

Plant Based Foods to Restore the Oceans:
A Look at Shrimp, Fish Farms, and Salmon
(The third of four installments.)

by Kay Bushnell

Dr. Carl Safina, Director of The Audubon Society's Living Oceans Program, warns that "the last buffalo hunt is occurring on the ocean...conservationists and the general public have not yet recognized that fish are wildlife.... Most people think oil spills cause the most harm to ocean life. They don't. Fishing does." The last two columns have discussed overfishing, the use of longlines, driftnets, trawls, and the wasteful killing of non-target sea creatures. Let's take a look at some other problems in our oceans.

Shrimp production deserves the special attention of conservationists because of the particularly damaging aspects of producing both wild shrimp and farmed shrimp. Nets set for wild shrimp are notorious for their wasteful bykill. Aquarist Sidney Snider says, "In the Gulf of Mexico, for every pound of shrimp harvested ten pounds of sea turtles, horseshoe crabs, croakers, flatfish, and other species perish in shrimp nets." Shrimp fishing is one of numerous assaults on the world's sea turtles. In addition to the loss of sea turtles from longlines and driftnets, turtles die when trapped in nets set for shrimp. A worldwide decline of these ancient creatures is occurring despite the requirement in U.S. waters that nets set for wild shrimp have turtle excluder devices that allow turtles to escape.

Americans eat more than 50% of the world's farmed shrimp, according to E Magazine, Jan/Feb 1998. At an enormous price Bangladesh, Thailand, India, and Ecuador farm shrimp mainly for export to richer countries. Coastal mangrove wetlands, vitally important nurseries for young fish and habitat for a rich diversity of wildlife, are destroyed to create shrimp farms. Local fishers are driven out of business. The diseases and pollution of shrimp farms often limit the farm's life to ten years or less. When shrimp operations move on to new locations they leave demolished marine systems and human poverty in their wake. Meanwhile, in countries that import shrimp it is common to find huge platters of shrimp at social and corporate events and many shrimp dishes on restaurant menus. Diners seem to be unaware of the environmental cost of their shrimp appetizers.

Aquaculture, raising fish in pens, may seem promising at first glance, but its promise withers under scrutiny. Many of the environmental hazards of factory farming on land are also associated with aquaculture. Aquaculture, with its crowded pens of intensively raised marine creatures, requires the use of antibiotics, fungicides, herbicides, and other drugs to keep the penned fish alive. Most aquaculture does not occur in closed systems, where wastes can be treated and polluted runoff prevented. Nitrogen-laden runoff from a fish farm that flows into adjacent waterways leads to excessive growth and eventual decay of plants in nearby waters, depleting the waters of oxygen and creating "dead zones". Marine biologists are concerned about an additional hazard associated with fish

farming. In the case of farmed salmon, the numerous fish who escape their pens may hybridize with wild salmon and spread parasites and disease to them.

“Forty percent of the salmon people eat today have lived their whole lives in captivity, making them the equivalent of domesticated pigs and chickens,” notes John Fleischman in Audubon, March-April 1997. Few fish consumers are aware that large quantities of wild fish are fed to carnivorous farmed fish such as salmon. According to Dr. Safina, in 1994 fully one third of the world’s commercial fish harvest was ground into meal and oil to feed livestock as well as farmed fish. Rosamond Naylor, Senior Research Scholar at Stanford University’s Institute for International Studies, says that for some widely produced farmed species it takes 2-5 pounds of fish to yield 1 pound of farmed fish. Such data underscores the importance of choosing plant foods over all kinds of flesh foods.

Those who enjoy eating fish may wish to explore the amazing mock fish dishes in Asian restaurants that are made with tofu or wheat protein . Everyone can enjoy the following popular, easy recipe for Mock Tuna Salad. It is made with highly nutritious garbanzo beans and is a delicious filling for sandwiches, roll-ups and for stuffing a tomato or avocado.