

Bycatch – From problem to opportunity
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The Department of Agriculture philosophy

For as long as I have been involved in the commercial fishing industry, and that's going back for what is approaching forty years, there has been a widespread feeling that "things would be better if this industry were administratively housed in the Department of Agriculture (DOA)." Whether at the state level, in state waters within three miles of the coastline, or the federal level beyond three miles, there's always been a sort of wistful "*wouldn't it be great if we were over there*" view of the DOA, and the reasons for this aren't awfully difficult to fathom. The Department of Agriculture, no matter whether state or federal, is mostly focused on promotion, and fisheries agencies, no matter the level, are regulatory in nature, in organization and in attitude. This is glaringly obvious with the National Marine Fisheries Service, the federal fisheries agency, which in recent years has become almost totally focused to the virtual exclusion of anything else on limiting - rather than enhancing - the commercial production of fish and shellfish.

I started out in the early 1970s in experimental/pilot level aquaculture, running what turned into a fairly large experimental waste heat aquaculture facility on the Delaware River south of Trenton, NJ which was funded by the National Science Foundation. Having finished the course work for a professional planning degree at Rutgers, I convinced the powers that be at the National Science Foundation (the grantor), at Public Service Electric and Gas Company (the grantee), and at Trenton State College (the primary contractor) that I should be "loaned" to the New Jersey Department of Agriculture to work on a state-wide aquaculture development program.

Needless to say, it wasn't too long before I realized that New Jersey was never going to amount to much aquaculture production-wise. With some of the most expensive land, labor, energy and construction costs in the country, there were a whole bunch of other places where production aquaculture was much more feasible (Back then I had a colleague with a lot of experience doing international aquaculture development. His assessment was that nobody was going to get rich, or even stay in business, trying to do aquaculture in places where there wasn't a large and ready supply of unskilled labor. With the exception of mollusk culture he was - and still seems to be - right on target.)

Making a long story mercifully shorter, I segued over to capture fisheries, dealt increasingly with industry members there and decided that I'd rather work for and with those guys than with a passel of largely ineffectual career bureaucrats. So I "switched sides" (admittedly the dismal prospects I personally saw for finfish culture had a lot to do with this transition).

While this was going on two prominent commercial fishing industry member from New Jersey, Gösta "Swede" Lovgren, who was the owner of a commercial dock in Point Pleasant Beach and Jim Harry, a clammer (both ocean and bay) from Ocean County, had some major philosophical differences with the Division of Fish and Game in the NJ Department of Environmental Protection about how they were managing their fisheries in particular and New Jersey (and beyond) fisheries in general. They began to campaign to get fisheries moved to the NJ Department of Agriculture. Part of their strategy was to become involved with the Ocean County (NJ) Farm Bureau and the Ocean County Board of Agriculture.

Having just escaped from most of a decade's worth of employment in the NJ Department of Agriculture and in that time becoming painfully aware of the lack of a serious commitment in that Department to supporting the fish and seafood program - almost the entire budget was provided by outside funding - I didn't think that was a great idea in spite of the departmental focus on supporting NJ agriculture production. The move never happened and the New Jersey Department of Environmental Protection is still in charge of managing the fisheries in state - out to three miles - waters (the federal Department of Commerce is in charge from three miles out to two hundred miles, the Exclusive Economic Zone or EEZ).

But they were successful in raising awareness in the agriculture community, both in New Jersey and nationally, of the importance of commercial fishing, and are owed a collective industry-wide thank you for the consciousness-raising they did both in and outside the Department of Agriculture in Trenton. A generation later the relations they established are still bearing fruit for the commercial fishing industry.

According to the 2018 State Agriculture Overview for NJ (<https://tinyurl.com/y4yk645d>) annual crop production was valued at almost \$620 million. In 2016, the last year for which landings are valuable, New Jersey's commercial fish and shellfish landings were valued at \$184 million.

While the lion's share of the credit for this belongs to "Swede" and Jim, there were other industry members who were, and who still are, working at advancing relations between the agriculture community and the fish and seafood industry. Among them would be Jim Lovgren, Gösta's nephew, member of the Fishermen's Dock Cooperative in Point Pleasant Beach, third generation NJ commercial fishermen, founding board member of Garden State Seafood Association, former member of the Mid-Atlantic Fishery Management Council (responsible for managing fisheries in the EEZ from North Carolina to New York) and long-time member of the Ocean County Board of Agriculture. Also Ernie Panacek, manager of the Viking Village Commercial Dock in Barnegat Light, past president of Bluewater Fishermen's Association, and founding board member and past president of Garden State Seafood Association. And a number of other industry members who have seen significant benefits in maintaining (and growing) our connections with agriculture.

(And I can't overlook the efforts of a number of researchers and academics at Rutgers School of Environmental and Biological Sciences, formerly Cook College, and especially those folks at the Cook College Cooperative Extension service via NJ Sea Grant. They have maintained a research presence in support of the fishing industry in spite of a well-entrenched academic bias towards more esoteric, less immediately practical research.)

"It was really great to see Brick tie up a whole bunch of loose ends, get the right people together and initiate a program that has the potential to in large part solve one of the biggest problems that is currently confronting commercial fishermen. I support his efforts fully and think I can say the same for the entire membership of the Fishermen's Dock Co-op in Point Pleasant Beach." (Jim Lovgren)

"We at Viking Village in Barnegat Light have already been working with the folks at Trinity Seafood in Lakewood, successfully getting 4,000 pounds of donated albacore tuna to people who need a helping hand. We are looking forward to a long relationship with the Brick, Marty and the Folks at Trinity and salute Tyson for providing the much needed start-up funding." (Ernie Panacek)

Even back then what is known as "bycatch" was starting to attract public scrutiny – or if not the scrutiny of the public, at least the scrutiny of the anti-fishing environmentalists, who were becoming far more active and more well-funded by a handful of so-called "charitable" foundations back in the 1980s.

So what is bycatch?

Our coastal waters and the open oceans are frequented by billions of members of thousands of distinct species of living critters. These are generally invertebrates, fish, birds or mammals (with the occasional occurrence of "oddball" groups like reptiles or amphibians thrown in).

Obviously, at times members of different species will be in the same bit of water at the same time. Just as obviously, different sized members of the same species will be ditto.

It is illegal for folks to disturb, harass, catch, land, kill possess or fondle some of these species either at any time or at particular times, either anywhere or in particular locations.

In spite of what some of the misinformed (or purposely misleading) people would have you believe, both present and previous generations of fishermen have always worked to reduce bycatch, which according to Merriam-Webster is *"the portion of a commercial fishing catch that consists of marine animals caught unintentionally."* It has never been an acceptable part of fishing. This even extended back to the days when our accessible waters and the critters in them were consid-

ered to be inexhaustible. Bycatch consisted of those marine animals which, because of species, size or condition were unmarketable and were grudgingly discarded.

With the advent of fisheries management – and of the creation of a multi-billion dollar self-perpetuating fisheries management bureaucracy that often seem more interested in managing fishermen than in managing fisheries - as well as an understanding and appreciation of basic ecological principles, the issue of bycatch became much more complex and controversial. For any of a number of sound reasons, and some unsound reasons as well, laws or regulations were imposed upon fishermen that limited what they could catch or keep. Fish or shellfish of particular species, outside of mandated size ranges, outside of specific seasons, of particular sexes or from particular locations were “forbidden” to commercial fishermen and a large part of the fisheries management establishment was devoted to insuring that these mandates were adhered to. Hence today fishermen are either required to not catch or to return to the seas both those fish and shellfish that are not marketable and those that are referred to as “regulatory discards,” which they are not permitted to have in possession because of season, size or species but would be readily marketable and consumable otherwise.

Bycatch seems to be an issue expressly designed for the anti-fishing activists, as well as for the recreational anglers who thought that they were much more deserving of the bounty of our seas than the non-fishing public. It is a weapon used by individuals and by groups who wish to get commercial fishermen off the water and to get a higher percentage of limited harvests of particular species shifted from the non-fishing public to the recreational fishermen. Unfortunately, however, it is a weapon that can end up harming innocent parties while having none of the anticipated or at least promised conservation benefits.

*“Populations of Red Snapper *Lutjanus campechanus* in the Gulf of Mexico remain overfished, but overfishing has been ended. Historically, rebuilding plans were based almost entirely on the reduction of shrimp trawl bycatch mortality, which was believed to account for 80% of the total juvenile Red Snapper mortality. This estimate was based on the assumption that juvenile Red Snapper had low rates of natural mortality. Bycatch reduction devices were believed to be capable of reducing bycatch mortality by more than 50%, which would enable the stock to rebuild without any other management actions. Over the years, new information has shown that natural mortality rates of juvenile Red Snapper are four times higher than originally estimated, and bycatch mortality is presently estimated to comprise only about 4% of the total juvenile mortality. Hence, bycatch reduction, regardless of the means by which it is achieved, will not be very effective for rebuilding the Red Snapper stock.”* (From the abstract of An Updated Description of the Benefits and Consequences of Red Snapper Shrimp Trawl Bycatch Management Actions in the Gulf of Mexico; Benny J. Gallaway, W. J. Gazey & J. G. Cole; 2017, in North American Journal of Fisheries Management at <https://tinyurl.com/ralkrpk>)

Some anti-fishing groups have attempted to bolster their campaign against commercial fishing with efforts to eliminate bycatch. They generally employ specious arguments that all boil down to the “fact” that fishermen are not willing to do much to avoid bycatch because it is little more than an inconvenience to them. This is far from truth. A pound of a bycatch species costs a fisherman as much as does a pound of a targeted species; the fuel costs and the wear and tear on the gear and on the boat are the same and the labor in handling the fish or shellfish on board can actually be more.

Because of this, and because of the sheer waste involved, the fishing industry has been committed to reducing bycatch in fisheries in which it is a significant issue as much as is possible, but in particular instances it isn’t possible to reduce the bycatch to zero. In these instances an acceptable alternative would be to find uses for this unavoidable bycatch and people and groups in the commercial fisheries have made sporadic attempts to do so. But until recently no one, at least no one that I was aware of, had put together a successful program.

Michelle Sheldon with The Delmarva Farmer, wrote *“a Jersey Shore native is trying to help feed the hungry from some of the East Coast’s largest seaports and one the nation’s most regulated industries: Commercial fishing. Brick Wenzel has been rallying for support of a gleaning program like those through which farmers share a portion of their harvests with food banks, food pantries and soup kitchens. Fishermen have always done something like this, Wenzel said. They never formalized it”* (<https://tinyurl.com/wronj5k>).

But in the past several years, because of pressures that have nothing to do with fishing or the oceans and a lot to do with a burgeoning (yet controversial) Social Justice movement, the public – and the political – focus has shifted towards issues like food security. Wikipedia states that *“the final report of the 1996 World Food Summit states that food security ‘exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.’”* Particularly when combined with the growing awareness of the many health benefits of a diet rich in marine fish in particular, bycatch utilization has developed a definite cachet.

“We’ve seen the waste take place, we’ve just never been able to do address it,” says Brick Wenzel with America’s Gleaned Seafood. But a new program launched in New Jersey Friday means that some of this wasted fish will be donated to Fulfill, the food bank of Monmouth and Ocean counties (<https://fulfillnj.org>). “That fish gets turned over to the people in Monmouth and Ocean counties who need it the most. And there are a lot of them,” says former Lt. Gov. Kim Guadagno, the CEO of Fulfill. It’s called gleaning - taking extra produce produced by farms and donating it to the hungry. And now the concept will be applied to the ocean. It is believed to be the first such program in the country.” (New Jersey fishermen to donate excess catch to NJ food bank, News12 New Jersey, 9/20/2019-<https://tinyurl.com/w6n3ctd>)

If anyone were to begin to address the issue of bycatch as an opportunity rather than as a problem, the timing couldn’t be better than it is right now.

Fortunately a commercial fisherman out of Point Pleasant Beach, Brick Wenzel, realized this a couple of years back. Equally as fortunately, Brick has significant experience in local politics in New Jersey, and as equally important, he has also been heavily involved at a leadership level in Ocean County NJ Farm Bureau and the agricultural community. In other words, Brick was the right guy at the right time. And it helped that he had been rubbing elbows with the New Jersey fishermen who have been so involved in the New Jersey agriculture industry for so long.

In **Gleaned Seafood brings bycatch to the needy** in the September 20 issue of National Fisherman (<https://tinyurl.com/vfjyx5f>) Kirk Moore wrote *“America’s Gleaned Seafood executive director Martin McHugh used to head the New Jersey Division of Fish and Wildlife. Finding a better way to handle bycatch has long been on his mind. “I wanted to do this when I was (state) director, because we had Hunters Helping the Hungry,” a volunteer effort that delivered venison to the needy, McHugh said. Of course, given the high level of management and regulation on commercial seafood harvest, it has taken a lot of work by Wenzel and McHugh to get a system that all the participants — fishermen, law enforcement, docks, processors and non-profit groups — could buy into. “It’s an ecosystem of people you need to make this work,” McHugh said. The New Jersey state departments of agriculture, environmental protection and his old colleagues at Fish and Wildlife have been especially supportive, he said. State and NMFS law enforcement agents work with the program, observing bycatch pack out into designated containers with tickets for delivery to Trinity. An early test run used 1,000 pounds of scup that were landed at a time of zero market demand and could be used to test the delivery system and processing, McHugh said. Boats working for the program out of the co-op include the draggers Arianna Maria, Kailey Ann, and Amber Waves. Organizers were anticipating squid and sea robins to be in the next round going out to Trinity Seafood (<https://tinyurl.com/v9sc36t>), a Sysco company in Lakewood, NJ, is another participant in the project and is responsible for processing and handling the donated product.*

It’s obvious that setting up this program required a lot of contacts, a lot of credibility, a lot of coordination, and I’d be willing to bet, more patience than most of us would have. And as I covered up above, a lot of groundwork by a handful of committed New Jersey commercial fishing industry leaders going back for at least two decades.

“I feel this is a great example of a responsible use of a natural resource that benefits those most in need. The industry is using its resources, particularly its labor and time, to help reduce hunger and provide a great source of protein. High-priced campaigns, funded largely by the environmental industry to demonize commercial fishermen, have done nothing to help those in need. This proactive campaign does just that.” Ray Bogan, lawyer who represents a number of marine and fisheries organizations as well as active fishing families.

Is it worth the effort? How often do you see positive articles in the general media about commercial fishing? How often are arguments against the “waste” inherent to bycatch used to justify the imposition of onerous – and as we’ve seen most recently in the commercial red snapper fishery in the Gulf of Mexico and the West Coast groundfish fishery (see NOAA Fisheries press release **New Fishing Opportunities Emerge from Resurgence of West Coast Groundfish** at <https://tinyurl.com/rgndgfw> and keep in mind that the resurgence that the people at NOAA Fisheries are so intent on patting themselves and each other on their collective backs about happened far before it was due to because the restrictions on fishing that cost so many millions of dollars and caused so much economic misery on West coast fishing families and their communities primarily to reduce bycatch were obviously far more severe – and punitive - than they needed to be). And how many people’s lives would be improved if they had ready access to some of the thousands of tons of bycatch that are wasted every year?

Steve Strunsky at NJ Advance Media for NJ.com wrote in **Instead of throwing their catch overboard, fishermen are feeding the hungry in N.J.** on 11/21/19 (updated on 12/07/19) *“Homeless roofer Graig Miller and former Lieutenant Governor Kim Guadagno have at least one very personal thing in common: food insecurity. Miller, a 41-year-old Keansburg resident who described himself as an alcoholic, was among three dozen hungry adults and children gathered for lunch on a recent sunny day inside the soup kitchen and food pantry at Keansburg's St. Mark's Episcopal Church. He said the roofing job he thought he'd be doing that day didn't materialize, so he was free for lunch. It was an Italian seafood stew made with whiting, calamari and stingray literally gleaned from sources that might otherwise have thrown it back in the ocean or, worse, a dumpster, because the market simply did not make it worth the cost of shipping. Awesome,” Miller, a fish lover, said of the fresh seafood dish, a healthy source of protein, rich in Omega-3 fatty acids, vitamins D and B2, and other nutrients. “They did a frigging great job.”*

*The aptly named **Seafood Gleaning Program** is the brainchild of longtime Jersey Shore fisherman Brick Wenzel, who landed the program's first gleaned fish in August after spending two years putting together a production and distribution network. It includes the Fisherman's Dock Cooperative in Point Pleasant Beach, whose members catch the fish; the Trinity Seafood processing plant in Lakewood, which freezes and packs it for distribution; and the nonprofit Fulfill food pantry, which regularly feeds 136,000 people in Monmouth and Ocean Counties with two warehouses and a network of 289 pantries, soup kitchens and women's shelters. A \$50,000 grant from the Tyson Foods Protein Innovation Fund pays for boxing and labeling. Despite its health benefits, fresh seafood has been a rarity at soup kitchens and food pantries up to now, even though much of the fish caught in New Jersey and elsewhere goes to waste. But fishermen, business and civic leaders, and volunteers in Monmouth and Ocean counties are trying to change that, with a seafood gleaning program that has served and distributed over three tons of fresh fish at soup kitchens and pantries that had absolutely nothing wrong with it other than a lack of sufficient demand in the commercial marketplace.*
<https://tinyurl.com/t5vcn3f>.

Is it going to eliminate bycatch completely? Definitely not, but it holds the promise of reducing it significantly, and at the same time it will address in part the increasingly important issue of food insecurity.

Thanks to the hard work of Brick Wenzel and his colleagues and the generosity of Tyson Foods the pilot program has demonstrated that the concept is workable, but it’s going to take a lot of commitment by a lot of people to significantly scale it up. This is going to represent a significant investment by the commercial fishing industry, but it’s an investment that’s well worth making, both from the perspective of reducing bycatch and from helping people who can use a hand.