ratification of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and the Kyoto Protocol in 1997, as well as the yearly UNFCCC Conference of the Parties (COPs). The

---

<sup>4</sup> Amadeo, Kimberly, "Hurricane Katrina Facts, Damage and Costs" *The Balance* <https://www.thebalance.com/hurricane-katrina-facts-damage-and-economic-effects-3306023>

<sup>5</sup> Dillinger, Jessica, "Countries Most Prone to Natural Disasters." *World Atlas*, 21 Jan. 2016, [www.worldatlas.com/articles/countries-with-the-deadliest-natural-disasters.html](http://www.worldatlas.com/articles/countries-with-the-deadliest-natural-disasters.html).

<sup>6</sup> Leslie Allen, "Will Tuvalu Disappear Beneath the Sea?" *Smithsonian Magazine*, <https://www.smithsonianmag.com/science-nature/will-tuvalu-disappear-beneath-the-sea-180940704/>

UNFCCC negotiations have focused on mitigating (reducing the greenhouse gases that contribute to climate change) and adaptation (responding to the consequences of climate change). These and more recent efforts have emphasized the need to address climate change and to help states to prepare and build their capacity to respond. Other recent efforts include the 2030 Agenda and specifically Sustainable Development Goal (SDG) 13, which states "take urgent action to combat climate change and its impacts."<sup>7</sup> As of April of 2019, 185 parties have ratified the Paris Agreement negotiated as part of the UNFCCC efforts, in which all members must submit new nationally determined contributions and ambitions by 2020. In addition, the Agreement continues specific provisions to support capacity building in Articles 9, 10 and 11. At the same time, global climate finance flows have increased by 17 percent in the time slot of 2015-2016 comparative to 2013-2014. In addition, the Green Climate Fund (GCF), created by the Copenhagen Agreement, was designed to provide financial assistance from "advanced states" to developing states to assist with mitigation and adaptation actions. As of June 2019, 259 activities have been approved by the GCF, with 225 funded in 115 countries, totaling USD 54.68 million.<sup>8</sup>

On March 15, 2019, the United Nations Environment Assembly closed their fourth session, hosted at its headquarters in Nairobi, Kenya on the theme of Innovative Solutions for Environmental Challenges and Sustainable Consumption and Production. In their fifth resolution (UNEP/EA.4/Res.5), the UNEA calls for the production and collaboration of sustainable infrastructure, with emphasis on utilizing previous frameworks and initiatives, as well as inclusion and progress towards the SDGs.<sup>9</sup> Resolutions 21 (UNEP/EA.4/Res.21)<sup>10</sup> and 23 (UNEP/EA.4/Res.23)<sup>11</sup> also focus on mitigating climate change as well as promoting further research on the environment and the global climate impacts.

---

<sup>7</sup> "Goal 13 Sustainable Development Knowledge Platform." *United Nations*, United Nations, [sustainabledevelopment.un.org/sdg13](https://sustainabledevelopment.un.org/sdg13).

<sup>8</sup> Green Climate Fund, Meeting of the Board "Eighth Report of the Green Climate Fund to the Conference of the Parties to the United Nations Framework Convention on Climate Change" [https://www.greenclimate.fund/documents/20182/1674504/GCF\\_B.23\\_10\\_-\\_Eighth\\_Report\\_of\\_the\\_Green\\_Climate\\_Fund\\_to\\_the\\_Conference\\_of\\_the\\_Parties\\_to\\_the\\_United\\_Nations\\_Framework\\_Convention\\_on\\_Climate\\_Change.pdf/3a253685-3375-563e-00e5-88fce8ef2dd1](https://www.greenclimate.fund/documents/20182/1674504/GCF_B.23_10_-_Eighth_Report_of_the_Green_Climate_Fund_to_the_Conference_of_the_Parties_to_the_United_Nations_Framework_Convention_on_Climate_Change.pdf/3a253685-3375-563e-00e5-88fce8ef2dd1)

<sup>9</sup> UNEA. "Sustainable Infrastructure." *United Nations Environment Assembly of the United Nations Environment Programme*, UNEP, 15 Mar. 2019, [wedocs.unep.org/bitstream/handle/20.500.11822/28470/English.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/28470/English.pdf?sequence=3&isAllowed=y).

<sup>10</sup> *Ibid.*

<sup>11</sup> UNEA. "Keeping the World Environment under Review: Enhancing the United Nations Environment Programme Science-Policy Interface and Endorsement of the Global Environment Outlook." *United Nations Environment Assembly of the United Nations*

Many Member States have taken initial steps towards achieving SDG13; however, many more ambitious steps must be made as the rate of climate change continues to rise above those expected. Access to financial resources and strengthened capacities need to be scaled up at a much faster rate, particularly for the least developed and small island developing States.

## **CAPACITY BUILDING**

Capacity building is the "process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in a fast-changing world,"<sup>12</sup> and requires actions on the local, national, and international levels. According to the United Nations Development Programme (UNDP) capacity development "starts from the principle that people are best empowered to realize their full potential when the means of development are sustainable – home-grown, long-term, and generated and managed collectively by those who stand to benefit." In a more literal sense, capacity building starts from the principle that people are the core solution to their own problems. In other words, local solutions are essential for success so that developing nations have the capability to form and manage infrastructure which can ensure future independence from international aid. At the core, local, or community, capacity building focuses on understanding the obstacles that inhibit people, governments, international organizations, and non-governmental organizations (NGOs) from realizing the development goals that allow them to achieve sustainable results.<sup>13</sup>

## **CLIMATE-AWARE CAPACITY BUILDING**

In the context of climate change and environmental concerns, capacity building has evolved to include measures to mitigate pollution, environmental decay, and biohazards, as well as provide

---

*Environment Programme*, UNEP, 15 Mar. 2019.

[wedocs.unep.org/bitstream/handle/20.500.11822/28486/K1901170.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/28486/K1901170.pdf?sequence=3&isAllowed=y).

<sup>12</sup> "Capacity-Building | Academic Impact." *United Nations*, United Nations, [academicimpact.un.org/content/capacity-building](https://academicimpact.un.org/content/capacity-building).

<sup>13</sup> "Capacity Development: a UNDP Primer." Edited by Kanni Wignaraja. *United Nations Development Programme*. UNDP, 2009. [www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/capacity-development-a-undp-primer/CDG\\_PrimerReport\\_final\\_web.pdf](https://www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/capacity-development-a-undp-primer/CDG_PrimerReport_final_web.pdf).

solutions and plans towards post-natural disaster and environment aid. All of these steps are designed to reduce vulnerabilities and risks, and increase climate resiliency.<sup>14</sup> Because of these factors, all forms of capacity building have become an important foundation of the newly adopted Paris Agreement. However, these measures still vary between Member States. For instance, many developing countries lack the necessary capacity for their daily livelihood, as well as the means to mitigate and adapt to climate action, for a plethora of reasons. These may include

a lack of public awareness and support for climate action . . . fragmentation of information and research institutions . . . a lack of international support specifically directed towards building and retaining skills . . . a lack of established or strong policies, systems and processes . . . to efficiently and effectively plan, manage and coordinate capacity building activities.<sup>15</sup>

Plus, many of these challenges strongly persist due to the short-term project based approach to capacity building created by the fragmentation of international institutions providing support.

Additionally, capacity building efforts need "greater coordination, coherence, monitoring, review, and reporting." Currently, there is no regular monitoring, review process, or centralized institution in place to provide the necessary guidance to coordinate, as well as shift towards climate-aware capacity building. In addition, it has been suggested that increasing coordination and coherence between the thematic bodies and entities under the United Nations Framework Convention on Climate Change (UNFCCC) will improve institutional architecture as well as promote climate action.<sup>16</sup>

One item to note, the Paris Agreement sets a road map on capacity building. Countries agreed during the 21<sup>st</sup> Conference of the Parties (COP21) to "enhance capacity building activities together with the associated institutional arrangements by establishing the Paris Committee in Capacity Building (PCCB)." The committee is mandated to oversee a comprehensive work program over the next four years, including to:

identify capacity gaps and needs, foster international, regional, national, and subnational cooperation, assess how to increase synergies, coordination, coherence, and collaboration among existing bodies and activities within, and outside, the UNFCCC, promote the development and spread of relevant tools and methodologies,

---

<sup>14</sup> UNFCCC, "What do Adaptation to climate change and Climate Resiliency mean? <https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/what-do-adaptation-to-climate-change-and-climate-resilience-mean>

<sup>15</sup> Dagnet, Yamide, and Eliza Northrop. "3 Reasons Why Capacity Building Is Critical for Implementing the Paris Agreement." *World Resources Institute*, 26 Sept. 2018. [www.wri.org/blog/2015/12/3-reasons-why-capacity-building-critical-implementing-paris-agreement](http://www.wri.org/blog/2015/12/3-reasons-why-capacity-building-critical-implementing-paris-agreement).

<sup>16</sup> *Ibid.*



and collect the best practices and lessons learned, with the goal of enhancing ownership and retention of capacity at national, regional, and subnational levels.<sup>17</sup>

Member States will choose the initial institutional arrangements under the Paris Agreement as well as cooperate to enhance capacity building activities, climate change education, public awareness, participation, and access to information. Developed countries have also agreed to improve support in developing countries with less capacity.

But what does it mean for Member States to create, adapt, and follow climate-aware capacity building? First, the impacts of climate change will be felt on all sectors, however mostly on natural resources and vulnerable areas including water, agriculture, forests, and coastal zones. These impacts are likely to be substantial and, depending on the region, could be catastrophic as have been seen by the events mentioned earlier. The UN Food and Agriculture Organization (FAO) has researched and identified possible measures to promote adaptation and capacity building in relation to climate shifts and vulnerability. According to the FAO there are three strategies for coping with climate variability:

1. Science and Assessment,
2. Before the fact: Preparedness, and
3. After the fact: Relief.

The three strategies are structured to ensure well-balanced and carefully formulated capacity building strategies. However, there are three important challenges that must be recognized while designing and implementing the core strategies:

1. Building effective knowledge generation systems,
2. Meeting financial considerations, and
3. Enabling institutional transformations.<sup>18</sup>

Most of these challenges though are easily "fixed" via the called for collaboration and coherence among Parties and Member States in regard to capacity building institutions and as emphasized in SDG17-Partnerships for the Goals.

Other possible solutions provided by the FAO include a list of how-to and not-to enhance the institutionalization of capacity building. First, the scope must be framed in broad terms, for narrowly focused capacity building institutions typically do not address or are not beneficial to economies or

---

<sup>17</sup>*ibid.*

<sup>18</sup>Kandlikar, Milind, and Ambuj Sagar. "Capacity Building for Climate Change: a Risk Management Approach." *Food and Agricultural Organization of the United Nations*, FAO, <http://www.fao.org/docs/eims/upload/288690/oct-climate-milind.ppt>.

human security. Second, do not "reinvent the wheel" — many organizations tend to begin without consultation with those who have taken action previously when formulating structures and goals. It is easier and more beneficial to build on previous structures and from knowledge achieved from beneficial and non-beneficial strategies. Third, it is essential to research "success stories" that may provide viable frameworks from multiple sources such as other international organizations and Civil Society Organizations (CSOs). Finally, local knowledge must be gathered and incorporated as those who are most vulnerable tend to be the most understanding of local issues and as discussed above (UNDP report) local people are the core solution to achieving success. Expert communities can assist with knowledge sharing but must be in balance with local knowledge. In addition, change must come on the local level, and it is often this level that has the most need of education and capacity building.<sup>19</sup> These are all steps that have been established as possible means to assist in sustainable, adaptable and effective capacity building, especially in regard to climate awareness and adaptation.

## **CONCLUSION**

Climate change poses an existential threat to the human race as well as the livelihood of all Member States. As the negative effects of climate change grow, the capacity of all states to mitigate and adapt to climate change will be increasingly challenged. Awareness and concrete actions to build capacity are essential on the international, national and local levels. By focusing on implementing SDG13, and finding sustainable and effective ways to generate climate-aware capacity building, we are guaranteeing the success and prosperity of future generations, as well as the health and future of all creatures on the Earth. The scientific evidence is present and simple: climate change equals the extinction of many species; extinction may equal no humans — effective actions need to be taken now.

---

<sup>19</sup>*Ibid.*

## QUESTIONS TO CONSIDER

1. In what ways is your state vulnerable to the effects of climate change?
2. What capacity does your state have to address your climate vulnerabilities and build climate resiliency?
3. Is your state in a position to assist in providing capacity building frameworks, or is your state in the need of assistance?
4. How has climate change already affected your state economically, physically, and/or morally?
5. Are people migrating to or from your state because of the effects of climate change?
6. What plans does your state have in relation to the Paris Agreement and capacity building?
7. Will your state engage in local, national and international collaboration regarding capacity building? Are there specific steps your state would like to see taken or considered?

## BIBLIOGRAPHY

- Allen, Leslie "Will Tuvalu Disappear Beneath the Sea?" *Smithsonian Magazine*,  
<https://www.smithsonianmag.com/science-nature/will-tuvalu-disappear-beneath-the-sea-180940704/>
- Amadeo, Kimberly, "Hurricane Katrina Facts, Damage and Costs" *The Balance*  
<https://www.thebalance.com/hurricane-katrina-facts-damage-and-economic-effects-3306023>
- "Capacity-Building | Academic Impact." *United Nations*, United Nations,  
[academicimpact.un.org/content/capacity-building](http://academicimpact.un.org/content/capacity-building).
- "Climate Change Evidence: How Do We Know?" Edited by Holly Shaftel. *NASA*, 30 Sept. 2019,  
[climate.nasa.gov/evidence/](http://climate.nasa.gov/evidence/).
- Dagnet, Yamide, and Eliza Northrop. "3 Reasons Why Capacity Building Is Critical for Implementing the Paris Agreement." *World Resources Institute*, 26 Sept. 2018, [www.wri.org/blog/2015/12/3-reasons-why-capacity-building-critical-implementing-paris-agreement](http://www.wri.org/blog/2015/12/3-reasons-why-capacity-building-critical-implementing-paris-agreement).
- Dagnet, Yamide, et al. "How to Strengthen the Institutional Architecture for Capacity Building to Support the Post-2020 Climate Regime." *World Resources Institute*, 26 Sept. 2018,  
[www.wri.org/publication/capacity-building-post-2020-climate-regime](http://www.wri.org/publication/capacity-building-post-2020-climate-regime).
- Dillinger, Jessica. "Countries Most Prone to Natural Disasters." *World Atlas*, 21 Jan. 2016,  
[www.worldatlas.com/articles/countries-with-the-deadliest-natural-disasters.html](http://www.worldatlas.com/articles/countries-with-the-deadliest-natural-disasters.html).
- "Goal 13: Sustainable Development Knowledge Platform." *United Nations*, United Nations,  
[sustainabledevelopment.un.org/sdg13](http://sustainabledevelopment.un.org/sdg13).
- Green Climate Fund, Meeting of the Board "Eighth Report of the Green Climate Fund to the Conference of the Parties to the United Nations Framework Convention on Climate Change"  
[https://www.greenclimate.fund/documents/20182/1674504/GCF\\_B.23\\_10\\_-\\_Eighth\\_Report\\_of\\_the\\_Green\\_Climate\\_Fund\\_to\\_the\\_Conference\\_of\\_the\\_Parties\\_to\\_the\\_United\\_Nations\\_Framework\\_Convention\\_on\\_Climate\\_Change.pdf/3a253685-3375-563e-00e5-88fce8ef2dd1](https://www.greenclimate.fund/documents/20182/1674504/GCF_B.23_10_-_Eighth_Report_of_the_Green_Climate_Fund_to_the_Conference_of_the_Parties_to_the_United_Nations_Framework_Convention_on_Climate_Change.pdf/3a253685-3375-563e-00e5-88fce8ef2dd1)
- Kandlikar, Milind, and Ambuj Sagar. "Capacity Building for Climate Change: a Risk Management Approach." *Food and Agricultural Organization of the United Nations*, FAO,  
<http://www.fao.org/docs/eims/upload/288690/oct-climate-milind.ppt>.
- Mettler, Lyn. "13 Islands That Will Disappear in the Next 80 Years." *Reader's Digest*, 2019,  
[www.rd.com/advice/travel/islands-will-disappear-80-years/](http://www.rd.com/advice/travel/islands-will-disappear-80-years/).
- UNEA. "Keeping the World Environment under Review: Enhancing the United Nations Environment Programme Science-Policy Interface and Endorsement of the Global Environment Outlook." *United Nations Environment Assembly of the United Nations Environment Programme*, UNEP, 15 Mar. 2019,  
[wedocs.unep.org/bitstream/handle/20.500.11822/28486/K1901170.pdf?sequence=3&isAllowed=y](http://wedocs.unep.org/bitstream/handle/20.500.11822/28486/K1901170.pdf?sequence=3&isAllowed=y).
- UNEA. "Sustainable Infrastructure." *United Nations Environment Assembly of the United Nations Environment Programme*, UNEP, 15 Mar. 2019,  
[wedocs.unep.org/bitstream/handle/20.500.11822/28470/English.pdf?sequence=3&isAllowed=y](http://wedocs.unep.org/bitstream/handle/20.500.11822/28470/English.pdf?sequence=3&isAllowed=y).

United Nations. "United Nations Framework Convention on Climate Change." *United Nations Framework Convention on Climate Change*. UNFCCC. [unfccc.int/files/essential\\_background/background\\_publications\\_htmlpdf/application/pdf/co\\_nveng.pdf](https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/co_nveng.pdf).

United Nations. "What do Adaptation to climate change and Climate Resiliency mean? UNFCCC. <https://unfccc.int/topics/adaptation-and-resilience/the-big-picture/what-do-adaptation-to-climate-change-and-climate-resilience-mean>

Wignaraja, Kannie (ed) "Capacity Development: a UNDP Primer." *United Nations Development Programme*. UNDP, 2009. [www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/capacity-development-a-undp-primer/CDG\\_PrimerReport\\_final\\_web.pdf](http://www.undp.org/content/dam/aplaws/publication/en/publications/capacity-development/capacity-development-a-undp-primer/CDG_PrimerReport_final_web.pdf).

## ADDRESSING MARINE POLLUTION IN LIGHT OF SDG NUMBER 14

Amber Holland, Western Oregon University  
MUNFW 70th Session – UN Environment Assembly

We recognize that our ocean covers three quarters of our planet, connects our populations and markets and forms an important part of our natural and cultural heritage. It supplies nearly half the oxygen we breathe, absorbs over a quarter of the carbon dioxide we produce, plays a vital role in the water cycle and the climate system and is an important source of our planet's biodiversity and of ecosystem services. It contributes to sustainable development and sustainable ocean-based economies, as well as to poverty eradication, food security and nutrition, maritime trade and transportation, decent work and livelihoods.

*A/RES/71/312: Our Oceans, Our Future: Call for Action*

### INTRODUCTION

Marine pollution is an extreme threat as over three billion people depend on marine and coastal biodiversity for their livelihoods. The UN Development Programme (UNDP) noted that "the market value of marine and coastal resources and industries is estimated at US\$3 trillion per year, about 5 percent of global GDP."<sup>1</sup> However, despite numerous efforts by the United Nations, marine pollution continues to rise with an estimated 5.25 trillion plastic debris in the ocean as of 2018.<sup>2</sup> Globally, 13,000-15,000 pieces of plastic are dumped into the ocean every day. In addition, the increasing costs of recycling and more states becoming unwilling to be the waste processors for the world have further exacerbated the crisis of plastic waste disposal.<sup>3</sup> At the same time, oil spills are polluting large amount of ocean water and coastal zones. In 2018 the International Tanker Owners Pollution Federation Limited (ITOPF) recorded three enormous ocean oil spills. The estimated loss of oil that year to the environment was 116,000 tonnes, a majority of which was attributed to the *Sanchi* collision in the East China Sea.<sup>4</sup> In addition, the Ocean Conservancy reports that oil spills have grown

---

<sup>1</sup> United Nations, Sustainable Development Goal 14: Life Below Water <https://www.un.org/sustainabledevelopment/oceans/>

<sup>2</sup> Ocean Crusaders, <http://ocean crusaders.org/plastic-crusades/plastic-statistics/>

<sup>3</sup> A recent example of this is China no longer buying the United States' recycling, this has made it much more difficult for communities to get rid of their waste in a sustainable way.

<sup>4</sup> International Tanker Owners Pollution Federation Limited (ITOPF) 2019, <https://www.itopf.org/knowledge-resources/data-statistics/statistics/>

larger over the past 20 years.<sup>5</sup> Understanding what has and should be done to address this serious problem is essential to finding solutions.

## **UN ACTIONS**

The United Nations (UN) has been combating marine pollution for several decades. One of the first actions was the adoption of The International Convention for the Prevention of Pollution from Ships (MARPOL) by the International Maritime Organization (IMO) in 1973. The Convention created many regulations "aimed at preventing and minimizing pollution from ships - both accidental pollution and that from routine operations."<sup>6</sup> An important annex of MARPOL is Annex 6, "Prevention of Pollution by Garbage from Ships." The Annex set specific distances from land that trash and waste from a ship's bilge could be dumped. Furthermore, the first United Nations Convention on the Law of the Sea (UNCLOS) created a comprehensive system of laws to govern and protect the oceans and its resources<sup>7</sup> and subsequent UNCLOS meetings have generated stronger environmental protections that pertain directly to marine pollution. In addition, the UN 2030 Agenda "Transforming Our World" gives special focus to environmental issues with Sustainable Development Goal (SDG), 14 "Conserve and sustainably use the oceans, seas and marine resources for sustainable development," sets out seven targets combatting overfishing, marine pollution, environmental protections, and coastal eutrophication.

In response to continued ocean degradation and the goals set forth in SDG 14, the General Assembly of the United Nations convened the Ocean Conference and passed A/RES/71/312, "Our Oceans, Our Future: Call for Action." This resolution and the Conference have aimed to combat the current causes of marine pollution as well as increase resource conservation and clean-up efforts. While emphasizing cooperation, it acknowledges "that each country faces specific challenges in its pursuit of sustainable development, in particular least developed countries (LDCs), landlocked

---

<sup>5</sup> The Ocean Conservancy, "What have we learned from 50 years of off-shore oil spills" <https://oceanconservancy.org/blog/2019/02/05/learned-50-years-offshore-oil-disasters/>

<sup>6</sup> International Maritime Organisation, [http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx)

<sup>7</sup> S.S. Rana & Co, <https://www.lexology.com/library/detail.aspx?g=b5b618ab-f09d-43f4-a518-01b31599bf61>

developing countries, small island developing States (SIDS), and African States, including coastal ones, as do others recognized in the 2030 Agenda."<sup>8</sup> During the Ocean Conference they also appointed Peter Thomas of Fiji as Special Envoy for the Ocean.

## **MARINE DEBRIS**

Marine debris is a major threat to the ocean's health and is defined as "any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment."<sup>9</sup> It poses a serious and long-term danger to marine animals, ecosystems, navigation and human health.

### *Our Plastic Planet*

Plastic production took off in the 1950s and less than 9% of plastic produced between 1950 - 2015 was recycled. Single use plastic has become a central part of most peoples lives. Whether we realize it or not, we are surrounded by plastic. We are producing more than 300 million tons of plastic per year, and UNDP estimates that 89% of that is single use plastics<sup>10</sup>. Plastic bottle consumption alone accounts for 14% of plastic waste. "According to the Container Recycling Institute, "100.7 billion plastic beverage bottles were sold in the U.S. in 2014, or 315 bottles per person. 57% of those units were plastic water bottles: 57.3 billion sold in 2014. This is up from 3.8 billion plastic water bottles sold in 1996, the earliest year for available data." In fact, a billion gallons of oil are used to supply plastic water bottles for the US alone.<sup>11</sup> It is estimated that this year every person on the planet will produce about 300 pounds of single use plastics. While an individual using a plastic water bottle seems insignificant, it is done by many on a global scale.<sup>12</sup> According to National Geographic "half the world's mismanaged plastic waste was generated by just five Asian countries: China, Indonesia, the

---

<sup>8</sup> The United Nations, <https://oceanconference.un.org/callforaction>

<sup>9</sup> National Oceanic and Atmospheric Administration (NOAA), 2019, <https://oceanservice.noaa.gov/facts/marinedebris.html>

<sup>10</sup> United Nations Development Programme, <https://feature.undp.org/plastic-tidal-wave/>

<sup>11</sup> Craig Lesson, 2013, "A Plastic Ocean" (documentary), Sima Studios.

<sup>12</sup> For emphasis on other potential producers of plastic products, Coca-Cola produces 3 million tons of plastic packaging per year, <https://www.forbes.com/sites/heatherfarmbrough/2019/03/15/coca-cola-reveals-it-produces-3m-tonnes-of-plastic-packaging-a-year-in-ground-breaking-report/#147964a6670f>.



Philippines, Vietnam, and Sri Lanka. . . . Let's say you recycle 100 percent in all of North America and Europe' " says Ramani Narayan, a chemical engineering professor at Michigan State University who also works in his native India, " "You still would not make a dent on the plastics released into the oceans. If you want to do something about this, you have to go there, to these countries, and deal with the mismanaged waste.' "<sup>13</sup>

At the UN Environment Assembly in Nairobi in 2019, 170 Member States pledged to significantly reduce their plastic usage by 2030. This pledge followed the 2016 conference during which the Assembly adopted UNEP/EA.2/RES.11 addressing marine pollution and microplastics. It called for further implementation of resolution 1/6 regarding "Marine plastic debris and microplastics," encouraged international cooperation on transboundary watercourses where surface runoff transports litter and eutrophication, and welcomed cooperation with other UN bodies, IGOs and NGOs.

These global commitments and the growing awareness of this problem has led to multiple actions. More than 60 countries have set goals to cut back plastic waste. Canada has aimed to ban single use plastics by 2021. Chile and Peru have also worked to ban and reduce single use plastic waste. "Chile's Constitutional Court ratified a bill that bans retail use of plastic bags across the country on July 6, ruling against an appeal that had been filed by the plastics industry." This bill was the first plastic ban bill in the Americas. Big companies such as Disney and United Airlines have set goals to remove plastic from their facilities. As of 2018 companies "PepsiCo, Coca-Cola, Procter and Gamble, Danone, Unilever, and Dow are committed to funding the \$90 million investment, and Circulate Capital says a deal will be inked by early 2019."<sup>14</sup> Combating plastic pollution requires joint strategies between countries, public-private partnerships, and other organizations in order to be effective. While plastic is a valuable resource, plastic pollution is irresponsible and unnecessary. "Ocean plastic is not as complicated as climate change. There are no ocean trash deniers, at least so far. To do something about it, we don't have to remake our planet's entire energy system."<sup>15</sup>

---

<sup>13</sup> Laura Parker, 2018, "We Made Plastic. We Depend on It. Now We're Drowning in It." <https://www.nationalgeographic.com/magazine/2018/06/plastic-planet-waste-pollution-trash-crisis/>

<sup>14</sup> Brian Clark Howard, et al. 2019. "A running list of action on plastic pollution" National Geographic <https://www.nationalgeographic.com/environment/2018/07/ocean-plastic-pollution-solutions/>

<sup>15</sup> Laura Parker, 2018.

### *Our Ocean Dumping*

Abandoned or discarded fishing gear is a significant problem for ocean life "because this trash can entangle, injure, maim, and drown marine wildlife and damage property."<sup>16</sup> UNEP/EA.2/Res.11 references the role of the International Maritime Organization in reducing marine litter. It also outlined strategies to mitigate marine pollution by establishing effective port reception facilities, creating harbor fees to cover trash recovery and disposal costs and other incentives.

The dumping of waste in the ocean creates another problem. The waste collects into large patches due to the circulation of ocean currents, the most notable being the Pacific Garbage Patch. A recent study showed a majority of the waste in the Pacific Garbage Patch was not from straw or bags, but from fishing gear. Approximately "79,000 tons [of waste was fishing gear]. The study also found that fishing nets account for 46 percent of the trash, with the majority of the rest composed of other fishing industry gear, including ropes, oyster spacers, eel traps, crates, and baskets." Over 100,000 marine animals are entangled and suffocated by discarded or lost fishing nets annually. Clearly, ocean pollution is a serious threat as it is estimated that by 2050 due to the overall the accumulation of plastic waste and marine litter there will be more plastic in the ocean than fish.<sup>17</sup>

## **SOURCE POLLUTION**

In addition to the dumping of waste in the oceans, marine pollution can come from the land. The U.S. Environmental Protection Agency (EPA) defines point source pollution as "any single identifiable source of pollution from which pollutants are discharged, such as a pipe, ditch, ship or factory smokestack." A common source is from factories, such as oil refineries, or sewage treatment plants who discharge their effluents into water which makes its way into rivers and the ocean. Unregulated point source pollution contaminates water sources and has a severe negative impact on human health and the ocean environment.

---

<sup>16</sup> NOAA, 2019, <https://oceanservice.noaa.gov/facts/marinedebris.html>

<sup>17</sup> Laura Parker, 2018, <https://www.nationalgeographic.com/magazine/2018/06/plastic-planet-waste-pollution-trash-crisis/>

A second common example is debris from natural disasters. It is estimated that 20% of trash in the Pacific Garbage Patch is from the 2011 Japan tsunami. In addition, the meltdown of the Fukushima Nuclear Plant contaminated one million tons of water. The Japanese government is currently debating dumping the radioactive water into the ocean to dilute it, no longer making it harmful to humans. However, there has been a strong backlash from local fisheries and fishermen whose livelihood is dependent on the health of the fish.<sup>18</sup>

Point source pollution can be attributed to single events such as oil spills. On January 6<sup>th</sup> 2018 the Panama- registered Iranian oil tanker *Sanchi*, going to South Korea carrying condensate,<sup>19</sup> and Chinese cargo ship *CF Crystal* collided off the Shanghai coast. "The Sanchi was carrying a highly flammable fuel oil, equivalent to one million barrels of oil."<sup>20</sup> The tanker drifted and sank into the South China Sea, an area already with a vulnerable ecosystem, making the worst-case scenario a disastrous reality. China and Japan's territorial disputes delayed clean up because it was unclear who was responsible for environmental protection in the area. "Despite being obliged by the UN Convention on the Law of the Sea to protect the marine environment, both China, in whose 200-nautical-mile exclusive economic zone the accident occurred, and Japan, in whose claimed exclusive economic zone the vessel sank, were slow to respond."<sup>21</sup> While Japan and China have agreements over the disputed waters to avoid clashes, there are no joint contingency plans to deal with environmental disasters.<sup>22</sup> The crash posed a major threat to Japan, South Korea and marine life; many compare the disaster to the same extent as Exxon Valdez<sup>23</sup>.

---

<sup>18</sup> James Patterson, 2019, "Japan to Dump Radioactive Water from Fukushima Reactor into Pacific Ocean," <https://www.ibtimes.com/japan-dump-radioactive-water-fukushima-reactor-pacific-ocean-2830468>

<sup>19</sup> According to Mark Valencia (2018), condensate is a highly volatile, highly toxic material that is greatly harmful to the environment. In addition to the slick on the water's surface, the sinking of the ship means that the remaining condensate cargo and bunker oil – a heavier form of fuel oil – threaten the depths of the sea from the wreckage. An estimated 2,000 tonnes (2,200 short tons) of bunker oil is thought to have been in *Sanchi's* fuel storage tanks. The accident sight is also where many edible fish were spawning and in the path of a whale migration. <https://www.scmp.com/comment/insight-opinion/article/2134058/muddy-waters-how-china-japan-territorial-disputes-delayed>

<sup>20</sup> South China Morning Post, 2019, "How the Sanchi oil tanker environmental disaster unfolded" <http://multimedia.scmp.com/news/china/article/sanchi/>

<sup>22</sup> Mark Valencia, 2019, <https://www.scmp.com/comment/insight-opinion/article/2134058/muddy-waters-how-china-japan-territorial-disputes-delayed>

<sup>23</sup> Stephen Leahy, 2019 "Exxon Valdez changed the oil industry forever-but new threats emerge" <https://www.nationalgeographic.com/environment/2019/03/oil-spills-30-years-after-exxon-valdez/>

## NON-POINT SOURCE

Most non-point source pollution is a result of land run off from agricultural and urban areas into rivers causing deoxygenation. Oxygen is critical to the health of our planet and oxygen breathing plants and animals in the oceans. Despite it being an essential part of marine life, we are seeing an exponential increase of deoxygenation in our ocean systems. The nutrients from agriculture, sewage and industrial waste are causing ocean dead zones, fish kills, worsening habitat loss, and the alteration of biogeochemical cycles and food webs. Excess fertilizers, herbicides and insecticides from agricultural lands and residential areas are the leading remaining causes of water quality problems. Nonpoint source pollution not only affects ecosystems; it can also have harmful effects on the economy. For example, U.S. Coastal and marine waters support 28.3 million jobs, generate \$54 billion in goods and services through activities like shipping, boating, and tourism, and contribute \$30 billion to the U.S. economy through recreational fishing alone. If pollution leads to mass die-offs of fish and dirty-looking water, many areas will experience deep financial losses.<sup>24</sup>

The UN Food and Agriculture Organization (FAO) published a report in 2017, "The executive summary of Water Pollution from Agriculture: A Global Review," examining the growing concern over the agriculture industries impact on water quality. Eduardo Mansur, Director of FAO's Land and Water Division, said "In most high-income countries and many emerging economies, agricultural pollution has overtaken contamination from settlements and industries as the main factor in the degradation of inland and coastal waters." FAO reports that many countries, such as Argentina, Malaysia, South Africa and Pakistan, have experienced exponential economic growth by using pesticides; however, nitrate from agriculture is now the most common chemical contaminant in the world's groundwater aquifers and is leading to fetal illness, birth defects, cancer and more. In addition, fertilizers are entering rivers and flowing out to pollute the ocean. The FAO has suggested responding through policies/incentives, and on-farm practices and off-farm practices. One proposal that shows promise is establishing

---

<sup>24</sup> NOAA, [https://oceanservice.noaa.gov/education/tutorial\\_pollution/04nonpointsource.html](https://oceanservice.noaa.gov/education/tutorial_pollution/04nonpointsource.html)

protection zones along surface watercourses, within farms and in buffer zones around farms and improving irrigation systems.<sup>25</sup>

## **CONCLUSION**

Awareness of the harmful effects of marine pollution is an important first step toward addressing this crisis. Actions taken by the United Nations, NGOs and Member States point in a positive direction that together we can reduce, prevent, and potentially repair the damage from marine pollution. Plastic is a valuable resource- it keeps medical supplies sterile, provides water to contaminated areas; it's durable and lasts multiple lifetimes; however, the waste produced by our current plastic use is unmanageable and unnecessary. The 300 million tons created this year is expected to triple when the global population reaches 8 billion people, unless we respond quickly. Likewise, the UN, in its 2018 Progress report on SGD14, noted that among other concerning marine pollution trends "Global trends point to continued deterioration of coastal waters due to pollution and eutrophication."<sup>26</sup>

As of 2019 there has been very limited progress on marine pollution. Awareness has increased, commitments have been made, but very few consequential international actions have been taken to significantly reduce the problem. Clearly, further steps need to be taken to identify those who are creating the waste, and Member States must negotiate tangible policies and actions by developed states, and provide support for developing states so all Member States can reduce their marine pollution. The UNEA needs to do more to raise awareness of the dangers of marine pollution by Member States, and design concrete and realistic strategies to fund and implement positive change. Possible steps could be to build on SDG 17 ("Strengthen the means of Implementation and revitalize the global partnership for sustainable development") by creating partnerships with NGOs and non-UN IGOs to educate shipping companies and to encourage Member States to create and enforce environmental protection policies. Increasing focus on SDG14's Targets and Indicators 14.1, 14.1.1 and

---

<sup>25</sup> Food and Agriculture Organization, 2019, "Land & Water" <http://www.fao.org/land-water/news-archive/news-detail/en/c/1032702/>

<sup>26</sup> The United Nations, 2019, <https://sustainabledevelopment.un.org/sdg14>

14.C are vital in moving towards a healthy ocean with greater effort. Our planet, marine life, and all living creatures need Member States to create sustainable solutions in order to achieve the progress called for by Sustainable Development Goal 14 by 2030.

### **QUESTIONS TO CONSIDER**

1. What are the major sources of marine pollution in your country?
2. What waste water management and solid waste recycling systems are in place?
3. Is your country landlocked or coastal; does it have rivers that drain to the ocean? How does this affect your policies, use of chemicals, waste systems, etc.?
4. What commitments has your country set for SDG 14? Have you taken any concrete actions to achieve them?
5. What systems does your country have in place to handle an environmental disaster?

## BIBLIOGRAPHY

- Farmbrough, Heather, 2019 "Coca-Cola Reveals It Produces 3m Tonnes of Plastic Packaging A year in Ground-breaking Report",  
<https://www.forbes.com/sites/heatherfarmbrough/2019/03/15/coca-cola-reveals-it-produces-3m-tonnes-of-plastic-packaging-a-year-in-ground-breaking-report/#147964a6670f> [accessed September 1, 2019].
- Food and Agriculture Organization, 2019, "Land & Water" <http://www.fao.org/land-water/news-archive/news-detail/en/c/1032702/> [accessed September 15, 2019].
- Howard, Brian Clark, *et al.*, 2019, "A running list of action on plastic pollution" National Geographic <https://www.nationalgeographic.com/environment/2018/07/ocean-plastic-pollution-solutions/> [accessed August 1, 2019].
- International Maritime Organization, 2019, "International Convention for the Prevention of Pollution from Ships" [http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx) [accessed September 1, 2019].
- International Tanker Owners Pollution Federation Limited (ITOPF) 2018, "Oil Tanker Spills 2018" <https://www.itopf.org/knowledge-resources/data-statistics/statistics/> [accessed August 5, 2019].
- Leahy, Stephen, 2019 "Exxon Valdez changed the oil industry forever -but new threats emerge" <https://www.nationalgeographic.com/environment/2019/03/oil-spills-30-years-after-exxon-valdez/> [accessed August 5, 2019]
- Lesson, Craig, 2013, "A Plastic Ocean" (film documentary), Sima Studios.
- National Oceanic and Atmospheric Administration (NOAA), 2019, "What is marine debris" <https://oceanservice.noaa.gov/facts/marinedebris.html> [accessed July 1, 2019].
- NOAA, 2017, "Nonpoint Source Pollution" [https://oceanservice.noaa.gov/education/tutorial\\_pollution/04nonpointsource.html](https://oceanservice.noaa.gov/education/tutorial_pollution/04nonpointsource.html) [accessed August 5, 2019].
- Ocean Conservancy, 2019, "What have we learned from 50 years of off-shore oil spills" <https://oceanconservancy.org/blog/2019/02/05/learned-50-years-offshore-oil-disasters/> [accessed August 5, 2019].
- Ocean Crusaders, "Plastic Crusades" <http://oceancrusaders.org/plastic-crusades/plastic-statistics/> [accessed August 5, 2019].
- Parker, Laura, 2018, "We Made Plastic. We Depend on It. Now We're Drowning in It." <https://www.nationalgeographic.com/magazine/2018/06/plastic-planet-waste-pollution-trash-crisis/> [accessed September 1, 2019]

- Patterson, James Patterson, 2019, "Japan to Dump Radioactive Water from Fukushima Reactor into Pacific Ocean," <https://www.ibtimes.com/japan-dump-radioactive-water-fukushima-reactor-pacific-ocean-2830468> [accessed September 21, 2019]
- Rana, S.S. & Co, 2018, "Pollution in Oceans"  
<https://www.lexology.com/library/detail.aspx?g=b5b618ab-f09d-43f4-a518-01b31599bf61>  
[accessed September 1, 2019].
- South China Morning Post, 2019, "How the Sanchi oil tanker environmental disaster unfolded"  
<http://multimedia.scmp.com/news/china/article/sanchi/> [accessed September 21, 2019].
- United Nations, 2019 "Ocean Conference" <https://oceanconference.un.org/callforaction> [accessed July 1, 2019].
- United Nations, Sustainable Development Goal 14: Life Below Water  
<https://www.un.org/sustainabledevelopment/oceans/> [accessed July 1, 2019].
- United Nations Development Programme, 2019, "A Tidal Wave of Plastic"  
<https://feature.undp.org/plastic-tidal-wave/> [accessed July 1, 2019].
- Valencia, Mark, 2018, "Muddy waters: How China-Japan territorial disputes delayed the response to the Sanchi oil spill" <https://www.scmp.com/comment/insight-opinion/article/2134058/muddy-waters-how-china-japan-territorial-disputes-delayed> [accessed September 21, 2019].