

## Parasite of the Planet: The Human Impact on our Oceans

Excerpt from Neve Abraham

According to national geographic 90% of all seabirds are consuming plastic. By 2050 All will have it in their daily diet. When in 1960 only 5% had plastic. 1 million die/year. Because of this sea birds are going extinct. Population decreased by 67% in last 60 years. The birds die by eating too much plastic. It does not allow for any food. Therefore no nutrients. They also swallow sharp edged points puncturing internal organs. One bird was found with over 200 pieces inside of it.

There is much more than just marine birds being affected in this process. This brings me to my next topic on fish. Fish like any major food source is extremely important for the survival of the human race. Yet we are killing them day by day. CBC news let out a statement saying it is estimated that by 2048 the ocean will be empty of fish.

Fish are consuming more plastic than ever right now due to two reasons. First never been so much plastic. Secondly, plastic has smell of prey due to algae. When algae comes in contact with salt water the Algae emits a product called DMS (Dimethyl sulfide) which attracts fish. An Experiment done where wild anchovies reacted same to ocean plastic as food. so how are fish supposed to tell the difference. This means that these fish are not only ingesting the plastics on purpose but actively seeking them out. There are so many different sizes of plastic being eaten by different sizes of fish. This means that some fish are being caught and put right on the human dinner plate.

This leads me to my next topic, HUMAN HEALTH. Throughout the fish's food cycle it will eat plastic. Throughout the human food cycle we will eat fish. I'm sure you can connect the dots. Basically if you can't connect the dots. When fish eat plastic, it affects us. 143.8 million tonnes fish eaten per year. That is a sure sign that humans are eating plastic too. A study in Malaysia was done where Scientists took 120 mackerel/anchovies. Found 36 different types of microplastics. Nylon, polystyrene and polyethylene were found inside these fish.

Microplastics attract toxins which could be released into human body after consumption. Because dry fish are sold as a whole they're the most dangerous towards humans. It just seems really crazy to me that we are poisoning ourselves.

There is also microplastics attacking marine biotas like shellfish and mussels. It is estimated that 11,000 pieces of plastics per year could be consumed by top European shellfish consumers. A new study was done that shows that when microplastics come in contact with water, they are able to absorb mercury so when these fish consume microplastics they also consume mercury. When these fish were tested, it was found that microplastics and mercury caused neurotoxicity, lipid oxidative damage, and changed enzymes. This all affects the human diet and has an effect on the structure or function of the central and peripheral nervous system. Seeing that humans are being affected, it amazes me on how much we produce which leads me to the manufacturing of plastic.

The issue today with plastic is how easy it is to use and make. Half of all plastic created is for one time use only. Over 300 million tonnes of plastic is created every year and approximately 8 million tonnes of plastics is dumped into the ocean annually. this number has skyrocketed over the past 70 years.