
ASSEN MODEL UNITED NATIONS 2022

COMMITTEE GUIDE

UNITED NATIONS ENVIRONMENT PROGRAMME



*"Fighting the destruction of coral reefs caused by
climate change"*

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Chairs

Jim van IJcken

Dear delegates,

My name is Jim, and I am happy to be one of your chairs during the ASMUN conference. In the past years, I have participated in several MUNs and always enjoyed the conferences. I'm looking forward to all your creative ideas, some heated debates, and outstanding speeches.

As a chair, I hope you will enjoy the conference and leave the day with great memories. I will do my utmost best to make sure the gossip box will not go unused. I'm looking forward to seeing you all in person and wish you good luck with your preparation.

Enjoy!

Jesse van Beelen

Hi delegates of ASMUN 2021,

My name is Jesse van Beelen and I am excited to be a chair for this year's MUN. I am currently in my sixth and thus last year of VWO. So, I have had the opportunity to participate in some other MUNs for the last couple of years, including ASMUN in 2020 and OLMUN last year.

I hope you are looking forward to be a delegate and to take part in the conference, to solve real time problems we are facing in the world right now. I hope you are as excited as I am!

Writer

Honourable delegates,

I was incredibly pleased to write about the protection of coral reefs, as it is one of the lesser known, but not less important, issues concerning climate change.

This issue has been around for quite some time and will be one of our biggest issues in the future if we do not take any form of action. I was shocked to find out how much coral reefs contribute to our daily lives; it is therefore time to act.

Now, it is your job to find solutions which can be incorporated into a strong resolution! I hope there will be a few future Greta Thunberg's in this council that will take this responsibility seriously, so we can walk on this earth a little longer. I am incredibly curious to see what you all will come up with and wish you all good luck. Moreover, I wish you much fun during the conference and debating! And remember this is our own future we are talking about, so 'be the change you want to see in the world'.

Sincerely,
Meria Bahnan

Countries on the committee

- The Commonwealth of Australia
- Republic of Indonesia
- Republic of the Philippines
- The Federation of Malaysia
- The Independent State of Papua New Guinea
- United States of America
- The French Republic
- The Republic of the Marshall Islands
- The People's Republic of China
- The Republic of Costa Rica
- The Republic of Nicaragua
- The Federative Republic of Brazil
- The Republic of Maldives
- Republic of South Africa
- Russian federation
- Republic of Poland



Introduction

Dear delegates,

Welcome to the United Nations Environment Programme committee. It is a well-known fact that the ocean is the foundation of all life, an extraordinary and largely unexplored place, teeming with fascinatingly diverse plants and animals which, together with currents and natural systems, shape our planet. 72% of our planet is covered with ocean, which provides us with food and facilitates pleasure. The most important asset of the ocean is, however, the coral reefs.

Even though coral reefs only cover about 285,000 km², which is less than 0.1% of the surface area of the ocean, they essentially underpin ocean biodiversity. Around 25% of all marine species live in and around coral reefs and many more species are discovered each year. Coral reefs are essentially nurseries to many fish species, giving the small fish a home and a chance to grow, which explains the great diversity.

Additionally, coral reefs provide important economic, social, recreational, and cultural benefits to society. For example, they provide natural infrastructure, which can protect coastlines from storm events and flooding. They also create food security for vulnerable populations, by maintaining fisheries in the area. Even modern medicine has benefitted from coral reefs, as they provide certain complex compounds used for life-saving medicines. Lastly, coral reefs attract tourism, creating economic opportunities for locals.

During this conference, it is your job to propose measures that can protect coral reefs around the world, as well as counter any actions that harm the reefs. Different regions are affected differently by the corals and not all countries may see the direct benefit. However, it is time to compromise and finally tackle this global problem.

Good luck.

History of the council

The United Nations Environment Programme (UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment. Their mission is to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and people to improve their quality of life without compromising that of future generations.



Headquartered in Nairobi, Kenya, the council works through divisions as well as regional, liaison and out-posted offices and a growing network of collaborating centres of excellence. They also host several environmental conventions, secretariats and inter-agency coordinating bodies.

They categorize their work into seven broad thematic areas: climate change, disasters and conflicts, ecosystem management, environmental governance, chemicals and waste, resource efficiency, and environment under review.

UNEP works closely with its 193 Member States and representatives from civil society, businesses, and other major groups and stakeholders to address environmental challenges through the UN Environment Assembly, the world's highest-level decision-making body on the environment.

In 2019, the United Nations General Assembly declared 2021 until 2030 the UN Decade on Ecosystem Restoration. The work of the UN during this decade will focus on the restoration of degraded and destroyed ecosystems to enhance food security, improve the air quality, secure water supply, address the climate crises and protect habitats that support life on earth, like coral reefs. Additionally, the same decade has been declared the UN Decade of Ocean Science for Sustainable Development,

which puts a spotlight on coral reefs to inspire advances in science and technology to improve ocean health.

UNEP is supporting multiple partners to protect coral reefs, which include the Global Coral Reef Monitoring Network (GCRMN) and the International Coral Reef Initiative (ICRI).

Problem

As said in the introduction, coral reefs are indispensable to the health of marine life, but also to our lives. Each year, coral reefs provide up to 2.7 trillion dollars in services and benefit around 1 billion people. Unfortunately, coral reefs are currently in danger and climate change is the culprit. Ocean pollution, air pollution, global warming, you name it, is all detrimental for the coral reefs.

Firstly, the ocean temperatures are rising and 'ocean heatwaves', prolonged extreme oceanic warm water events, increase in frequency and severity. This affects the symbiotic (protracted) relationship between coral reefs and a type of algae (zooxanthellae). A symbiotic relationship means both species benefit: the reefs provide the algae with protection, while the algae produce nutrients for the reefs. The algae are also responsible for the striking colours of the coral reefs. When ocean temperatures increase, algae are expelled from the reefs, which means reefs lose an important source of food. They also lose their colour, which gives this process the name 'coral bleaching'. The coral reefs do not necessarily die, but cooler temperatures are required for the reefs to recover.

Another problem that affects coral reefs is ocean acidification. This is not only caused by an increase in ocean temperatures, but also by a rise in carbon dioxide levels. Both factors mean the pH of the oceans decreases, which reduces the availability of carbonate ions. These ions are one of the main building blocks of the skeletons of corals. A decrease in carbonate ions levels means reefs have trouble growing, and even maintaining, their skeleton. A good example of this is Australia's Great Barrier Reef, the world's largest coral reef, where growth has declined by 14.2% since 1990.



Solutions

Research shows that measures must be taken now to prevent the coral reefs from dying out. 30 to 50 percent of coral reefs has been lost already and if the current rate of global warming is maintained, 90% of coral reefs will have dissolved by 2050. Luckily, there are many ways to help coral reefs, which range from local to global measures.

Firstly, climate change needs to be tackled. Ocean temperatures must decrease, carbon dioxide levels must decline, and ocean pollution must be reduced. Many agreements have already been established internationally,

like the Paris Agreement on climate change, and many conferences are held between world leaders. In the end, only these kinds of efforts will be able to save the coral reefs. However, in the meantime, there are many other measures that can be taken to, temporarily, protect the corals.

One measure that can be taken is doing extensive research on the ways in which coral reefs and other species interact. As said earlier, coral reefs harbour incredible amounts of organisms, which leads to countless different mutual relations. Moreover, research can be done on the lives and habits of coral reefs. By understanding how corals work and how certain circumstances affect them, other efforts can be tailored more specifically towards the needs of coral reefs.

Furthermore, new regulations can be established concerning fishing and seafood consumption. Fishing can threaten coral reefs in different ways. For example, the use of certain fishing nets, which do not differentiate between fish species, can trap large amounts of herbivorous fishes, which keep algae in check. Another problem is fishing for large or small fish specifically. Young fish are often caught before having the chance to reproduce. Large, older fish produce more offspring that are likely to survive to adulthood. A decrease in both types of fish means populations will dwindle over time.

Other solutions include monitoring coral reefs throughout the world, as well as examining ocean temperatures and acidity levels. There is also the possibility of coral reef restoration, which assists the natural recovery process of degraded coral reefs. First, detached corals, which include broken fragments, are collected and grown in dense coral nurseries. Then, the corals are reattached to reefs piece by piece with cements, zip ties, and nails. This process has proven to aid the growth of coral reefs, but it costs time and effort.

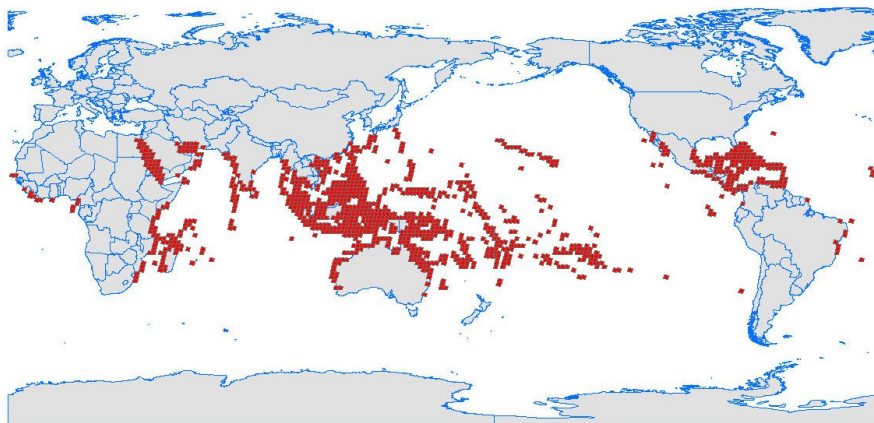


Figure 1: Coral reefs around the world

Around the world
The United States of America are taking many steps to protect coral reefs in Florida, Hawaii, Puerto Rico, and the Caribbean. In Florida, corals are expected to grow from 2% to 25% with the 'Mission: Iconic Reefs'. In

Puerto Rico, over 7000 coral fragments were rescued after Hurricane Matthew. Now, the restored reef is flourishing, with survival rates of 90%. In Hawaii, algal overgrowth was causing problems to the urban reef. With an underwater vacuum, invasive algae were removed and a natural predator of algae, the sea urchin, was released.

Australia accommodates the largest coral reef of the world, the Great Barrier Reef. The Reef Restoration and Adaptation Program (RRAP) is currently intervening in Australia to protect the Great Barrier Reef. For instance, they investigate cooling and shading techniques, they assist corals with adapting to a changing environment, and research methods to support the natural restoration of damaged and degraded reefs.

In 2018, the Reef Futures symposium was organised to bring together over 400 restoration experts, businesses, and civil organisations to identify solutions for protecting the coral reefs. It was concluded that reef restoration projects in the Caribbean and Eastern Tropical Pacific are not well known internationally, which reduces the global impact discoveries during these projects could have. Perhaps better cooperation and communication between countries, organisations, and researchers can diminish this problem.

According to Razak, a coral reef expert at IPB University in Indonesia, coral restoration efforts are often regarded as one-off installations. She argues that organisations must monitor their projects on the long-term, so lessons from existing projects can be implemented in future ones. Then, a centralized long-term approach must be generated, so projects and results can be shared internationally.

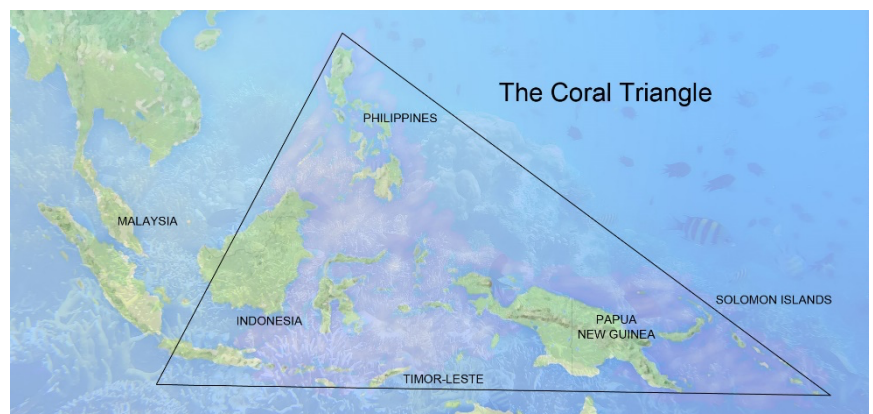
Bloc positions

Current efforts to protect the coral reefs are mainly initiated and executed by non-governmental organizations (NGOs). Some of these NGOs focus on a specific area, like the Reef Restoration and Adaptation Program (Australia) and the National Oceanic and Atmospheric Administration (United States). Others try to aid corals worldwide, like the organization Green Fins, which promotes a sustainable diving and snorkelling industry to protect and conserve coral reefs. This organization is active in three different regions, namely the Caribbean, the Middle East, and South-East Asia.

It is important to make a distinction between the different organisations that occupy themselves with the reefs. Region-specific NGOs are often mainly or completely funded by one state, while global NGOs often rely on wealthy individuals, states, and organizations like the United Nations. Of course, the amount of funding a certain state reserves for different problems is a great indicator of the importance a state places on that problem.

In general, the most attractive and economically valuable reefs in the world are found in developing countries. Because of these attributes, they have also become the most endangered. There is now a growing need for management and coral conservation programmes are created at local, regional, and international levels. Local efforts are widely distributed, showing signs of both failure and success. The situation in developing countries differs from that in developed countries for various reasons, including level of awareness, infrastructure, and law enforcement.

A specific example of a developing country combatting the destruction of coral reefs is Indonesia. According to research, it is leading the way in restoring coral reefs and making a bigger effort than any other country. Indonesia is part of the so-called Coral Triangle, comprising



Indonesia, the Philippines and Malaysia, where nearly a third of the world's coral reefs is situated. It is believed that the coral in the Coral Triangle was not hit as hard by warming waters, which can explain the success of the different restoration efforts.

Coastal regions with coral reefs in developing countries often rely on marine tourism to support the economy. In these areas, loss of coral could be disastrous for the local inhabitants, as tourism would decline, and people employed in this sector would suffer unemployment. Coral restoration can provide a solution in this case, as was seen in Indonesia. During the pandemic, around 10,000 people in tourism lost their job and found employment in the Indonesian Coral Reef Garden organization. This organization is fully funded by the Indonesian government.

Further reading

Information about the UNEP committee:

- <https://www.unep.org/>
- <https://www.unepfi.org/about/structure/leadership-council/>

Information about coral reefs:

- <https://www.nhm.ac.uk/discover/quick-questions/what-is-a-coral-reef.html>
- <https://oceanservice.noaa.gov/facts/coralreef-climate.html>
- <https://www.iucn.org/resources/issues-briefs/coral-reefs-and-climate-change>

Country-specific information:

- <https://www.cia.gov/the-world-factbook/>
- The official government website of a country

Sources:

- <https://www.unep.org/explore-topics/oceans-seas/what-we-do/protecting-coral-reefs>
- <https://www.nationalgeographic.org/article/coral-reefs/>
- <https://greenfins.net/>
- <https://www.reefdoctor.org/projects/conservation/coral-reefs/reef-restoration/>
- <https://gbrrestoration.org/>
- <https://www.fisheries.noaa.gov/national/habitat-conservation/restoring-coral-reefs>
- <https://www.aljazeera.com/news/2021/11/2/indonesia-leads-the-way-in-coral-restoration>
- <https://www.semanticscholar.org/paper/Reef-management-in-developing-countries%3A-a-case-in-Gomez/497d46206f2bbf2527e6fa0d8f58954f97fdda96>
- <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0228477>