

**Freshman #14**

TOPIC:protecting coral reefs

SOCOMUN XXVI

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Life Below Water – Protecting Coral Reefs

Hi! My name is Amanda Fosdick. I am a senior and I will be one of your co-chairs at SOCOMUN this year. I am just beginning my fourth year of MUN and I cherish all of the experiences I have gotten out of it. I plan on using the skills of public speaking and consideration of all viewpoints in my future both in college and the professional world. Within MUN I really enjoy environmental topics and my fascination with them has even led me to taking Environmental Science, which is now my favorite class. I have gone to conferences at UCSB as well as Yale. While travelling I not only got to enjoy new sights, but I also established bonds with people from all across the globe. Outside of MUN I enjoy running track, soaking in the sun, and waterskiing.

 I sincerely hope that your experience at SOCOMUN will excite you to continue on with more MUN conferences. Within committee you will be representing your country in discussing the crisis of the dying and bleaching of coral reefs. Throughout the committee you will give individual speeches, participate in caucuses which are small group discussions, and write resolutions. In writing resolutions, you will collaborate and compromise with other delegates to form the best solutions possible. If you have any questions whether in regards to MUN in general or specifically for the conference or your research do not hesitate to email me at socomunfresh14@gmail.com. Looking forward to the conference!

Hi my name is Patrick Villasenor, and I am a 16 year-old sophomore. I will be your legal for this year’s SOCOMUN. This is my second year of MUN and I enjoy it very much. I have won a total of 4 awards in my MUN career, including an award at the Berkley MUN conference. Model United Nations has truly made me a better speaker, and a more globally minded individual.

Hello, my name is Analiese McFadden and I will be your Secretariat at SOCOMUN. I am a sophomore at SMCHS, and this will be my second year participating in MUN. I enjoy MUN because it has helped me see the world, and many of the issues in it, those of which I was never aware of before. Besides MUN, I enjoy running, practicing yoga, and going to the beach.

**Background:**

 The vast ocean covers just less than three quarters of the entire earth and holds 97 percent of all of the water in the Gaia ecosystem. Within the expanse ocean are a variety of marine ecosystems. Of these marine ecosystems, coral reefs are the most biodiverse in that they are home to a multitude of different organisms ranging from reef sharks to sea cucumbers to single celled organisms. Approximately 25 percent of oceanic species rely on coral reefs to provide a source of food and a place for shelter. Corals are animals, a majority of which feed on the single celled organism zooxanthellae. Depending on the particular species of the coral, it reproduces either asexually or sexually. Despite the way in which the coral reproduces it does so in a rapid way, allowing for the establishment and expansion of coral reefs, such as the well-known 1,600 mile Great Barrier Reef off of the coast of Australia. Beyond the key role that coral reefs play within the functions of the oceanic ecosystem, they also provide immeasurable benefits to the human population. In terms of monetary value, experts from the National Oceanic and Atmospheric Administration’s Coral Reef Conservation Program estimate it to be the coral reefs provide somewhere from 30 billion to 172 billion US dollars annually. This number derives from a combination of factors which come as a result of coral reefs. These factors include a source of food, shoreline protection, jobs created from tourism, medicinal benefits, and even an aesthetic value.

 Alarmingly, in the past 30 years a relatively rapid loss of our coral reefs has occurred, specifically half of the coral reefs died off. The coral reefs are failing to reproduce at a sustainable rate. If these rates continue, scientists from 50 Reefs conclude that all of the coral reefs within the earth will die out by the year 2050. The loss of coral reefs raises concerns for a wide range of reasons. These concerns range from human centric to environmental sustainment. Coral reefs are facing various negative impacts brought on by changing natural events and conditions as well as increased destructive human activities. One of the most prominent natural occurrences negatively impacting coral reefs is climate change. Increased temperatures have directly impacted coral reefs because just over 90 percent of the resultant heat is absorbed by the ocean water. Additionally, 33 percent of carbon dioxide emissions, which is one of the major gases affecting climate change, is absorbed by ocean waters. Climate change has caused mass amounts of coral bleaching, one main example being the Great Barrier Reef. Coral reefs are struggling to maintain stability when faced with these rapid changes. Other natural causes impacting coral reefs is ocean acidification, coral disease, alien species, and the Crown of Thorns Starfish. Human activities play the largest role in the destruction of the coral reefs. These activities include unsustainable fishing practices, snorkeling and scuba malpractices, over crowded tourism, urbanization, and pollution.

 The United Nations, many NGOs and other organizations have taken steps to begin addressing the issues targeting coral reefs and the negative results as they continually face destruction. Resolution 2/12 was recently implemented by the UNEP’s Coral Reef Unit. This resolution calls for international collaboration on the preservation of the world’s coral reefs. Involvement in this issue can also be seen in organizations such as the National Ocean Service, Defenders of Wildlife, and the Coral Reef Alliance, all of which are promoting protection of coral reefs through altering human activities. The National Ocean Service is working with the Coral Reef Conservation Program to supply up to date information on the continuing devastation hitting coral reefs along with simple suggestions on how to limit your individual negative impact on the coral reefs within the span of your daily life. The Defenders of Wildlife is an organization that mainly focuses on protecting habitats and the species within them. For example, the Defenders of Wildlife organization is currently working on efficient and effective conservation and management strategies for coral reefs. Alongside that, the organization researches and discovers ways in which members can aid coral reefs in adjusting to the effects of climate change. The Coral Reef Alliance establishes partnerships and bonds with local reef communities across the globe in order to best provide protection to coral reefs.

P**ossible Solutions:**

 The following are some possible solutions to address the crisis of the declining coral reefs. In creating solutions for your country it is necessary to consider your individual country’s policy and preferences in regards to the preservation of coral reefs. (Although it is unlikely for harsh contrast between policies, different countries may advocate for various policies to be implemented in order to benefit their nation.) Also, the following are mere suggestions but it is strongly encouraged that unique and thorough solutions are created. These solutions will establish collaboration with other nations throughout the conference in order for resolutions to be formed by the end of committee. Please note that it is not necessary to address funding when forming solutions due to the fact that it is of concern of the Fifth Committee and the World Bank.

 The proposed solutions outlined below address some crucial aspects in regards to the issue of the dying coral reefs and work towards protection of coral reefs and the promotion of maintaining sustainable coral reefs in the future. The establishment of marine protected areas (MPA) is a foundational step in the overall protection of coral reefs. Though these are implemented for many coral reefs, endorsement of establishing more major coral reefs under this designation as well as calling for further steps to be taken in order to ensure and enhance the benefits of the marine protected area. By assigning people in the local area to be the main enforcers of the marine protected area as well as the main protectors, these areas will be thoroughly protected. Another step would be to build an agreement as to specific fishing regulations, between the new overseers of the marine protected area, who would be in charge of the rules, and the companies who fish in the area on. Ultimately, this agreement would aim to allow the company to continue to survive as well as the coral reef to continue to flourish.

 In taking into consideration the significant impact which climate change plays in the loss of coral reefs, solutions towards decreasing climate change and the effects of climate change would prove to be proactive. (Climate change is a large and broad crisis thus it is its own topic at many conferences, yet remains applicable to the preservation of coral reefs so a solution or two geared towards it would be sufficient.) One key, yet simplistic way to limit climate change is to limit emissions of greenhouse gases. This can be done through a minimization of waste, such as government legislation mandating that plastic and paper bags at grocery stores be a cost to the consumer as a way to promote reusable bag usage. Minimization of waste disposal minimizes greenhouse gas emission due to the fact that it limits various forms of waste management which typically leads to gas emissions. Also, promotion of carpooling and public transportation significantly limits greenhouse gas emissions. Government incentives would be of benefit to supporting this. These incentives may include a carpool lane bypassing traffic or discounted public transportation if taken so often.

Often times coral reefs provide a form of monetary benefit or value to a local area or community. In many solutions which successfully protect the coral reef systems, the financial takeaways are lost. To combat this issue, a proposed solution is the institution and promotion of ecotourism. Typically, coral reefs are breath taking sites with the capability to draw people from around the world. Nations with coral reefs off of their coast should advertise ecotourism if they are not already. Also, nations which simply advertise to tourists would benefit from specifying ecotourism. Ecotourism will counterbalance the loss of revenue directly from the coral reefs through activities such as fishing, by bringing in tourists providing a new form of revenue. Tourists will improve the local area by bringing money into the city, specifically in places such as restaurants, shops, and hotels. Additionally, ecotourism benefits the coral reefs by bringing attention to their aesthetic value as well as the biodiversity which they support. Additionally, the money raised will also go towards further funding for the protection of and sustainability within coral reefs. Within ecotourism, various mediums by which to convey important information can also be established. The information would include the universal benefits of coral reefs within the Earth’s ecosystem, the major sources of the destruction of coral reefs, and ways in which they can minimize their influence on the dying and bleaching of coral reefs. Specifically for ecotourism, ways to minimize one’s own negative impact would include descriptions of ways in which to scuba dive and snorkel without harming the coral reefs. The mediums of this information can be from a multitude of options. Depending on the resources of the local area it may be a pamphlet, a video, an email, or even a smartphone app.

**Questions to consider:**

The following questions are provided simply to assist in guiding research and preparation for the conference. It is neither required nor necessary to directly answer these questions, but rather they are to act as a helpful resource.

1. In terms of environmental issues and topics, is your country heavily involved or is it of minimal concern in their governmental agenda? How involved is your country?
2. Specific to the crisis facing coral reefs, does your country have a specific focus towards addressing one specific aspect of the issue or is it interested in a more holistic approach? If your nation is geared towards a specific approach, what is it?
3. What actions, if any, has your country taken with the aim to save and protect the coral reefs?
4. Does your country have a direct interest in taking measures to preserve the coral reefs? If so what is it? Tourism? Fishing industry? Food source?
5. Are there any new technologies which would benefit in the efforts towards coral reef conservation and protection? If so, what are their success rates and are they practical to implement?
6. How can your country entice its private citizens to adhere to basic practices of pollution prevention such as recycling and reducing?
7. Does your nation have the infrastructure to support ecotourism as a method to prevent further destruction of coral reefs? If so, what would be the specific draw for ecotourism?
8. In what ways can nations support businesses which either directly or indirectly assist in the protection of coral reefs?

Works Cited

US Department of Commerce, National Oceanic and Atmospheric Administration.

"Corals."*Protecting Coral Reefs - Corals: NOAA's National Ocean Service Education*. N.p., 01 June 2013. Web. 20 Apr. 2017. <http://oceanservice.noaa.gov/education/tutorial\_corals/coral11\_protecting.html>.

According to the National Ocean Service, coral reefs are heavily endangered due to a variety of factors. These factors include climate change, human interference, and changes to the ocean’s ecosystem. If something is not done about protecting coral reefs, the National Ocean Service says they are bound to disappear, and so is the life that thrives in coral reefs.

When assessing this article, it is important to note that a major country (the U.S.) created a Coral Reef Task Force to try and protect coral reefs. It would be interesting to see if other countries (such as Australia who has the Great Barrier Reef) have similar task forces too.

From this article I have learned the importance of coral reefs to the oceans ecosystem. I have also come to realize that the destruction of coral reefs is drastically affected by human error, and the climate change issue.

"Threats to Coral Reefs." *Defenders of Wildlife*. N.p., 06 May 2013. Web. 20 Apr. 2017.

<http://www.defenders.org/coral-reef/threats>.

According to the activist agency defenders of wildlife, the acidification and warming of the water are the main environmental enemies of the coral reef. Human interference in the forms of fishing, and tourism also affect coral reefs in a negative way.

From this article, one can identify solutions that could possibly be used by the delegates to form a resolution. This website also suggests that the main contributors to saving coral reefs are the United States.

From this article I have furthered my knowledge of what threatens a coral reef. I have also identified specific solutions such as limiting the amount of tourism to coral reefs, and also implementing an international ban on fishing near coral reefs.

*CRU Home*. N.p., n.d. Web. 20 Apr. 2017. <http://coral.unep.ch/CRU\_Home.html>.

The UNEP’s Coral Reef Unit has recently implemented Resolution 2/12 on coral reef management. This resolution has called for the international community to collaborate on the issue of protecting the natural beauty of the coral reef.

This article clearly shows that the international community is committed to protecting coral reefs, since they set up a task force in the United Nations Environment Programme. Also, one could notice that there are a variety of political and economic roadblocks that prevent the international community from fully helping the coral reefs.

From this article I have learned that the United Nations is fully committed to helping coral reefs. I have also identified a possible solution the delegates can utilize. This solution would require more countries to get involved with the protection of coral reefs, by using incentives.

"Biodiversity." *Coral Reef Alliance*. N.p., n.d. Web. 20 Apr. 2017. <http://coral.org/coral-reefs

101/why-care-about-reefs/biodiversity/>.

According to the international organization, the Coral Reef Alliance, coral reefs are similar to metropolises. They are home to a variety of creatures from sea cumber to reef sharks. The organisms on the coral reef also act as food for these creatures.

From assessing this article one can see that these sea creature would all perish if a coral reef is destroyed. The lasting effect of the destruction of a coral reef can affect the different ecosystems.

I learned about the different wild life that resides in a coral reef. Delegates can possibly formulate a solution that will make it a criminal act to touch a coral reef.

"| The Nature Conservancy." *Ways to Help Coral Reefs | The Nature Conservancy*. N.p., n.d.

Web. 20 Apr. 2017. <https://www.nature.org/ourinitiatives/habitats/coralreefs/ways-to-help-coral-reefs/>.

This website states that the best ways to protect coral reefs include practicing safe snorkeling and scuba diving, and also by reducing pollution. Another way is to throw away trash in the right bin so that it does not end up on a coral reef.

From this website it can be assumed that trying to protect our coral reefs does not just have to be a government job. This could provide the delegates with some solutions that they can apply to their citizens.

From this conservation website I learned what some citizens can do to protect the coral reefs. An example solution for a delegate would be to provide incentives to the general public if they agree to get involved with helping to save the coral reefs.

Hughes, Terry. “Scientists Mobilize as Bleaching Resumes on the Reat Barrier Reef. ScienceDaily, ScienceDaily, 15 Mar. 2017,

www.sciencedaily.com/releases/2017/03/170315143821.htm. Accessed 26 Mar. 2017.

This source explains how scientists are worried about the bleaching and dying of the Great Barrier Reef, and how climate change has been affecting all of the coral. The scientists formed studies to try to find out why the coral was dying.

This article is from a trustworthy source, and has solid facts that are backed up by evidence. It also has direct quotes from the scientists themselves, which can be used to show statistics.

The text offers great detail on how the Great Barrier Reef has been affected by bleaching, but it fails to mention any other coral reefs around the world. The information included could most definitely be used as a source to show a cause of the dying coral, but it may be too general of a source.

Mead, Leila. “UNEP Releases Tool to Support Coral Reef Conservation | SDG Knowledge Hub |

IISD.” *SDG Knowledge Hub*, IISD- SDG Knowledge Hub, 26 May 2016, sdg.iisd.org/news/unep-releases-tool-to-support-coral-reef-conservation/. Accessed 27 Mar. 2017.

In this source, a tool developed by the United Nation’s Environment Programme (UNEP) is described. The tool mentioned records the data from coral, and helps to determine how much changes in temperature are affecting and bleaching the corals.

The source is very trustworthy, as it is based off of one of the UN’s very own programmes. The author is an expert on climate change, and is absolutely qualified to be writing an article such as this one. The research does not appear biased in any way, and the source is qualified, and very recent,

This article can fit into my research by being used as an example of one of the ways the UN has taken action to help the problem of the dying of coral reefs. It also contains a few specific statistics on how many coral reefs have been affecting by bleaching, which can be used to explain the problem, as well as provide trustworthy information on the topic.

Na. “50 Reefs.” The Ocean Agency, The Ocean Agency, 2017,

www.theoceanagency.org/50reefs/?gclid=Cj0KEQjwqtjGBRD8yfi9h42H9YUBEiQAmki5Ohzbyx-B-tFv\_bigxOD9F5iJ8CHUdcivMlMifRt4\_IYaAhs28P8HAQ. Accessed 25 Mar. 2017.

In this article, the organization, 50Reefs*,* which is connected to The Ocean Agency, gives information on how critical the problem with the coral reefs really is, as well as what consequences would occur if all the world’s coral reefs died. In addition, it gives great key statistics on how many people and other lifeforms would be affected by the extinction of coral reefs, and how soon they could all be gone.

 This article is well written, and the facts are very well documented. The source appears scholarly, and the team leading the organization consists of many of the world’s top coral reef scientists.

It is a very useful source, because it provides very specific and knowledgeable statistics. It also is a source that can be used to draw out the reasons for the dying of coral reefs, what can be done to save them, as well as why the reefs need to be saved.

US Department of Commerce, National Oceanic and Atmospheric Administration. “Corals-

Protecting Coral Reefs.” *Protecting Coral Reefs - Corals: NOAA's National Ocean Service Education*, National Ocean Service, 1 June 2013, oceanservice.noaa.gov/education/tutorial\_corals/coral11\_protecting.html. Accessed 25 Mar. 2017.

In this article, the National Ocean Service explains a few of the key characteristics and roles coral/ coral reefs play in our world today. It also elaborates on a few organizations that have been formed to help preserve and protect the endangered corals in our oceans.

After reading and assessing this article, I have come to the conclusion that it is a reliable source, and is up to date. This source is also not biased in any way, however, there is not a specific author listed in the article, which may be a problem.

 This article fits into my research because it can be used as a source that lists a couple helpful organizations that work to preserve coral reefs. It also provides useful information about coral reefs and their roles in the world, as well as give a sense of what ideas have already been used.

Michael Webster. “Coral Reefs 101.” *Coral Reef Alliance*, Coral Reef Alliance, 2014,

coral.org/coral-reefs-101/. Accessed 27 Mar. 2017.

This article contains many useful elements, including a list of explanations for the cause of the dying corals, reasons for why coral reefs need to be saved, as well as ways for everyone to help out in preventing the corals from going extinct. The article is from an organization, the Coral Reef Alliance, which has played a role in protecting coral for a very long time.

It is a reliable source, and all of the facts and data are provided by certified experts. The facts are well documented, and the leading director is a specialist in coral reef science.

This source can be used as a reference for background information on the endangerment of coral, as well as give people an idea of solutions to form to help aid in protecting coral reefs. It can also be used as an organization that would possibly be a sponsor in the solutions portion of the paper.