River, Niigata prefecture northern Japan, which located symmetrically against Otsuchi Bay in the river mouth direction. Miomete River flows into Japan sea and Otsuchi Bay is open toward the Pacific Ocean. Kubo (1938) concluded that the catch was influenced by snowfall and wind; a significant positive correlation between the catch and the amount of snow and "easterly" wind.

We can say that the fishermen's proverbs are worth believing.

Contamination and toxic impact of organochlorines and butyltins in mammals

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The present paper overviews the global contamination by persistent organochlorines and organotins, a representative group of endocrine disrupters, and their ecotoxicological implications on marine mammals.

The recent pattern of contamination by organochlorine residues in the coastal environment is prominent in tropical regions due to continuous usage in the low-latitude developing countries. The major emission source of organochlorines is probably located in the tropical belt and large quantities of volatilized contaminants are dispersed through the atmosphere of global terms. Reflecting this, a considerable contamination was observed in open ocean tropical waters as well as in the Arctic and nearby waters. The study of the mass transfer of organochlorines at the air-water interface suggests that the oceanic water bodies, particularly Arctic waters, act as a sink for persistent contaminants.

In this regard, the marine mammals, particularly cetaceans, are one of the animal groups receiving high concentrations of persistent organochlorines arising out of a worldwide contamination. They can amplify much greater amounts of toxic contaminants through feeding and also pass them in large quantities from one generation to the next through lactation. Unfortunately, these animals have a smaller capacity for degradation of these contaminants due to the specific mode of cytochrome P-450 enzyme systems. These drug-metabolizing enzyme systems may be related to the possible effects of persistent organochlorines, particularly coplanar PCBs. Furthermore, the residue levels of these contaminants in marine mammals are unlikely to decline in the near future.

Regarding organotin pollution, both cetaceans and pinnipeds showed the highest concentrations of butyltins (BTs) in the liver among various tissues and organs. In addition, noticeable high concentrations were found in the hair of pinnipeds, indicating possible excretion of BTs through shedding. BTs composition in mammals and their prey organisms suggested that pinnipeds have a stronger capacity to degrade BTs rather than cetacean. No age trend of BTs concentrations was observed in pinnipeds, while cetaceans showed increasing levels in immature growth stage. Comparing butyltin concentrations on various marine mammals, cetaceans retained higher butyltin concentrations than pinnipeds. The above specific accumulation patterns found in marine mammals are probably attributable to the lower breakdown capacity of BTs in cetaceans and the significant excretion of BTs through shedding in pinnipeds. Unlike organochlorines, comparable residue levels of butyltins were found in male and female of marine mammals. Such a trend suggested that butyltins are less transferable through gestation and lactation from mother to fetus/pup. On a global perspective of butyltin contamination in marine mammals, residue levels were found to be prominent in the coastal water of developed nations. The present contamination by BTs may pose a toxic threat to some coastal species of cetaceans.

Considering all these facts, it may be concluded that marine mammals are one of the most vulnerable and possible target organisms with regard to long-term toxicity of hazardous man made chemicals in the future.

Distribution, fates and effects of man-made organics in the aquatic environment

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I. *Distribution of selected man-made organics in the aquatic environments.*

We are surrounded by more than hundred thousands of man-made organics. Various species of wild animals as well as human are exposed to these chemicals. Field observations have been conducted about some organochlorine and organophosphorous compounds in the water of Western part of Japan including Lake Biwa, Yodo River basin, rivers in Osaka City and the harbor area of Osaka Port during these 20 years. The levels of organochlorines such as PCBs and HCHs in river water are decreasing year and year after the prohibition of application and use of these chemicals since 1972 in Japan. The concentration of PCBs and HCHs are less than 100 ng/L, generally. In place of these organochlorines,