
Marine debris, plastics and microplastics

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NPAFC contribution to Part I of the UN Secretary-General report on
ceans and law of the sea

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Executive Summary:

Plastic debris is a well-known issue and a major concern for Pacific salmon scientists as an increasing pollution problem, affecting aquatic food webs worldwide. Dr. Katherine Myers *Potential Mechanisms of Ocean Mortality of Juvenile Salmon and Steelhead Due to Ingestion of Plastic Marine Debris* rd NPAFC International Workshop on April 25~~26~~, 2013. In this paper, authors reviewed what is known about the ingestion of plastic debris by Pacific salmon and steelhead, presented field data collected in international waters of the North Pacific Ocean and Bering Sea, and discussed potential mechanisms of ocean mortality of juvenile salmon and steelhead caused by plastics ingestion.

As it was revealed, mechanisms of salmon marine mortality may be direct, e.g., lethal mechanical injury or toxicity, or delayed, e.g., reduction in reproductive health and fitness affected by heritable alterations in gene expression of progeny. Further field and laboratory process studies are needed as to the level of impacts to ecosystem and anadromous species in the North Pacific Ocean. Diverse chemicals (bisphenol A, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, and derivatives of polystyrene) leached and absorbed by plastic debris can bioaccumulate in fish, and anadromous fish can s(c)4yst-2(nada)92.35cfis21(a)4(1rJTJ h0()JTJEBT1 0k(c

Coast Guard and the master was fined 100,000 RMB (currently approximately \$16,300) for violations, the highest fine permitted under Chinese law under the circumstances.

Regarding marine debris, the U.S. Party presented information to the NPAFC regarding the