

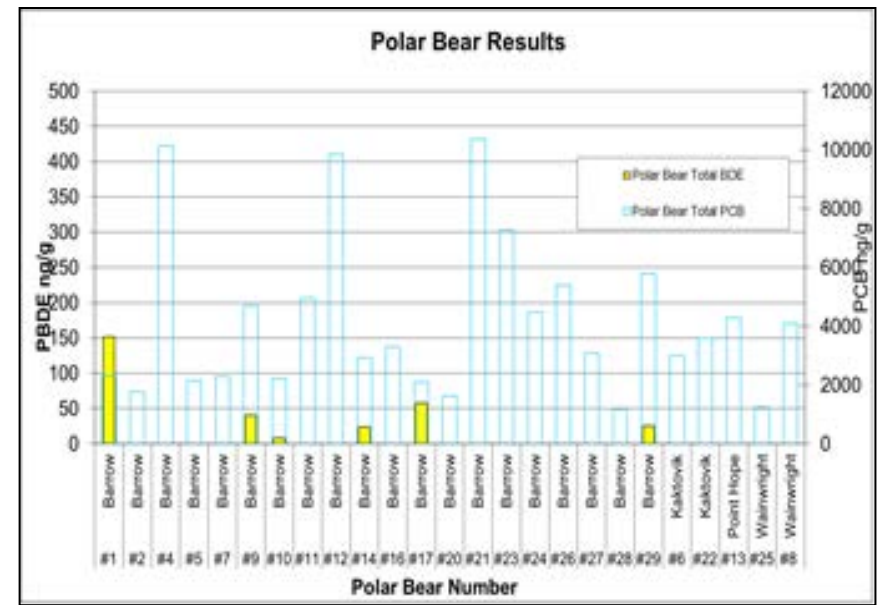
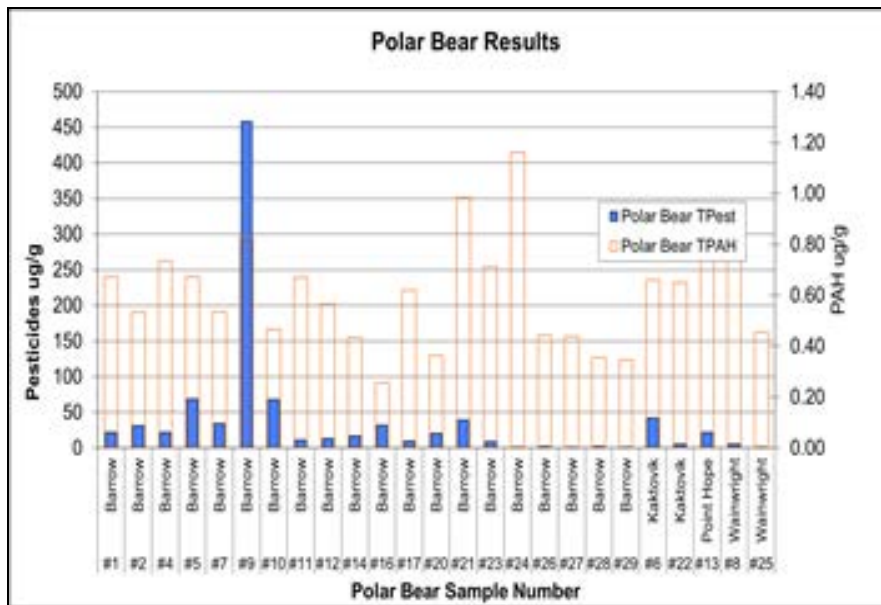


Update: Contaminants in Polar Bear Tissues

Previous studies have shown that polar bears, being at the top of the Arctic food chain, have higher contaminant levels than other marine mammals. To better understand the current levels, we worked with Mote Marine Laboratory in Florida to analyze fat from 25 polar bears harvested during 2011-2016 on the North Slope. Contaminants tested included legacy pesticides, PAHs and PBDE. Poly-brominated diphenyl ethers (PBDEs) are used as flame retardant and have also been used in a wide array of products, including building materials, electronics, furnishings, motor vehicles, plastics, polyurethane foams. Polycyclic aromatic hydrocarbons (PAHs) come from fossil fuel combustion. Legacy pesticides have been banned but were used in the past for pest control. These toxic chemicals have been introduced to the Arctic marine environment from industrial and agricultural activity in other parts of the world, and although some may no longer be used, they are very persistent.



Preliminary Results: Our studies confirm that PBDEs and legacy pesticides remain detectable in polar bears, but levels vary greatly by individual. PBDEs were detected at low concentrations in a few animals. Similarly PAHs were detected at very low levels in polar bear bears. This study will provide useful baseline data for the future as we continue to monitor for these chemicals.



Many thanks to the hunters for providing carcasses and sharing their knowledge on polar bears. Quyanaq! This research was funded by qualified outer continental shelf oil and gas revenues by a substantial grant from the Coastal Impact Assistance program, Fish and Wildlife Service, US. Department of the Interior and the North Slope Borough. For more information, contact Raphaella Stimmelmayer at raphaella.stimmelmayer@north-slope.org or call 852-0350.