Research Report

Model United Nations Oud-Beijerland

2026

Environmental commission

Addressing the global crisis of plastic pollution in marine ecosystems

Introduction

Plastic pollution in the oceans is an environmental problem. Every year millions of tons of waste end up in the sea, where plastic can harm marine animals, damage ecosystems and potentially affect human health. Plastic is used in products because plastic is cheap, light and durable. However these qualities also mean that plastic takes a long time to break down. Because of this plastic waste can stay in the environment for hundreds of years.

Plastic pollution affects countries, over the world because ocean currents carry plastic across national borders. This means that one country cannot solve the problem on its own. Countries need to work to reduce plastic waste and protect marine ecosystems for future generations.

General Overview

The Scale of the Problem

Plastic production has grown rapidly since the 1950s. Today, hundreds of millions of tons of plastic are produced every year, and some of this waste eventually reaches rivers, seas and oceans. Millions of tons of plastic enter marine environments annually, making it difficult to keep oceans clean.

Plastic pollution comes in different forms. Plastic bottles, bags and food packaging are often found floating in the sea or washed up on beaches. Over time, sunlight and waves break larger pieces of plastic into smaller particles called microplastics. These particles are usually less than five millimeters in size and have been found in oceans around the world.

Impact on Marine Life

Plastic waste can be dangerous for many marine animals. Sea turtles sometimes mistake plastic bags for jellyfish and eat them, which can cause serious health problems or death. Seabirds also swallow

plastic pieces while searching for food. Since they cannot digest plastic properly, it can collect in their
stomachs. Fish and marine mammals can become trapped in fishing nets and other equipment that has been lost or abandoned. This is known as "ghost fishing."

Coral reefs are affected by plastic pollution as well. Plastic waste can damage corals and make them more likely to develop diseases. When marine habitats are damaged, animals can lose places to live and find food. This can reduce biodiversity and disturb food chains, affecting the balance of marine ecosystems.

Impact on Human Society

Plastic pollution affects humans as well as wildlife. People can come into contact with microplastics through seafood, drinking water and the air. Scientists are still investigating the possible long-term effects on human health, so more research is needed to understand the risks.

Coastal communities can also lose money because of plastic pollution. Beaches covered in litter may attract fewer tourists, which can negatively affect local businesses. Fishing industries can face problems when equipment is damaged or marine resources are affected. Governments also have to spend money on cleaning beaches and removing plastic waste, which can put extra pressure on public budgets.

Causes of Marine Plastic Pollution

Several factors contribute to the growing problem.

Poor Waste Management

- In many countries, waste collection and recycling systems are not developed enough to handle all the plastic waste produced. When waste is not collected or disposed of properly, it can enter rivers and eventually reach the ocean.

Single-Use Plastics

- Plastic bags, straws, cups and food containers are often used once and then thrown away. Because these products are so common, they contribute a lot to the plastic waste found in marine environments.

Fishing and Shipping Activities

- Fishing nets, ropes and other equipment sometimes get lost or are left behind in the sea. These items can continue to harm marine animals. Plastic waste from ships and other shipping activities can also end up in the ocean.

Consumer Behavior

- Many people depend on disposable plastic products because they are convenient and easy to use. Limited environmental awareness and a lack of affordable alternatives can make it more difficult for people to reduce their plastic use.

Major Parties Involved

Key parties:

United Nations Environment Programme (UNEP)

- The United Nations Environment Programme (UNEP) works with countries to address environmental issues, including plastic pollution. It helps governments develop environmental policies, supports research and brings countries together to discuss solutions. UNEP has also played an important role in international negotiations for a global plastics treaty.
- UNEP helps countries cooperate and encourages governments to introduce stronger rules to reduce plastic waste and protect marine environments.

National Governments

- National governments can introduce laws to control plastic production, consumption and waste disposal. Some countries have introduced charges for plastic bags, restricted certain single-use plastics or invested in better recycling facilities.
- Governments are important because they can enforce these rules, provide funding and encourage businesses and citizens to reduce plastic waste.

Environmental Non-Governmental Organizations (NGOs)

- Organizations such as Greenpeace, Ocean Conservancy and the World Wildlife Fund (WWF) work to draw attention to plastic pollution. They organize cleanups, carry out research and

inform the public about ways to reduce waste.

- These organizations help keep the issue in the public eye and encourage governments and companies to take action.

Plastic Manufacturing Industry

- Plastic manufacturers are important because they produce many of the products that eventually become waste. Although plastic is useful in many industries, manufacturers face increasing pressure to reduce its environmental impact and take more responsibility for the waste their products create.
- Some companies are investing in recyclable materials and packaging that produces less waste.

Coastal Communities and Fishing Industries

- People who depend on the ocean for their income are directly affected by plastic pollution. Fishermen can experience damaged equipment and problems with their catches, while communities that depend on tourism may lose income when beaches become polluted.
- These groups have an interest in protecting marine environments and often support projects and policies that help reduce plastic waste.

Key countries

- **China**
    - China is one of the world's largest producers and users of plastic. Its large population and manufacturing industry mean that it has an important role in reducing plastic pollution. The Chinese government has introduced measures to improve recycling and waste management.
- **Indonesia**

    s problems with plastic pollution in its oceans. Plastic waste can travel through rivers and coastal areas before reaching the sea. Since fishing, tourism and other marine activities are important to the country, reducing plastic pollution is important for both the environment and the economy.
- **The United States**
    - The United States is one of the largest users of plastic products. Its economic resources and technology could help improve recycling systems and develop alternatives to traditional plastics. The country can therefore contribute to

international efforts to reduce marine pollution.

- **Small Island Developing States (SIDS)**
  - Small Island Developing States, including Fiji, the Maldives and Seychelles, are especially vulnerable to plastic pollution. Although these countries contribute relatively little to the global problem, they can experience serious consequences. Their economies often depend on tourism and fishing, so they regularly support stronger international measures to protect the oceans.

Possible Solutions

- **Reducing Single-Use Plastics**
  - Governments could introduce restrictions or bans on disposable products such as plastic bags, straws and cutlery. Businesses could also offer reusable products or alternatives that have a lower environmental impact.
  - Using fewer single-use plastics would reduce the amount of waste produced and prevent some plastic from reaching rivers and oceans in the first place.

Improving Waste Management Systems

- Many countries need better facilities for collecting, sorting and disposing of plastic waste. Investing in these systems could stop more plastic from entering rivers and oceans.

- Countries that lack the resources to improve their waste management could receive financial support and technical help from other countries.

Expanding Recycling Programs

- Recycling programs can reduce the amount of plastic that ends up in landfills or the natural environment. Governments could encourage recycling through public campaigns, deposit-return systems and financial incentives for businesses.
- Manufacturers could also design products that are easier to sort and recycle.

Supporting Innovation

- Research can help develop better methods for collecting and recycling plastic waste, as well as materials that have less impact on the environment. Governments and private companies could invest in new technologies and alternative packaging.
- These developments could reduce the need for traditional plastics while still allowing businesses to produce useful products.

Strengthening International Cooperation

- Plastic pollution crosses national borders, so countries need to work together to deal with it. A global agreement could introduce shared standards, set targets for reducing plastic waste and encourage producers to take more responsibility for the environmental impact of their products.
- International cooperation would help countries share resources and knowledge instead of leaving the problem for other states to solve.

Public Education and Awareness

- Individuals can help reduce plastic pollution by using fewer disposable products, recycling correctly and taking part in beach cleanups. Schools, governments and environmental organizations can educate people about how plastic waste affects marine ecosystems.
- Reducing plastic pollution in the long term requires changes in everyday habits as well as action from governments and businesses.