



**Biotica
Research**

Today

Vol 3:1 ⁰³³
2021 ⁰³⁴

Invisible Pollution

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 Open Access

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Keywords

Balloon release, Electricity loss, Marine threat, Wildlife threat

Article History

Received in 11th January 2021

Received in revised form 15th January 2021

Accepted in final form 16th January 2021

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How to cite this article?

Arumughan, 2021. Invisible Pollution. Biotica Research Today 3(1): 033-034.

Abstract

Balloon release is a common event in many ceremonies but when a balloon ascends into the heavens, it doesn't end up on Jupiter. Although a helium balloon can rise to altitudes of five miles (8 kilometers) into Earth's atmosphere, it's got to come back down eventually, and when it does, it wreaks some havoc. It could get tangled up in the flippers of a sea turtle or be eaten by one who mistakes it for a jellyfish. Animals of the land, sea and air are equally susceptible to mistaking deflated balloons for food, or even worse, getting tangled up and strangled by the ribbon attached to it. Also, the world may be running out of helium soon anyway. It causes power loss since the metallic or foil balloons conduct electricity by interacting with power line. This paper presents the harmful effects of balloon release on the environment and also the alternatives for balloon release during the ceremonies.

Introduction

Balloons may look nice, but they have a number of environmental concerns associated with them. Balloon release, a common event in many ceremonies, acts as an unseen ghost in the destruction of lives in our Earth. A single balloon can travel thousands of miles and end up polluting an aquatic, marine, or terrestrial ecosystem. According to NOAA website, in 1998, a balloon released at the Olympics in Nagano, Japan, landed in Los Angeles just 49 hours later, a distance of approximately 5,300 miles.

Impact of Balloons on Marine Life

Most balloon releases happen in suburban or rural areas and there is often assumption that distance from the ocean reduces harm to marine life. But it is not the case. In recent studies, it is reported that soft debris, like balloon material, is more hazardous to seabirds. Sea turtles are at special risk because the balloons form, shiny Mylar material, and vibrant colors of rubber and latex resemble their favorite food jellyfish when floating in the water, including the coral reefs, which are destroyed by tumbleweed-like discarded nylon fishing nets that become entangled in the coral, breaking off pieces as the mass is pulled along by the current. Balloons may clog a turtle's digestive system, leaving the animal to starve to death. And also dolphins, whales and some fishes have been reported with balloons in their stomachs and ribbons and strings can lead to entanglement, causing death. This also leads to extinction of many marine animals.

Impact of Balloons on Wildlife

The deflated balloons create ingestion and entanglement risks to animals that live in forest areas. Sometimes it endangers the key stone species like Elephant, Tiger, etc. and collapses the entire food chain and food web. This can

be felt by the frequent visit of wild animals into the domestic areas which results in human-animal conflict.



Figure 1: Harmful Effects of Balloons on Nature and Marine Life

Wastage of Electric Power

Most people intuitively know about wildlife and debris concerns with balloons, but another hazard of balloon releases is related to power loss. Metallic or foil balloons conduct electricity by interacting with power lines which is another culprit. It leads to power shortage for consumers and power wastage by conduction through the balloons.

Helium Wastage

Generally helium is used for balloons to make them rise to very high altitudes. But there is high need of affordable helium for products such as MRI scanners, fiber optics and LCD screens. If it is continuously used for balloon releases, then the world may be running out of helium soon anyway. It is important to never waste any such valuable resource.

Alternatives to Balloons

Instead of releasing balloon, one can plant a tree, have a ceremonial bonfire, release of ladybugs (beneficial for pest control), float flowers on the water (easily degradable), plan a fundraiser, donate books to a local library may be done, which creates a win - win situation for both Nature and Human beings.

Conclusion

As a society, people are helping each other with or without benefit, but fail to care the mother earth. The goal is to make the Earth pollution free and make it a better place to live not only for our future generations but also for all the caretakers of the Earth viz., pollinators like humming birds, seed dispersing agents like pigeon, forest doctors like woodpeckers, ocean cleaners like sea birds etc.

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