Anatomy of an anti-fishing campaign

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In their latest assault, the anti-commercial fishing interests are attempting to equate the use of bottom-tending trawls and dredges to the supposed "environmental catastrophe" called timber clear-cutting (actually an environmentally sound forestry technique when properly used but one that has been demonized by anti-logging activists). Through the clever use of words and statistics, they are trying to make it appear as if fishing techniques which have been in use for generations are turning huge areas of sea floor into biological deserts, lifeless areas presaging the end of biological diversity in the world's oceans. Like so many of the anti-fishing arguments that are being circulated, however, these are based on misinterpretations and distortions of the most meager of scientific observations.

Two marine researchers supported by the same Pew Charitable Trusts program that seems determined to put the East coast swordfish fleet out of business kicked off the most recent anti-fishing ruckus in an article published in the December 1998 issue of Conservation Biology. In Disturbance of the Seabed by Mobile Fishing Gear: A Comparison to Forest Clearcutting, Elliot Norse and Les Watling go through a series of exercises to conclude that trawling and dredging by commercial fishing boats is "An activity that each year disturbs an area of seabed as large as Brazil, the Congo and India combined " Then in a fund-raising letter for the American Oceans Campaign Ted Danson, the model turned actor most widely known for his bartender role in the series Cheers, states "Each year the number of forests clearcut (that is, stripped bare of trees) equals an area the size of the state of Indiana. By comparison, the annual wordwide trawling of seabeds takes place over an area greater than the U.S. and Mexico combined. That's more than 100 times the size of forests clearcut." Extending this geographic theme farther, in draft Federal legislation being discussed in Washington aimed at "saving" the oceans from these traditional fishing techniques are the words "The practice and technology of bottom trawling and use of other mobile fishing gear on the seabed has increased to the point that an area of seabed twice the size of the contiguous United States is affected by these practices each year." While there is some apparent disagreement as to which are most appropriate, the point seems to be that fishing affects an area of ocean as large as several medium-sized land masses.

In each of these examples, some statistics were apparently manipulated to force seemingly startling conclusions regarding the extent of mobile fishing gear use. But how valid are such exercises? Let's apply the same techniques to what might be a more familiar situation.

Starting a little closer to home – and the familiar – we applied the methodology used by Norse and Watling in their paper to determine the threat of damage to wildlife habitat that motorized vehicles pose in New Jersey. There were 4.3 million cars, trucks and busses registered in New Jersey in 1997. We assume that the average tire tread width of these vehicles is one foot (at least two tires on each side, each tire at least 6 inches wide), and that each vehicle is driven at least 6,000 miles each year. Using these conservative figures and some reasonably simple mathematical manipulations, it's easy to "prove" that the tire treads of New Jersey's fleet of motor vehicles could crush every square inch of New Jersey's 7,500 square miles of land area at least 600 times every year. In total, almost 5 million square miles of terrestrial habitat could be flattened into unrecognizability by New Jersey's vehicular traffic annually, almost twice the total land area of the contiguous 48 United States (or over one hundred and fifty times the size of forests clearcut).

But, a reader familiar with driving patterns in the U.S. might well argue that this is misleading. In spite of all the SUV commercials which would lead us to think otherwise, New Jersey's 4.3 million vehicles do most of their driving on highways or in mall parking lots. Traffic isn't evenly distributed over all of New Jersey's real estate.

Unfortunately, few of us are as sophisticated about fishing patterns as we are about driving patterns. When a commercial fishing boat leaves the dock at the beginning of a trip it's captain doesn't start aimlessly or randomly towing a trawl or dredge across the ocean bottom. He heads for where the fish are – and that's generally where the

fish have been since there have been commercial fishermen. Year after year, decade after decade and generation after generation particular areas on the sea floor have come to be known as reliable "producers" of particular species during particular seasons – and every year the fishermen return to these areas and use the same types of trawls and dredges to harvest those fish. Norse and Watling even report that some areas of sea floor actually "...*can be trawled an astounding 40,000% annually.*" while other areas - usually where the fish aren't - might be fished only once every several years, if at all. This means that, like the effects of vehicular traffic in New Jersey, fishing effects aren't close to being evenly distributed. Cars and trucks go where the concrete and blacktop are, fishing boats go where the fish are.

Our traffic example sounds much more compelling when we project the effects to seemingly huge areas, but in actuality the effects are (relatively) minimal because they are focused on areas that can resist those effects. In the same manner the effects of trawls and dredges aren't spread out over an area seven times the size of Australia, but are concentrated in limited areas that have been proven to consistently produce fish. Likewise, this would seem to argue that the effects of the gear were minimal (if not, the fish would probably not still be hanging around). However, the real picture having neither the requisite dramatic impact nor the proper anti-fishing spin, let's bring in the land masses and clear-cutting analogy.

How much of New Jersey's wildlife is being destroyed by vehicular traffic each year? Certainly too much, but by no stretch of the imagination is the Garden State being turned into a biological desert by the "*pulling, ripping and crushing*" (Mr. Danson's words used to indict trawling and dredging) of the tires of over four million motor vehicles. By the same token, no matter how the figures are presented, and no matter how significant the local effects, fishing is concentrated on only limited areas of the ocean bottom. And, somewhat confoundingly for the antis, these areas continue to produce fish.

According to Watling and Norse "people trawl almost anywhere they want, and the sea's equivalent of ancient forests are becoming cattle pastures...." This is not quite the case. More than 80% of the total area of the world's oceans is more than a mile deep, and this is a depth that is well beyond the reach of the gear on the vast majority of modern fishing vessels. Of the remaining 20%, much is inaccessible because of geographic, political or economic considerations and some because it has been claimed by fixed-gear fishermen. While the image of threatened "ancient forests" is certainly a compelling one, it would appear that whatever the ocean-equivalents of these forests might be, in the greatest part of the world's oceans they would be safe from the supposed ravages of today's commercial fishing fleets.

More supposed fuel for the anti-commercial fishing fire is the idea that fishing with trawls and dredges changes the bottom, and that such changes are not acceptable. While the clear-cutting analogy (as clear-cutting is popularly perceived) serves this argument well, it certainly isn't the most accurate. Clear-cutting is supposedly a one-shot harvest of all of the useable timber in an area, tearing up the terrain, destroying all the non-useable trees and leaving behind a biological wasteland with no provisions for or thought of future logging or any other natural or unnatural use. It would seem, particularly in the face of inarguable proof that areas of the ocean bottom have been trawled and dredged for generations and have produced fish continuously, that these fishing techniques are much closer to agriculture than to clear-cutting. The fishing grounds aren't cropped once and abandoned as in clear-cutting. After harvesting, the fishing grounds aren't left in a condition that would prevent them from being harvested again for decades. And there is evidence that the changes brought about by trawling or dredging will in some instances actually increase the production of the species being harvested. The dramatic impact and the anti-fishing appeal of the clear-cutting comparison is obvious. The accuracy, however, seems seriously lacking.

Comparing trawling and dredging to agricultural techniques, while obviously much more accurate, would just as obviously be much more troubling to the anti-fishing forces. The idea of continuously producing a food crop from an area of ocean bottom – even acknowledging the fact that harvesting that crop might be altering the bottom – would certainly seem to be more acceptable to the public than "clear-cutting" the bottom, and successful PR campaigns aren't built around attacking acceptable practices.