

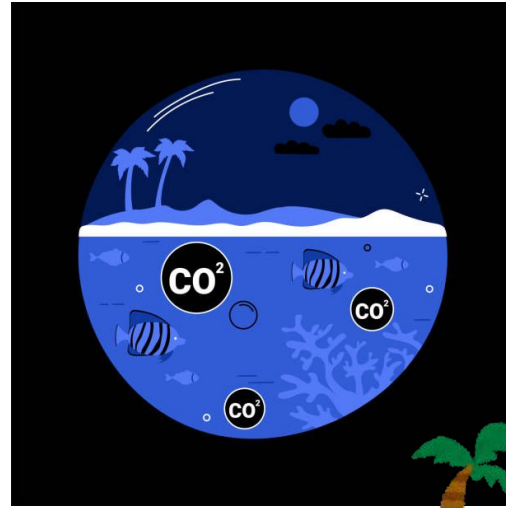


Life Below Water

Marine pollution

Focus on 2 problems

- Ocean acidification
- Marine garbage



Background

From Center for global Environmental Research

Specifically, CO₂, which is also a problem in global warming, is released into the atmosphere.

It dissolves into the ocean and the ocean is oxidized.

It has a bad effect on the growth of sea creatures.

Ministry of the Environment

Plastic debris can have a negative impact on marine ecosystems and can also affect human health.

International measures such as the 3Rs (Reduce, Reuse, Recycle) and improving waste disposal capacity are essential.

Background

From Center for global Environment

Sp

- Creating a low-carbon society with reduced consumption of chemical fuels
- Action Plan for Marine Plastic Litter

In Government.

M

Plastic litter and marine debris are a global problem that affects ecosystems and can also affect human health. International measures such as the 3Rs (Reduce, Reuse, Recycle) and improving waste disposal capacity are essential.

Problem

Sea creatures can't live without in the ocean.

Purpose



Learn how these affect marine animals.

Ocean Acidification

Method

1 Make sea water

2 Grow artemias

3 Make sea water with different pH in each of the four tanks

4 Observe how long the artemias can live



Result

days / pH	A(4.4)	B(5.4)	C(6.4)	D(unadjustment)
1	dead	dead	survived	survived
2	dead	dead	some were survived	survived
4	dead	dead	dead	survived

decrease in pH of 1 reduces the number of days of artemia survival by about 1 day

Marine Garbage

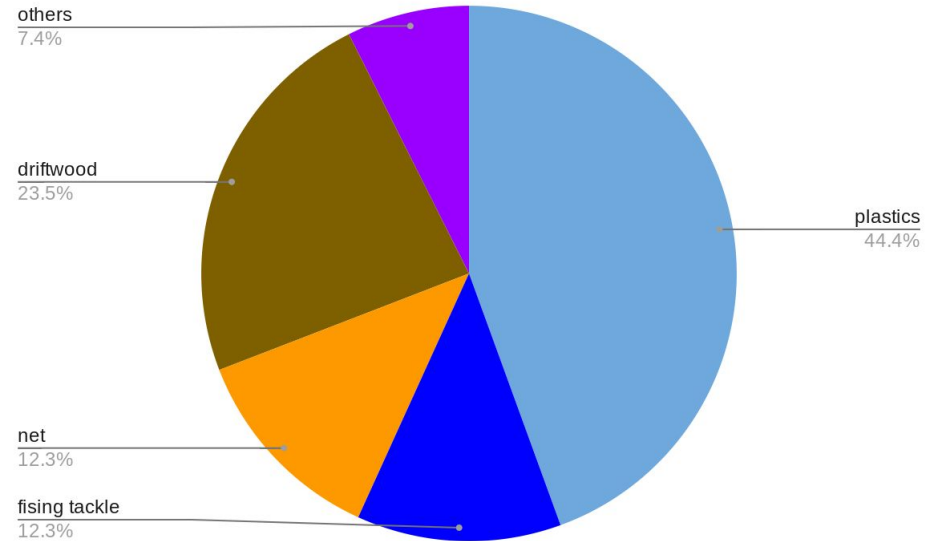
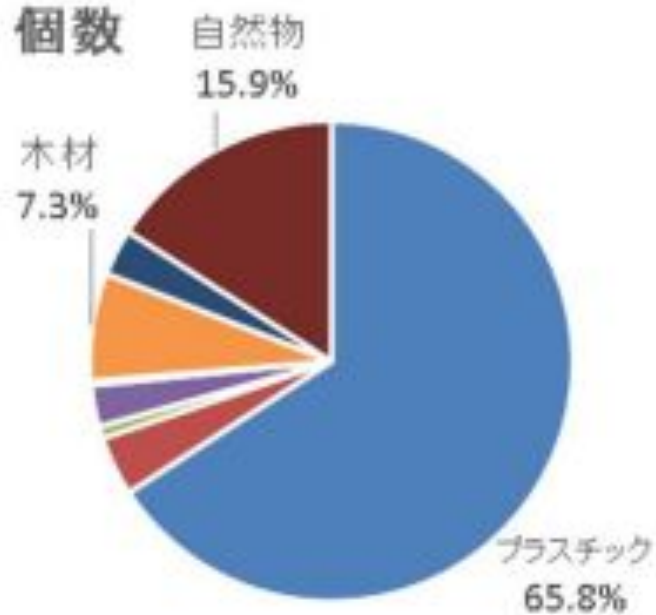
Method

- 1 Find out the amount of marine garbage published by the government.
- 2 Make a graph the type of garbage.
- 3 Consider whether the government's plan makes sense.



Result:Garbage Research

1《Ministry of the Environment》 2《self-research》



Result: Affect of marine garbage on marine creatures

① Marine creatures cannot distinguish it from true food and **misuse** or **ingest it**

→ Malnutrition and **starvation**

② Marine creatures become entangled in nets and fishing lines and are unable to escape (**Ghost fishing**)

→ Stuck and **starving** to death



effect on growth of creatures

Ocean acidification

Body melts or
becomes
difficult to grow.

Marine garbage

- Malnutrition and starvation
- Stuck and starving to death

measures

Do not use your car carelessly
use eco bags and be aware of the 3Rs



Thanks you for listening