

WEEK

# 12 FISHERIES DEPLETION



Next Week:  
Teamwork & Perseverance

Position: -49.4178,  
-58.3833  
Time: 2017-01-19  
11:30:00 UTC

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**By Rich Wilson, Skipper  
Great American IV**

Living in New England, with the major fishing ports of Gloucester and New Bedford, one is exposed to the state of the fisheries. Over the course of the last half century, the major stocks have depleted significantly. For the Grand Banks off Canada, the cod stock, one of the most important in fishing history, is so severely depleted that there is a complete ban on cod fishing there.

Globally, similar situations exist. A challenge is simply the huge population explosion in the world. People need protein, and fish are a good source, if the resource exists. Yet, fishing technology continues to improve. I remember in 2002, sailing from Australia to Hong Kong between two of our clipper route voyages, we were about 1500 miles northwest of Papua New Guinea, when suddenly there was the distinct thwap-thwap-thwap of helicopter blades. 1500 miles from land?! There was a tuna fishing vessel with a helicopter flying out to find where the tuna were!

Beyond not seeming fair to the tuna, clearly it was effective or they would not have been using such expensive technology.

I recall in the 1960s and 1970s, that population was a topic much written about, studied, and discussed. Part of the discussion was what will an expanding population do to resources, and, in fact, will constrained resources constrain the population? I notice that the topic of expanding populations has essentially disappeared from public conversation. It's not just the fisheries that would be part of that discussion, but water resources, other food resources, and job availabilities. But if the discussion does not exist, no solutions will be sought or found.

Here, I have no scientific data on the fish below the boat. I do think that we had fewer flying fish coming on deck going through the tropics. We have perhaps had more tiny shrimp come on board than I recall from other voyages here to the south. Clearly, those two observations do not deserve to be part of the scientific discussion. Yet as with other topics, we must go to the experts, such as Dr. Ambrose Jearld, and the research performed globally for fisheries, for valid assessments.



**by Dr. Ambrose Jearld  
Fisheries Biologist**

As Rich sails across the world's oceans he will not see the thousands of fish species living in the waters far beneath his boat or the smaller prey species and plankton that they eat. Fish is a growing source of food for people around the world, but as more people eat fish and the technology to locate and catch them improves, many species have been depleted (or are being depleted) by overfishing, climate change, and other factors. Satellites and advanced sonars or fish finders are making it easier to locate schools of fish.

Warming ocean waters are causing many fish populations, which prefer certain temperatures to grow and survive, to move to more preferable habitats which could be farther offshore and away from current locations. Another increasing problem in the world has been illegal, unreported and unregulated (IUU) fishing, which makes it very difficult to manage fisheries.

We want to be able to keep eating fish, but we won't have enough for the future unless we allow depleted fish populations to rebuild and grow, and unless we keep other populations at healthy levels.

The good news is that fish are a renewable resource, and they can naturally replenish their populations if the right management measures are put in place.

As scientists we try to understand basic biological questions like how does each species of fish grow and reproduce, but we also need to know how the environment or ecosystem in which the fish live affects its behavior and life cycle. This way of looking at the whole picture (and not just the fish) is called ecosystem-based management, and it is being put into practice in many parts of the world. A number of depleted fish populations are recovering, but we have a lot more work to do.

As students, there are many ways you can become involved in helping to sustain fisheries around the world and especially in your local area. You can help track ocean currents through surface drifter programs, learning more about fish species that

live in your area and catching only those fish that are not in danger of depletion.



## NEWS EXPLORER

Locate a newspaper article that focuses on a particular natural resource (either a living resource such as fish or a non-living one such as energy.) Is the resource in question renewable or nonrenewable? Are supplies currently abundant, or is the resource becoming increasingly scarce? What is being done, or could be done, to make use of the resource more sustainable?

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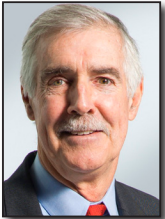
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