

Life below water and the fate of humanity: with special reference to the efforts by Adidas towards reducing the effects of plastic waste on the marine life.

La vida bajo el agua y el destino de la humanidad: con especial referencia a los esfuerzos de Adidas para reducir los efectos de los desechos plásticos en la vida marina.

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#### ABSTRACT

Marine Pollution is all the human waste in terms of chemicals, unwanted substances, non-biodegradable waste such as plastic that is thrown into the Earth's water. The origin of the marine pollution is varied human activity that takes place on land. Wherein industrialization on one has shown immense growth in the life of human beings on this planet, taking them to the era being ruled by artificial intelligence, this rapid and unprecedented growth has also lead to the demolish of the treasures of our oceans and water bodies. The Pacific Ocean has a plastic "garbage patch" of approximately 6, 20,000 sq miles. The plastic pollution, notedly, is the most harmful of the other pollution sources as it directly affects the life of corals through fibres, poisoning and trapping of sea animals in nets, wires etc. In 1972, London Convention was the first international agreement on protecting the oceans and the oceanic life. The 2006 London Protocol bans all the hazardous waste from being disposed in the sea. Companies like Adidas have started finding solutions to control, if not yet eliminate, hazardous human actions.

Keywords: marine life, pollution, human actions, water bodies.

#### RESUMEN

La contaminación marina son todos los desechos humanos en términos de productos químicos, sustancias no deseadas, desechos no biodegradables como el plástico que se

arrojan al agua de la Tierra. El origen de la contaminación marina es la variada actividad humana que se desarrolla en tierra. Donde la industrialización en uno ha mostrado un inmenso crecimiento en la vida de los seres humanos en este planeta, llevándolos a la era gobernada por la inteligencia artificial, este crecimiento rápido y sin precedentes también ha llevado a la demolición de los tesoros de nuestros océanos y cuerpos de agua. El Océano Pacífico tiene un "parche de basura" de plástico de aproximadamente 6, 20,000 millas cuadradas. La contaminación plástica, es notorio, es la más dañina de las otras fuentes de contaminación ya que afecta directamente la vida de los corales a través de fibras, envenenamiento y atrapamiento de animales marinos en redes, alambres, etc. los océanos y la vida oceánica. El Protocolo de Londres de 2006 prohíbe la eliminación de todos los residuos peligrosos en el mar. Empresas como Adidas han comenzado a encontrar soluciones para controlar, si no eliminar aún, las acciones humanas peligrosas.

Palabras clave: vida marina, contaminación, acciones humanas, cuerpos de agua.

## INTRODUCTION

The water that surrounds the Earth acts as the amniotic fluid that develops and gives life to various life forms both on land and in sea. It is the cradle of life.

However, it is at tremendous danger of peril due to human actions. Over the years, the negative impact of human intervention and influence is becoming prominent towards water and water life pollution. The strengths of the currents have started diminishing due to overdrawn of water supply. The corals have begin to bleach and many aquatic species such as beluga whales, hawksbill turtles, seals and sea lions are on the verge of extinction. Notedly, it is the Arctic where the impact has been the greatest. The ice there now sets later and melts earlier, while growing thinner every year. This change is of grave nature as in the natural life cycle, this ice cover is responsible for providing sustenance to the bottom of the food chain and also regulating the global climate (Fig. 1).

The objectives are: 1) To study the impact of plastic waste on marine life. 2) To comprehend the effect of human actions globally towards preservation of natural treasures. 3) To commemorate the efforts of Adidas towards preserving marine life.

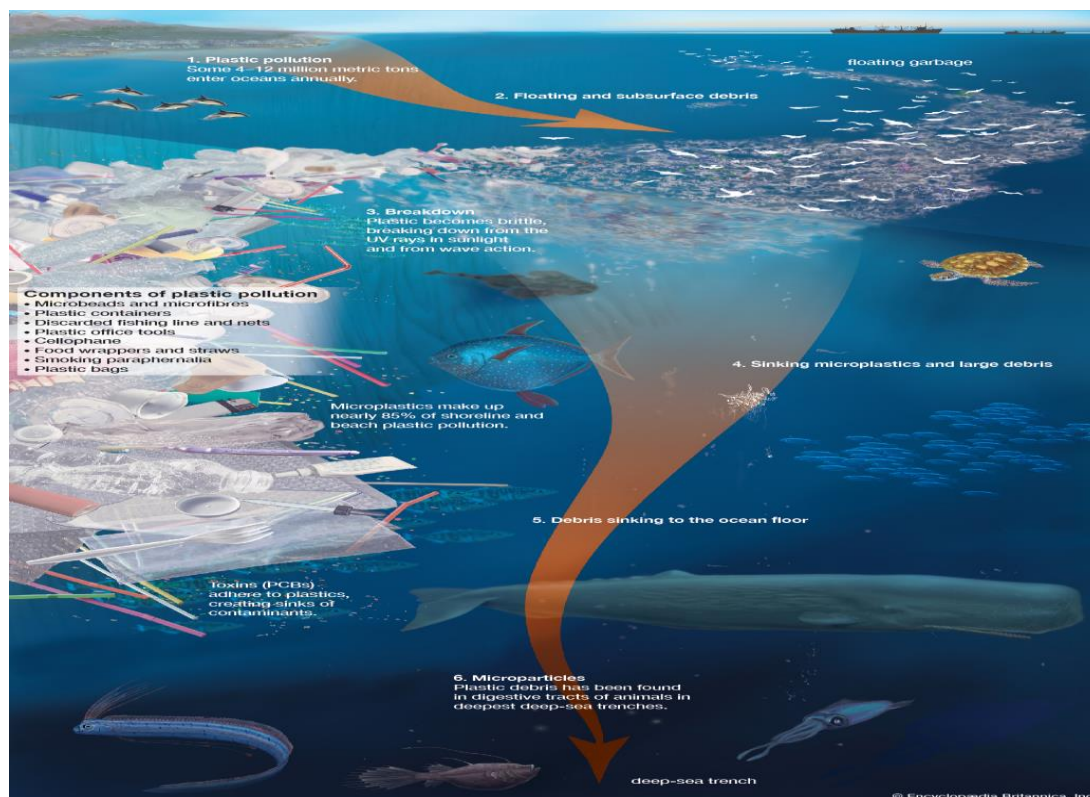


Figure 1:- The Spread of the Plastic Pollution in the oceans

(Source:- Encyclopædia Britannica, Inc./Christine McCabe)

## THE PLASTIC PROBLEM – OUR DYING WATER BODIES

The biggest global crisis today is the plastic in our oceans. The marine pollution is threatening the existence of nearly 267 species, including 86% of all sea turtle species, 44% of all seabird species and 43% of all sea mammal species(www.cleanwater.org). Ingestion, starvation, entanglement, suffocation, infection, drowning – they all cause threat to life of the sea animals due to the pollution debris.

The plastic in Atlantic ocean has reportedly tripled since the 1960s. The Pacific Ocean has a plastic “garbage patch” of approximately 6, 20,000 sq miles(Times of India, 2020).



Figure 2:- Image of dying coral reef before and after bleaching due to human stressors such as plastic pollution, fishing, and debris.

Source:- <https://inside.ewu.edu/engl201-13/depleting-coral-reefs-living-in-colorless-waters/>  
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Figure 3:- Plastic waste at Bermuda Sea Caves - (source - [www.seaturtles.org](http://www.seaturtles.org))

Most marine debris comes through land based sources – such as debris from construction sites closer to ports and marinas, commercial and industrial facilities, landfill activities etc. Ocean-based sources, such as, overboard discharges from ships and discarded fishing gear, account for the other 20%. With every passing year, the marine debris is on a rise. Researchers at the Algalita Marine Research Foundation documented an increase in plastic debris in the Central Pacific Gyre five-fold between 1997 and 2007, where the baseline in 1997 showed plastic pieces outnumbered plankton on the ocean surface 6:1(Moore, 2006).

Off Japan's coast, the quantity of pelagic plastic particles floating increased 10 fold in 10 years between the 1970s and 1980s, and then 10 fold every 2-3 years in the 1990s(Fukimoto, 2000). In the Southern Ocean, plastic debris increased 100 times during the early 1990s (Copello, 2003). It was during these timelines that worldwide production of plastic fibers quadrupled. What came forth was the ill-planning or no-planning of this industry and its effects thereof on the environment.

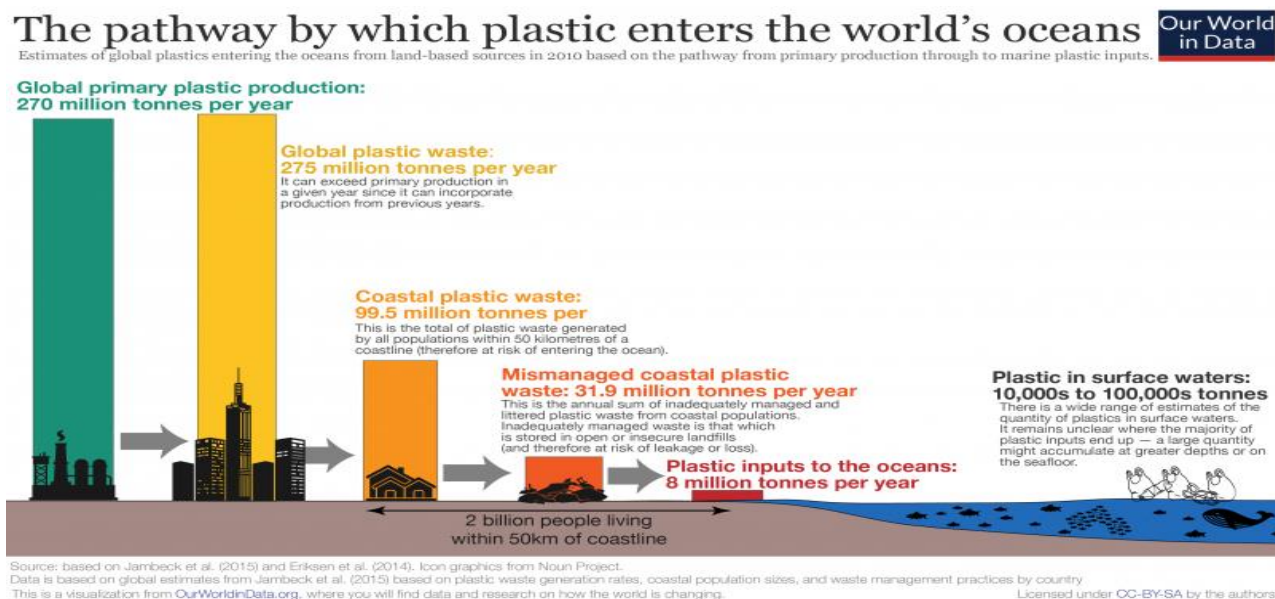


Figure 4:- The Pathway by which Plastic enters the world's oceans

(source:- <https://ourworldindata.org/plastic-pollution>)

The World Environment Day 2018 was completely dedicated to "No to Plastic" and save the marine life. But, this is not a catastrophe that can be only taken care of by actions done in one day. The need of the hour is to proactively focus our actions and find solutions to totally eradicate the marine pollution. It is the basis of human chain. The threats are humongous.

Acknowledging this need, many corporate giants have initiated their company policies and CSR towards reducing these threats. Adidas is one of them.



## ADIDAS AND ITS INNOVATIVE MARINE POLLUTION CONTROL



Figure 5:- Adidas Shoes made out of recycled plastic

Adidas is a German MNC and is a market leader in designing and manufacturing of shoes, clothing and accessories, especially its sportswear. It ranks second in the world after Nike for its market share globally. Adidas also has a number of collaborations with sports bodies around the world. Players like Lionel Messi have been sponsored by the company. The company's deep rooted philosophy is that sports have the power to bring tremendous changes in lives and ways of living. To achieve this purpose the company adopts a Sustainability Strategy that translates group's sustainable and tangible goals into efforts. This holistic strategy framework follows the entire lifecycle of sport with its two main focus on product and people. It's the combined effort on the two that drives various social initiatives for Adidas. One of them being their efforts and innovations to reduce marine pollution.

It's a global opinion that very soon there would be more plastic in our oceans than the marine life. Thanks to the human disruption and intervention. Adidas is contributing immensely to control and minimize the water pollution.

Adidas manufactures approximately 400 million pairs of shoes every year to meet the worldwide requirements. To meet its such demand goals, the supply or raw material always doesn't have environment friendly actions. Therefore, Adidas turned to a new source – the oceans.

In 2015, Adidas collaborated with an environmental organization called Parley for Oceans. Their product deemed to be sportswear made from marine pollution. Parley collects the marine waste from coastal areas which is then sorted and sent to an Adidas processing plant. Adidas makes effective use of the plastic bottles that contain polyethylene terephthalate, or PET. The other parts of the bottles like caps and rings are sent to normal recycling facilities if they cannot be utilized.

The processing plant crushes, washes, and dehydrates the waste, into small plastic flakes. The flakes are heated, dried, and cooled, then cut into small resin pellets. Normally, polyester is made from petroleum. But Adidas melts these pellets to create a filament, which is spun into "Ocean Plastic", a form of polyester yarn. Adidas uses Ocean Plastic to form the upper parts of shoes and clothing like jerseys. Each item in the Parley collection is made from at least 75% intercepted marine trash. And they still meet the same performance and comfort standards of Adidas' other shoes. Recycled polyester uses less water and fewer chemicals and helps prevent plastic pollution. Each of the shoes made contains around 12 plastic bottles of ocean waste, with some material of the discarded fishing net.



Figure 6:- Adidas Ocean Plastic Jersey

Adidas' goal is to replace all virgin polyester with recycled polyester by 2024. Currently, more than 40% of Adidas' apparel uses recycled polyester. Clothing made with Ocean Plastic has been used in college football, baseball, the NHL, the Australian Open, and many such events. With the help of Parley for the Oceans, Adidas is using readily available material to manufacture new products which is a big step towards a sustainable future. In

2019, Adidas made approximately 11 million pair of such shoes, with the partnership preventing around 2800 tonnes of plastic from reaching the oceans.



Figure 7:- Adidas 3D printed shoes

(Source:- <https://design-milk.com/adidas-converts-ocean-plastic-3d-printed-shoes/>)

Eric Liedtke, Adidas Executive Board member, opined, "with Adidas products made from recycled plastic, we offer our consumers real added value beyond the look, functionality, and quality of the product, because every shoe is a small contribution to the preservation of our oceans".

Adidas has set its targets for future, some of which are:-

The market launch of first fully recyclable running shoe "Futurecraft Loop" is planned for 2021. It has been in the test phase since 2019. Adidas is also working on the development of bio-fabricated materials for sports apparel and presented first prototypes for tennis wear in 2019.

From 2021 onwards, packaging used to transport products from the manufacturing countries to the store shelves will also be made from recycled materials. At the same time, Adidas is testing a recycling loop for transport packaging.

By 2024, Adidas will only use recycled polyester in all Adidas products across the business, aided by the introduction of Primeblue and Primegreen performance fabrics where 100% of the polyester used is recycled.



By 2030, as a signatory to the UN Fashion Industry Charter for Climate Action, Adidas has committed to reduce both its own and its suppliers' greenhouse gas emissions compared to 2017 by 30 percent. By 2050 Adidas aims to achieve climate neutrality.

## CONCLUSION

The image below depicts the projected mismanaged waste globally. This is not something our world is ready to face. The threats to marine life or our environment are not less than any pandemic.

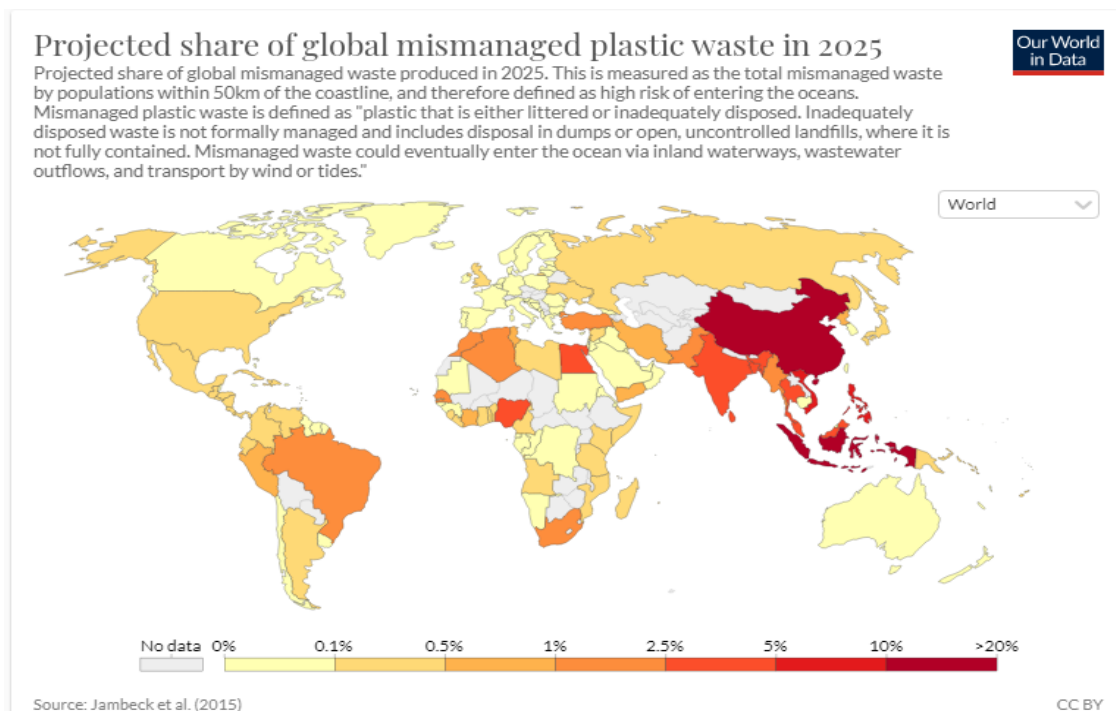


Figure 8:- Projected share of global mismanaged plastic waste in 2025

The simplest of the solutions for controlling the marine pollution can be:-

**Refuse:** - to use any products made of plastic. Become self-sufficient, or turn to more ecofriendly bags, steel utensils, glass bottles.

**Reuse:** - choose glass, paper, wood, stainless steel, ceramics, and bamboo products over plastic. These products are reusable and hence more beneficial for the cause.

**Reduce:**- individuals as well as corporates should focus and plan to reduce the use of plastic and its waste by taking prominent steps. In 2015 National Games of India,

Thiruvananthapuram, the authorities aimed at zero waste venue to make the event disposable free and banned the usage of disposable water bottles, plastic tablewares and tumblers.

Recycle:- the most important of all the solutions and actions. The plastic waste can be recycled at each and every step of the plastic life cycle. Recycled plastic can also be used to make road surface, amongst many other utilizations.

The clarion call is to adopt ecosystem based adaptive management for plastic waste. The plastic pollution problem can be overwhelming but proper and timely actions can make a difference to the world.

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