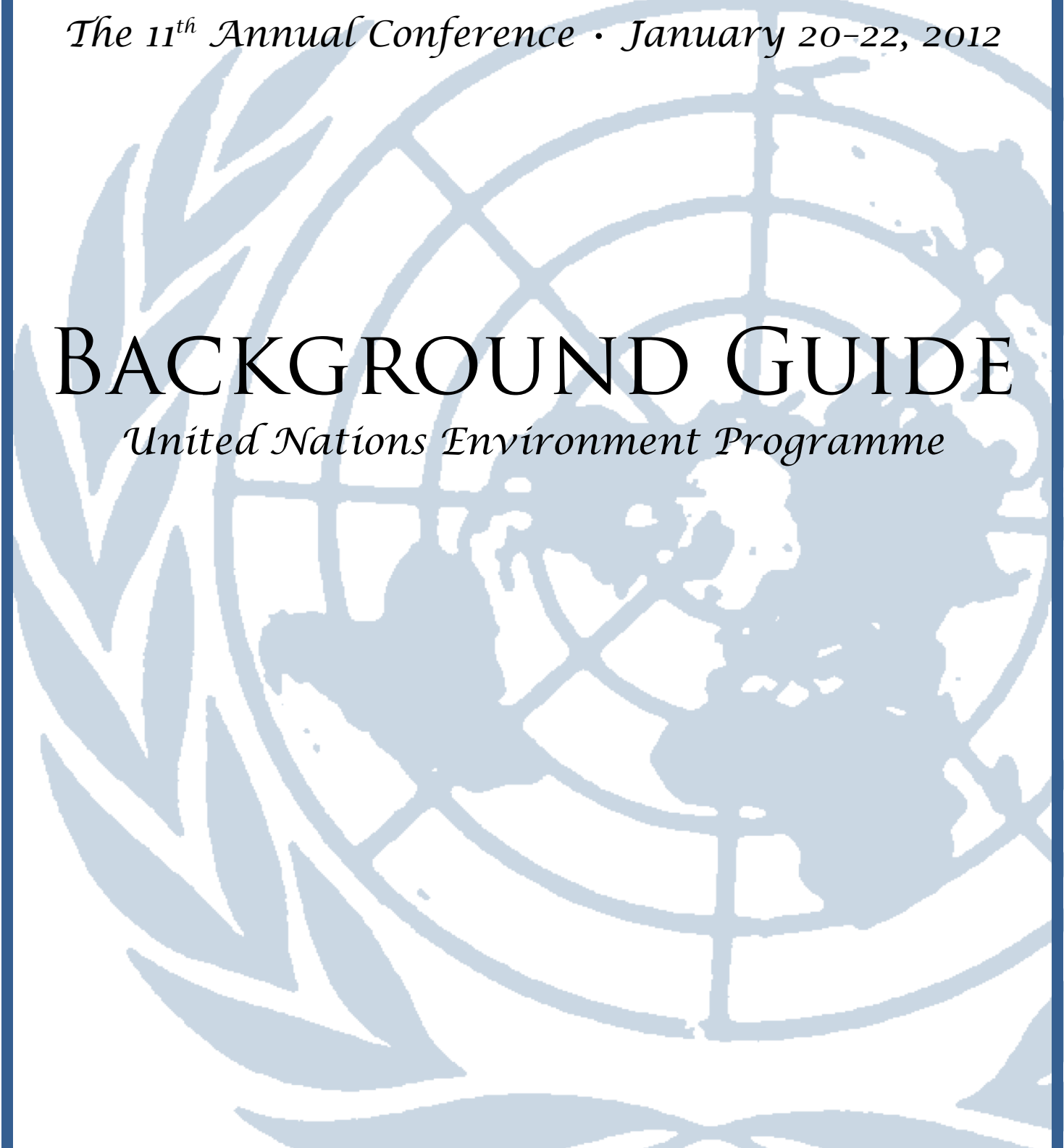


VANCOUVER MODEL UNITED NATIONS

The 11th Annual Conference • January 20-22, 2012

BACKGROUND GUIDE

United Nations Environment Programme





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The 11th Annual Conference • January 20-22, 2012

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Dear Delegates,

My name is Marco Wong and it brings me joy to serve as director for the United Nations Environment Programme at Vancouver Model United Nations 2012. I am currently attending Semiahmoo Secondary in South Surrey as a grade 12 student and have discovered a keen interest for world politics. My first ever conference as a delegate was actually here at VMUN 2010, two years ago, and I attended as a delegate again last year because I appreciated the high level of debate; hopefully you too will enjoy this committee, regardless of the amount of experience you have.

I hope that you will enjoy debating on the two topics for this committee that my staff and I have chosen; both are extremely relevant to the ever-changing world that we live in. The two topics of discussion in UNEP this year will be: Marine and Coastal Ecosystems and Sustainable Energy in Developing Countries.

In Topic A, Marine and Coastal Ecosystems, you will have to examine the numerous concerns related to these environments, especially at a time when climate change seems inevitable. Delegates are encouraged to think creatively about relevant issues relating to these ecosystems when doing their research; the BP oil spill crisis in the Gulf Coast might be a good place to start. Topic B, Sustainable Energy in Developing Countries will be challenging as it could polarize the committee, splitting between the more economically developed and the less economically developed nations. While the UN has hosted number of summits dedicated to tackling the issue of the enhanced greenhouse gas effect, nothing concrete has yet been established. Delegates are encouraged to think about how a solution agreeable to all nations might be achieved; a good place to start would be to look at previous documents such as the Cancun Accord and the Copenhagen Accord, and the Kyoto Protocol.

While this is an environmental committee, there are a number of aspects to these issues that transcend simply that, and it is up to delegates to find a resolution that benefits all. I wish you the best of luck in your research and look forward to hearing some top-notch, stimulating debate.

Best Regards,

Marco Wong
Director, United Nations Environment Programme

Topic A: Marine and Coastal Ecosystems

Introduction

As land-dwellers, most of us humans do not often consider the plight of the oceans. Marine and coastal areas, however, cover nearly three quarters of the Earth's surface, and face a diverse array of environmental challenges. The health of marine and coastal ecosystems is crucial to the human race; according to UNEP's introductory guide to Marine and Coastal Ecosystem-Based Management, "oceans and coasts ensure the well-being for a growing global population..." Marine and coastal ecosystems have a very important impact on the global economy, and their natural resources are central to industries running the gamut from fishing to tourism.

Unfortunately, mining, sewage, pollution, overfishing, industrial development, agriculture, and several other human factors have depleted the planet's marine and coastal ecosystems immensely. Many coastal habitats and wildlife are in decline: more than 29% of seagrass habitats have vanished in merely a decade, the living coral cover in the Caribbean has dropped by 50%, and the list goes on. These phenomena will directly and indirectly affect other ecological functions: for example, the oceans' decreased ability to absorb and remove large amounts of carbon dioxide in the Earth's atmosphere may lead to a rise in sea levels and global climate change.

Governments and environmental organizations have been well aware of the challenges facing our marine and coastal ecosystems. The United Nations Environment Programme (UNEP) itself was established in 1972 for the purpose of assisting nations in implementing sound environmental practices, which include the management of marine and coastal ecosystems. Governments have established more than 6,800 Marine Protection Areas (MPAs) in order to restrict human activity to preserve and manage marine and coastal ecosystems. And over the years, many non-governmental organizations, such as Oceana, have arisen to drum up awareness for marine and coastal ecosystems.

Timeline

1966 — Convention on Fishing and Conservation of Living Resources of the High Seas

1972 — American Marine Protection, Research and Sanctuaries Act establishes the National Marine Sanctuaries Programme

1973 — International Convention for the Prevention of Pollution From Ships

1975 — International Convention on the Prevention of Marine Pollution by Dumping of Wastes

1982 — UN Convention on the Law of the Sea

1988 — Intergovernmental Panel on Climate Change established

1994 — The Coral Reef Alliance founded for the purpose of preserving the world's coral reefs

2002 — The World Summit on Sustainable Development calls for increased spread of Marine Protected Areas (MPAs)

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2006 — The United Nations sets up the 2010 goal of conserving 10% of the world's ecological regions in Decision VII/15

2006 — New protocol adopted in place of the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter.

Historical Analysis

Throughout history, humans have been responsible for great changes in our marine and coastal ecosystems. Unfortunately, much of our impact has been negative, usually due to our lack of knowledge about the long-term damage caused to these ecosystems. Although today there are several high-profile organisations that exist to raise awareness of environmental issues, like UNEP and Greenpeace International, this has not been the case for most of history. Now, however, in an era of unprecedented public awareness of environmental issues, we are poised to make decisive inroads in preserving the health of marine and coastal ecosystems.

Because humans have been interacting with the marine and coastal ecosystems all around the world since prehistory, it is impossible to pinpoint any date for the beginning of this issue. That being said the human race's impact on the oceans has ballooned within the past few centuries, as the global population increased exponentially and modern economies arose. Under the doctrine of mercantilism – the idea that there was limited wealth in the world – in the 17th century, countries raced to claim as much land as they could. To maintain their security and prosperity, nations focused chiefly on strengthening their economy as much as they could. As a result, oceans and other bodies of water became means of transportation for the purpose of trade between mother countries and their colonies; this led to increased pollution. The species that lived in these ecosystems became not only food for the locals but products to export to foreign places; this led to overfishing and a loss of biodiversity overall. This continued on until the 18th century, where from then on it only worsened.

Between the 18th and 19th century, the Industrial Revolution spread from the United Kingdom, where it first originated, to the world. Countries began to adopt industrialization as they saw the evident economic rewards. Machines were invented in place of hand tools; various other kinds of power were used in place of human beings and livestock; factories were used to mass-produce and maximize results. Companies soon did whatever was necessary to minimize expenses, whether this meant lowering wages for workers or, more relevant to the topic of Marine and Coastal Ecosystems, turning to cheaper forms of energy – for instance, coal.

Though it is true that by using fossil fuels such as coal, profits may be maximized, there are many drawbacks. We know today that fossil fuels pollute by pumping excess carbon dioxide into the atmosphere, aggravating the balance of the greenhouse effect. As a result, temperatures begin to rise due to the warming of the Earth, leading to a variety of detrimental effects on our marine and coastal ecosystems. For instance, global warming led to the melting of glaciers at the North and South poles, resulting in an influx of fresh water mixing in with salt water. This imbalance resulted in the extinction of many species that may be well-suited for a certain environment. Other implications involve the loss of habitat for species living in the North and South poles, leading to a loss of biodiversity in that manner.

Current Situation

Despite the fact that there are numerous advocacy organisations for marine and coastal ecosystems, and that governments are well aware of what economic practices harm them, it is still very difficult to put the technical solutions we have into practice. For example, although the Intergovernmental Panel on Climate Change has made many recommendations, only a handful of these are widely practiced. Despite a multiplicity of collective environmental goals set at international conferences, legally-binding targets are rarely put into place to ensure that nations follow through on their commitments. Furthermore, even if we stopped polluting and damaging our marine and coastal ecosystems right now, the effects of our past actions would linger for centuries and require clean-up or reversal.

The concerns of the Industrial Revolution described above apply equally, if not more, in the 21st century. For one, pollution of marine and coastal ecosystems is still a pressing concern. Only in 2010 did we suffer the Deepwater Horizon Oil Spill in the Gulf of Mexico, which has become infamous as the “biggest unintentional offshore oil spill in the history of petroleum industry.” In that one spill alone, 4.1 million barrels of oil were spilled into the Gulf of Mexico, to disastrous effect. And then there is overfishing, one type of unsustainable resource depletion. Overfishing was a problem way back in the 17th century and remains a problem now. For example, one of Greenpeace International’s central initiatives involves the tuna population. They warn that our increasing consumption is pushing these species “to the brink of extinction,” noting a statistic that in 1999, the population of Mediterranean Bluefin had decreased by a factor of 80% since 1979.

In another regard, we are still heavily dependent on non-renewable fossil fuels. Despite the steps we have taken to replace them with cleaner forms of energy such as wind, solar, hydro, geothermal, and biomass power, the majority of our energy still comes from fossil fuels as they are less costly to develop (an issue which the committee will need to address in more detail in their discussion of Topic B – Sustainable Technology in Developing Countries). The enhanced greenhouse effect that we face from our use of fossil fuels has led the Intergovernmental Panel on Climate Change to estimate that if no changes are made to our current usage of fossil fuels, the best case scenario is that our temperature will continue to rise 1.5 to 1.9° C. The worst case scenario, again assuming no increase or decrease in our current fossil fuel consumption, is an increase of 3.4 to 6.1° C. In either case, our planet will see a more rapid melting and retreating of sea ice, permafrost and glaciers, changing the abiotic and biotic water composition of our marine and coastal ecosystems to a potentially massive degree.

The task at hand is for delegates to reach a resolution that addresses all of the issues named in addition to as many of the many more we face. Although a few examples of subtopics are suggested in this backgrounder, including mining, offshore drilling, industrial development, sewage, oil spills, over-fishing, climate change, delegates should be aware that there are numerous other issues that may be relevant to this topic. Throughout the conference, these other issues should be put up for discussion and delegates are encouraged to include solutions for these problems in committee resolutions. The problems faced by marine and coastal ecosystems are so numerous and diverse that this background guide is intended to spark ideas rather than place limits on them.

UN Involvement

There have been three major global treaties created regarding the preservation of marine and coastal ecosystems. These agreements concern dumping and pollution of oceans in particular, but delegates should note that in recent years treaties and conventions have expanded their focus to include other issues as well.

The first major treaty was the International Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, otherwise known as the London Convention of 1972. Entering into force in 1975, this convention, orchestrated by the International Maritime Organization and currently signed by 81 nations, prohibits entirely the dumping of certain hazardous materials in the ocean and restricts the dumping of other substances by requiring that dumpers own a permit. The London Convention distinguishes two different classes of potentially dumped materials: Black List and Grey List. In general, Black List substances may not be dumped unless present only in trace amounts or rendered harmless, while Grey List substances must be subject to special treatment when dumped. Furthermore, the London Convention sets out general criteria to take into account when issuing permits for dumping. This convention is especially significant because it was one of the first milestones towards combating marine pollution; it was a pioneer document in that its goal was to prevent indiscriminate dumping in international waters and possible consequent harm to human and animal health and depletion of natural resources. The London Convention has been relatively successful, causing a decline in dumping over the years. However, it is important to take into account that the convention only restricts deliberate disposal at sea of wastes from ships, aircraft, and platforms, neglecting to restrict other forms of pollution such as discharge from land-based pipes, waste generated by vessels, and placement of materials for a non-dumping purpose.

In 1996, the parties involved in the London Convention adopted a new protocol, which entered into force in 2006. This new protocol was a change from the former 1972 Convention because it stressed a “precautionary approach” to the issue of marine pollution. In other words, the 1996 Protocol required that “appropriate preventative measures are taken when there is reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects.” In addition, in contrast to the London Convention, which simply stated which materials could not be dumped, the new protocol stated the materials that could be dumped, which were placed on a selected list. Among these permitted materials are sewage sludge, dredged materials, fish waste, man-made structures at sea, inert and inorganic geological material, and organic material of natural origin. Finally, a main difference between the 1996 Protocol and the London Convention was that the 1996 Protocol stressed that pollution should not merely be shifted from one part of the environment to another.

The second important international treaty signed to protect marine and coastal ecosystems was the International Convention for the Prevention of Pollution From Ships, 1973, as modified by the Protocol of 1978, or MARPOL 73/78. This agreement is significant because it is the main international document that covers non-deliberate marine pollution by ships. MARPOL 73/78 includes six annexes, and is supported by 150 member countries. The six annexes are as follows:

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1. Regulations for the Prevention of Pollution by Oil
2. Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk
3. Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form
4. Prevention of Pollution by Sewage from Ships
5. Prevention of Pollution by Garbage from Ships
6. Prevention of Air Pollution from Ships

A significant problem that has plagued the success of MARPOL 73/78, unfortunately, is hesitance of lesser-developed nations to sign the agreement, because it does not particularly benefit them in their eyes. In addition, there are costs associated with the possible refitting of fleets to adhere to the convention and the building of waste disposal facilities on land. Furthermore, enforcement of MARPOL, cost recovery for countries, and the ultimate fate of the waste are major issues that have yet to be resolved.

A third and final major agreement was the 1982 UN Convention on The Law of the Sea. This groundbreaking document, first suggested in November 1967 by Malta's ambassador to the United Nations, basically strived to set forth regulations to control the use and abuse of the resources of the ocean, a monumental task that was supported by much of the international community. Each country was given certain economic and territorial rights to coastal and marine ecosystems surrounding or near their land, as well as the duty to govern their oceans in a way adhering to the UN Convention. Even more significantly, the 1982 Convention stressed the prevention of marine pollution in six areas: land-based and coastal activities; continental shelf drilling; potential seabed mining; ocean dumping; vessel-source pollution; and pollution from or through the atmosphere. Also, it states that the protection of marine ecosystems was a shared obligation of all states, though each state is urged to act not only according to national or regional standards, but also international standards set out by previous treaties.

It is crucial to recognize that these three conventions are not the only documents at this moment concerning the protection of marine environments. For example, the 1992 United Nations Conference on Environment and Development, held in Rio de Janeiro, also placed great importance on preserving ocean ecosystems, both by the prevention of dumping and the combating of depletion of fish stocks. In Agenda 21, the programme of action adopted at the 1992 Conference, these issues and many others are discussed in depth.

Possible Solutions & Controversies

The United Nations Environment Programme (UNEP) has provided guidance, coordination, and expert aid to countries in preserving their marine and coastal environments for decades, through UNEP's Marine and Coastal Ecosystems Branch (MCEB). UNEP tends to take a very methodological approach to environmental issues, and this is no exception when dealing with marine and coastal ecosystems. For one, UNEP stresses that sound science should be the guiding principle for environmental stewardship strategies. Also, UNEP approaches environmental issues from all levels, and implements small-scale solutions such as pollution monitoring and fisheries management broad-scale programs such as Integrated Coastal Management (ICM) and Ecosystem-Based Management (EBM). UNEP works with all levels of government to design and implement solid policies for ecosystem management. In addition to assessing ecosystems, analysing strategies, and providing expert technical advice to policymakers, UNEP promotes

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education and outreach programs for the public. Of course, UNEP also cannot fail to consider the economic needs of individuals and corporations in its strategies. Overall, because of UNEP's uniquely prominent role at the forefront of environmental reform, it is uniquely positioned to lead the charge against depletion of marine and coastal ecosystems.

The environmental problems that marine and coastal ecosystems face are diverse and numerous. As a result, any comprehensive resolution reached by UNEP will need to take a multifaceted approach from many avenues. A few examples of possible solutions and controversies are below, but delegates will need to research further into these and other sub-topics and bring fresh ideas to the conference.

Marine Protected Areas (MPAs)

Marine Protected Areas are one of the most widely-used methods of managing marine and coastal ecosystems. There are nearly 7,000 MPAs in the world. The term itself refers to a wide variety of areas that receive some degree of legal protection from human activity; for example, reduced or prohibited fishing takes of specific species. MPAs help conserve marine and coastal environments in several ways: they can protect endangered or threatened species from extirpation, unique habitats from destruction, and areas of high biological value or high biodiversity from depletion. MPAs are most commonly understood for their combating of overfishing, as their establishment can give fish populations a chance to rebound. In fact, it has been suggested that MPAs can create a "spillover effect", where depleted fish stocks all around MPAs of sufficient size rebound in concert with stocks in the MPA itself. MPAs are not without their controversies, however. The actual efficacy of MPAs, including the spillover effect, has been disputed. Fair compensation to fishermen whose livelihoods have been damaged by MPAs is an important issue, as well as the basic questions of whether a specific MPA will have a net positive effect on local economies at all. There have also been complaints from indigenous and aboriginal peoples who want to preserve their land rights, and continue their traditional activities in MPAs. Of particular interest was the controversy surrounding the Chagos Islands being converted into a MPA, which drew cries from native Chagossians who were deported decades before so that a US air force base to be built that the Marine Protected Area was intended to ensure they could never return.

Pollution

Pollution of the seas is, of course, a major issue. For example, currently, more than 400 million tons of sewage are dumped into the world's oceans annually. Ships and boats further pollute coastal and international waters with their exhaust, and, on longer voyages, their various human and other byproducts. Worse, neither of these is the most major pollution problem facing marine and coastal ecosystems. It is land-based pollutants that, quite disturbingly, generate even more waste. Through run-off and precipitation, heavy metals (from mining), oils, and pesticides can make their way into crucial ecosystems. They can alter water composition and heavily affect biodiversity in these marine and coastal ecosystems. It is very difficult to combat these sorts of pollution short of merely regulating and limiting their use. Bans on some pesticides, for example, are already in place, but suitable alternatives for farmers, miners, and other affected workers must be in place. Marine litter also presents a problem, with plastic often being the most problematic. While sunlight can break plastic down into smaller pieces, this presents a further set of problems, as animals may ingest these pieces, potentially altering their hormones and disrupting body functions such as reproduction. It is difficult to combat marine litter, as plastics and other such materials

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have very slow degradation rates. Actually, one of the worst problems facing us in combating marine and coastal pollution is our relative lack of knowledge about the long-term effects on the ocean.

Other Problems

There are many other problems facing our marine and coastal ecosystems, most of which must be combated from multiple angles. Pollution, which was discussed above, serves as an excellent example. Certainly, punishments and regulations must be a part of any comprehensive solution to pollution, but proactive strategies are just as effective: for example, encouraging recycling leads to less waste products that can enter the ocean. New inventions and scientific solutions can also help considerably: for example, the possibility of using algae-based biofuels in boats to reduce pollution has been brought up.

Environmental disasters, such as oil spills, are another example of an issue that must be attacked through multiple avenues. Considering the massive environmental damage that oil spills can wreak, it is obviously of the utmost importance to work on prevention, whether via safety regulations, drilling moratoriums, incentives, or technological inventions. That being said, UNEP would be flirting with doom if it were not also to consider and put into place contingency plans for mitigation and cleanup in the event of oil spills. Delegates would do well to study the 2010 BP Deepwater Horizon oil spill disaster as a case study for the sub-topic of environmental disasters.

There are a diverse array of possible solutions not mentioned in this background guide, and delegates are highly encouraged to seek them out and present them at the conference. Of course, delegates should try to consider different approaches to the issues. UNEP supports Ecosystem-Based Management (EBM), which is focused on the health of ecosystems as an integral part of humanity's resources than it is on short-term material profit. Delegates should be careful to consider the different interest groups and the pros and cons to each and every solution presented.

Bloc Positions

Africa

Most of the African states have committed to projects that protect the marine and coastal ecosystems. The Regional Seas Programme for West and Central Africa Region (WACAF) has made progress with issues such as planning and pollution. All East African countries have signed the Nairobi Convention, which states that their mission is to develop their marine and coastal resources in a sustainable manner.

Islands

Areas with many islands, such as the Caribbean, often have comprehensive fishing regulations as national policies. However, in developing states many fishermen choose to engage in illegal fishing practices to make a living. The Caribbean Environment Programme was created by UNEP to protect the coastal environments for the years to come. However, the welfare of small industries on less developed islands must also be considered.

East Asia and the Pacific

East Asia and the Pacific face challenges when dealing with ecosystems. The Action Plan for the Protection and Sustainable Development of the Marine Environment and Coastal Areas of the East Asian Region was

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originally signed by Indonesia, Malaysia, the Philippines, Singapore and Thailand. Only later, through a revised Action Plan, did Cambodia, China, Korea, Vietnam and Australia join. This plan analyzes the impacts of human activities on marine and coastal ecosystems; however, it is not a binding agreement.

North America and Europe

This bloc consists of developed countries, so most of these states have made strong commitments to the protection of marine and coastal ecosystems. The European Marine Ecosystem Observatory (EMECO) helps share data. Several North American Conservation Action Plans have also been issued to help preserve specific animals, such as the humpback whale.

Discussion Questions

1. How can nations balance the need for activities such as large-scale fishing and the development industry with the call for the sustainability of coastal ecosystems?
2. Why were previous efforts by international organisations and the United Nations not effective?
3. How can the international community prevent and reduce the impact of environmental catastrophes such as oil spills?
4. How can non-coastal nations engage and assist in the efforts of sustaining marine and coastal ecosystems?
5. What can nations do in attempt to mend and reverse the damage done to marine ecosystems?

Additional Resources

<http://www.unep.org/ecosystemmanagement/UNEPsWork/MarineandCoastalEcosystems/tabid/513/Default.aspx>

United Nations Environment Programme

<http://unfccc.int/2860.php>

United Nations Framework Convention on Climate Change

<http://www.un.org/en/globalissues/oceans/links.shtml>

United Nations (and Related Bodies)

<http://www.greenpeace.org/international/en/campaigns/oceans/marine-reserves/>

Greenpeace International

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<http://www.millenniumassessment.org/documents/document.356.aspx.pdf>

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