

**Wild
Oceans**
For the future of fishing

Spring Newsletter 2014

The Horizon

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CHANGING CLIMATE THREATENS OCEAN FISHERIES

The quiet storm

While some in the public arena are still wrangling over the reality of climate change, and who's responsible, the U.S. National Oceanic & Atmospheric Administration cuts to the chase: "Climate change is already having a profound effect on life in the oceans."

In the fisheries world, fishery managers and conservationists, scientists and fishermen take it as a given. They see the effects of warming waters and increasing acidity firsthand. They're worried about how it will effect the future of fishing and how we can better understand and adapt to the

changes that are coming, that are in fact already here.

No issue joins together the broad mission of NOAA – a federal agency that houses the National Ocean Service, National Marine Fisheries Service and National Weather Service - like the twin causes and consequences of climate change: warming of air and sea by an increasingly industrialized world; an ocean acidified by the daily absorption of massive amounts of carbon dioxide (CO₂) released into the atmosphere.

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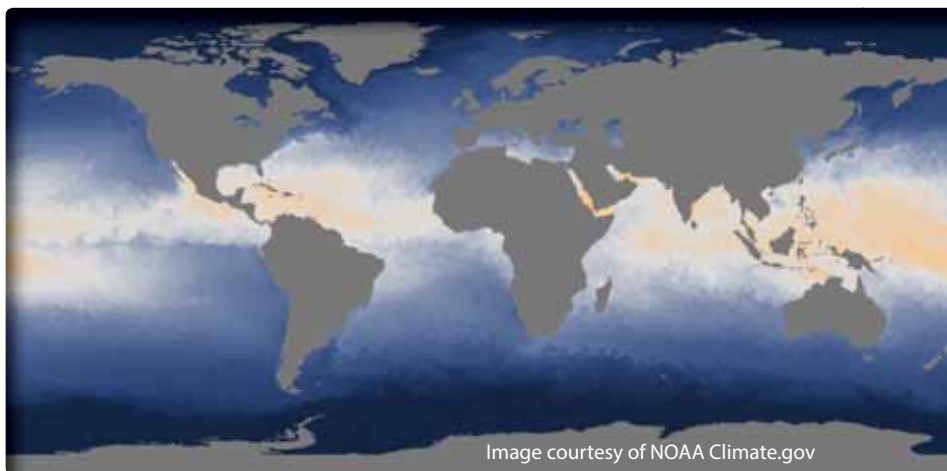


Image courtesy of NOAA Climate.gov

Our Mission

Wild Oceans was founded by anglers in 1973. Like the sportsmen before us who pioneered wildlife conservation on land, we are passionate protectors of fish and the wild world we share.

Our mission is to keep the oceans wild to preserve fishing opportunities for the future. To do this, we bring conservation-minded fishermen and pro-fishing environmentalists together to promote a broad, ecosystems approach to fisheries management that reflects our expanding circle of concern for all marine life and the future of fishing.

So much of what we love about the sea, about fish, about fishing, is in the wildness. But that wild world, and the future of fishing, now hangs in the balance. Everything we do, every decision we make, must be guided by a clear vision of the future we want for our oceans and of how the fishing public and responsible consumers will fit into that future.

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WildOceans.org

Where the wild things are

A few years ago I went hiking in Glacier National Park, a northwest Montana wilderness about as unlike the ocean environment as it gets. Or is it?

Signs posted at the trailheads warn of possible encounters with grizzly bears and mountain lions. It happens. Frankly, the thought of becoming prey to a large predator is a bit unnerving, to say the least. On the other hand, it's awfully exhilarating to be in such a wild place.

And as it happens, Glacier is the wildest of places, the only large ecosystem in the lower 48 states with all its native predators, all the ones that were here when Europeans arrived centuries ago: grizzly bears, black bears, mountain lions, Canada lynx, gray wolves, wolverines, coyotes, golden eagles and peregrine falcons, and more.

I thought of how Pat Wray, an elk hunter who spoke up for bringing wolves back to Yellowstone, answered opponents with this simple truth: "An ecosystem, like a machine, works best when it is complete, when it has all its parts."

.....
"A wild trout in its native habitat is a compact example of the Earth working well."

— Christopher Camuto

Unfortunately, most of our remaining wild lands – those that still have an abundance of predators and prey supported by diverse habitats and plenty of room to roam – are locked away in parks.

The ocean, on the other hand, still has all of its parts. It is still predominately a wild place, if no longer a wilderness. But the ocean's ecosystems are being diminished, *have* been diminished. A machine works even better, we might

say, when all its parts are in good working order. By some accounts, the numbers of top-of-the-food-chain fish, such as the marlins, sharks, big tunas and swordfish, have declined nearly 90% since WWII. Prey fish like herrings, sardine and menhaden, which sustain all life above them, are targeted by industrialized fisheries, making up 37% of the global catch of all species; almost all of it goes to feed domesticated animals, livestock and farm-raised fish. On top of that, we've filled wetlands and armored the coastline while development pressures are moving offshore.

As we can't say often enough, fish are wild animals and they need wild places. Wild fisheries depend on it. But will we preserve the ocean's wildness and, where necessary, restore it? Or will we allow what we've done on land to be the model for what we do at sea?

We're already heading in that direction. Consider the similarities between how we've managed wildlife on land and what some – in government,

For the Future of Fishing

Wild Oceans is a 501(c)(3) non-profit organization dedicated to keeping the oceans wild to preserve fishing opportunities for the future.

Our Goals:

- preventing overfishing and restoring depleted fish populations to healthy levels
- promoting sustainable use policies that balance commercial, recreational and ecological values
- modifying or eliminating wasteful fishing practices
- improving our understanding of fish and their role in the marine environment
- preserving fish habitat and water quality

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OCEAN VIEW CONT'D

mainstream environmental groups and even the fishing industry - are imagining as the future of fishing.

On land, wild places are confined to parks or wilderness areas. At sea, think of *marine reserves*, heavily restricted areas set aside to protect threatened species or sensitive habitats. On land, public access to living resources that once belonged to everyone resides increasingly in private hands. At sea, think *catch shares*, which give private property rights to a portion of a fish population. On land, we zone for competing uses; industrial, commercial, residential and open space. At sea, think *marine spatial planning*, essentially land-use zoning for coastal waters, allocating space for fishing alongside incompatible uses like energy development. On land, agribusiness has replaced family farms, with entire ecosystems reduced to monocultures. At sea, think *open ocean aquaculture*, with pen-raised salmon replacing wild salmon.

In his wonderful new book, [In Pursuit of Giants](#), veteran angler Matt Rigney speaks of the ideal of “wildness that extends across entire ecosystems and involves not just groups of animals but entire landscapes and seascapes, complete cycles of life across generations and throughout the entire web of relationships among creatures.”

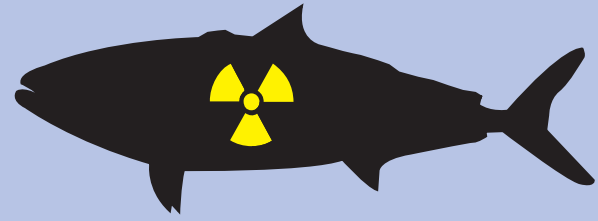
We believe that not only can wild oceans and fishing – commercial as well as recreational – co-exist, but the kind of fishing we want for ourselves, for our children and their children, depends on it. But simply letting human nature chart the course over Mother Nature – the course that we’ve followed on land, cornering and subduing wildness - will inevitably lead to fewer wild fish, less diversity of species, and vastly fewer opportunities to fish. We can imagine something better.

-Ken Hinman, President

GIANT RADIOACTIVE FISH, WORTH OVER A MILLION DOLLARS,
WIPED OUT BY OIL SPILL

News of the weird

Bluefin tuna have been all over the news of late, with the plight of this great fish only getting stranger – and more serious.



A 907-pound tuna caught in February by an angler in New Zealand drew kudos as a possible world record for Pacific bluefin, but also censure for boating such a big breeder from such a severely depleted population.

Last year a single bluefin made headlines when it sold for a mind-blowing \$1.76 million at auction in Japan. That was a bit freakish; nevertheless, it helps explain why bluefin are down and can't get up. Catching a giant can be the fishing equivalent of winning the lottery.

Because the nearly half-ton fish was caught under a sporting permit, it wasn't sold. So, should 56-year-old Donna Pascoe have kept it? (She said she's going to mount it. She didn't say how big her den is.) After all, a 2012 stock assessment for Pacific bluefin, a species related to but distinct from its likewise-beleaguered Atlantic cousin, put the number of spawning tuna at only a tiny fraction, about 4%, of an un-fished population. The assessment scientists, though, put most of the blame for the shrinking spawning stock on the fact that 90% of the catch is juvenile fish that never get the chance to reproduce.

The giant tunas' only known breeding grounds are in the northwestern Pacific, near Japan, the site of the 2011 Fukushima nuclear disaster. Since then, large bluefin caught as far away as California, nearly 6,000 miles to the other side of the ocean, have shown vastly elevated levels of radiation, with isotopes traceable to the earthquake-damaged reactor that to this day is leaking radiation into coastal waters. The tuna are contaminated by swimming in the area and feeding on radioactive prey fish. Government officials say the radiation levels found in tuna off California, ten times normal, are well below what's considered harmful to humans.

Over in the Atlantic, the news is even more unsettling. The northern Gulf of Mexico, the western bluefin's spawning ground, was the site of the monstrous Deepwater Horizon oil rig blow-out, which occurred smack in the middle of breeding season, April 2010. As we wrote at the time, “It's a cruel blow to a fish that's already reeling from decades of gross over-exploitation, with potentially graver consequences for the future of the species.”

A new study by researchers at NOAA, the University of Miami and Stanford University, released in March, gives us a grim glimpse of that future. According to the study, the exposure to crude oil caused severe damage to the developing hearts of bluefin tuna embryos and larvae, compromising their long-term survival, if not killing them outright.

BP says there is no evidence of a population-level impact from their oil spill, to bluefin or any other pelagic species. Indeed, we won't know until 2018 at the earliest, when the generation of tuna born in the oily waters of the Gulf comes home to spawn for the first time. Or doesn't. ■

Pacific saury is just one of the forage species that would be protected under the Pacific Council's new plan.

(photo © Tomomarusan/
Wikimedia Commons/ CC BY-
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COUNCIL MOVES AHEAD WITH FORAGE FISH INITIATIVE

Proactive protection for pacific prey

In April, the Pacific Fishery Management Council used the word **proactive** to describe its decision to move forward with Fishery Ecosystem Plan Initiative 1 – to protect unmanaged and unfished forage fish in the California Current Ecosystem (CCE) unless and until the Council can assess the impact on the ecosystem. Indeed, the Council's action, aimed at protecting forage species from 17 different taxonomic families, was not in response to overfishing or a decline in the species' population. The initiative was in support of the Council's commitment to develop an ecosystem based approach to fishery management that incorporates ecosystem considerations, such as protecting the integrity of the food web, into the Council's management of the CCE.

Forage fish are a critical link in the marine food web, consuming plankton and converting this energy into nutrient animal protein which fuels the upper tier of marine predators.

Forage fish feed not just sport and commercial fish like swordfish and marlin, salmon and groundfish, but dolphins, whales and seabirds, too. In their role as dinner for other fish and wildlife, forage fish indirectly support ocean economics, including recreation and tourism which provides 400,000 jobs and \$18 billion in revenue to California, Oregon and Washington.

But the high value of leaving forage in the ocean is challenged by increasing global pressure to take it out. Many of the unmanaged forage fish off of the Pacific coast are targeted in other parts of the world to satisfy escalating demand for fish meal and fish oil used in aquaculture and pet feeds. The Council's proactive approach will protect the integrity of the entire CCE from the increasing global demand for forage fish.

In order to finalize the plan to protect unmanaged and unfished forage, the Council approved a range of alternatives for protecting these species and will review the alternatives


at the September Council meeting. If the Council is satisfied with the alternatives, they will send proposed language for amending their Pacific fishery management plans out to the public for comment.


A new study in the journal of *Ecological Applications* confirms that it is extremely difficult to predict the impact of commercial forage fishing on dependent predator fish, and that the interaction is not the same in all ecosystems. The Council's precautionary approach to restrict fishing on unmanaged forage unless or until the Council can assess the impact on the ecosystem concurs with the authors' conclusion that simply lowering fishing rates on forage species reduces the likelihood of strong ecological and economic trade-offs. Conserving an abundant reserve of forage, and with it the predator fish and associated commercial and recreational fisheries that depend on it, is sound environmental and economic policy. It's a win-win for all of us. ■


Staff travel log

Our recent travels to fight for the future of fishing...


 Theresa Labriola, Wild Oceans West Coast Fisheries Project Director, attended the Pacific Fishery Management Council's Highly Migratory Species (HMS) Management Team meeting in **La Jolla, California** on January 22nd & 23rd. The HMS Team reviewed developments in the management of the Pacific swordfish driftnet fishery, recent research on swordfish, leatherback turtle and sperm whale use of the Pacific Leatherback Conservation Area, and alternative gear studies.


 On February 3-4, Theresa attended the Pacific Council's Ad Hoc Ecosystem Committee meeting in **Portland, Oregon**. The team developed the initial range of alternatives for protecting unmanaged and unfished forage fish, which was presented to the Council at its April meeting.

 It was somehow fitting that the Mid-Atlantic Fishery Management Council meeting in **New Bern, North Carolina** February 11-13 took place during an unusual ice storm that swept through the southland, since the council session opened with a Workshop on Climate Change and Fishery Science. (see cover story page 1) The workshop went ahead on schedule – although Wild Oceans staff couldn't get there as planned - but later parts of the meeting were cancelled due to the weather. We participated via webinar.

 Wild Oceans president Ken Hinman joined Theresa to provide testimony on the Annual State of the Ecosystem Report on March 8th during the Pacific Council meeting held in **Sacramento, California**. Theresa participated in the

Highly Migratory Species Management Team meeting on March 10-11, providing recommendations for developing protocols to guide alternative gear research in the Pacific swordfish fishery. Ken testified before the Council on March 13th in support of phasing out drift nets and bringing in safer, “greener” gears using our recommended performance criteria. (see story on page 7)

 Ken traveled to **Coral Gables, Florida** on March 27th to give a talk on “Wild Oceans and the Future of Fishing” to a gathering of area fishermen and scientists. He discussed his vision of wild oceans, the threats we face now and will face in the years ahead, and what we can do to change the way we think about the oceans and the way we fish to ensure a bright future for our children and their children.

 On April 10th, Theresa testified before the Pacific Council in **Vancouver, Washington** on the development of Ecosystem Initiative 1 which aims to prohibit commercial fishing on unmanaged and unfished forage fish. (See story on page 4) ■

The 2013 Annual Report is now available on WildOceans.org

(<http://wildoceans.org/about-us/annual-report/>).

We will no longer be including the annual report in our newsletter.

U.S., others declare intent to save the sargasso

A sea of floating *sargassum* seaweed in the northwest Atlantic, a 1.4 million square mile area known as the Sargasso Sea, provides food and shelter for hundreds of species of marine life in an otherwise barren region of the open ocean. (See [A Sheltering Sea Within the Atlantic, Horizon Spring 2013](#)) However, this critical habitat for tuna, billfish, turtles, eels and many other migratory species has eluded conservation stewardship by international authorities. On March 11th, the United States, Bermuda, United Kingdom and several other nations signed a pact, declaring their intent to meet regularly to collaborate on conservation efforts while setting up a Sargasso Sea Commission to monitor the health of the region and advise governmental representatives on needed actions.

The “Hamilton Declaration” comes as the result of work by the Sargasso Sea Alliance, a partnership led by the Government of Bermuda. The agreement is non-binding and the new commission will have no regulatory authority. It is, at this point, a statement of intent on behalf of countries with a vital interest in protecting this unique ecosystem from high seas shipping activities and overfishing, including the harvest of *sargassum* for fertilizer and livestock feed.

It is not the first declaration aimed at the Sargasso Sea. In 2005, the International Commission for the Conservation of Atlantic Tunas adopted a Resolution on Pelagic *Sargassum*, authored by *Wild Oceans* president Ken Hinman, calling on ICCAT members to monitor the status of this ecologically-important area and report on activities that could harm it. “The Hamilton Declaration takes conservation of the Sargasso Sea to another level,” says Hinman, “creating a process for highlighting and responding to threats to an area of the ocean every nation that fishes or borders the Atlantic depends on, whether they know it or not.” ■

The latest studies by NOAA scientists reveal that the ocean is changing faster than we thought, and in more insidious ways. As ocean water temperatures rise, there are measurable shifts in the ranges of fish and other species northward (in our hemisphere, southward below the equator) toward cooler climes. These range shifts, along with changes in migratory patterns, are apparent in species the length of the food chain. Making matters worse, predators and their prey are not moving at the same rate at the same time, which is throwing food webs out of whack. According to NOAA's Dr. Kevin Friedland, young Atlantic cod, for example, depend on an abundant supply of certain species of zooplankton to survive through the larval stage. But warmer conditions in the Gulf of Maine and on Georges Bank no longer favor those species. Friedland thinks that may be one reason cod stocks aren't recovering, in spite of tight restrictions on fishing.

Climate change also affects the timing of annual blooms and nutrient upwellings. Young salmon, for instance, evolved to time their move out of the rivers and into the ocean to coincide with cool, nutrient-rich waters rising to the surface to fuel production of phytoplankton. When that doesn't happen, the salmon starve. Such events have always occurred, in response to periodic anomalies like a warm-water El Niño event, but researchers at NOAA predict that, because of global warming, the unusual – starvation and die-offs – could become routine.

A change in the ocean's chemistry is harming marine life, too. A new United Nations report estimates 24 million tons of atmospheric CO₂, a byproduct of industrial practices, are absorbed every day by the world's oceans, raising acidity to levels incapable of supporting critical forms of life. Many corals, the foundation



Image courtesy of NOAA

of entire reef ecosystems, cannot cope in more acidic waters, with profound implications for fish and other marine animals that depend on reefs for habitat. The growth of krill and other invertebrates, including most planktons, is retarded in an increasingly acidic environment, reducing biomass of these tiny but vital bottom-of-the-food-chain creatures. Acidification can have more indirect effects on fish, studies show, altering their senses in ways that make them poorer predators and easier prey.

Though we're only beginning to understand the changes being wrought – and this discussion hasn't even touched on sea level rise and its impact on low-lying coastal habitats – it seems pretty clear that shifts in the distribution of fish populations, already underway, coupled with the struggle of ecologically-important species to adapt to an unstable environment, could irreversibly alter the nature of wild fisheries and the coastal communities that have come to depend on them.

So what can we do? That is, aside from how we as a society choose to address the larger issues of energy conservation and population control in order to shrink our collective

“carbon footprint.” Below we offer a three-pronged agenda, suggested by NOAA's recent research:

- **Implement Precautionary Fishing Policies.** “In a warming ocean, it is more important than ever to prevent overfishing and to allow overfished stocks to rebuild,” says NOAA. That's because climate change magnifies the effects of our fishing activities on vulnerable populations, while shrinking our margins for error.
- **Closely Monitor Oceanic Changes.** We'll need to understand and document the range shifts and mortality caused by climate change, at the species and ecosystem levels, in order to assess the status of fish populations and habitats. Future efforts to conserve them will depend on it.
- **Accelerate the Move into Ecosystem-Based Management.** As NOAA points out, individual species are responding to climate change, but it is the relationships among species that determine how it affects marine communities and, in the end, fisheries. Only by taking a multi-species, ecosystems approach can we avoid further harming already stressed components of the food web. ■

Pacific council gives indiscriminate drift nets the cold shoulder

For more than thirty years, the Pacific Fishery Management Council has allowed and at times encouraged the use of drift nets that hang like invisible curtains in California's coastal waters indiscriminately capturing any animal in its path. The Pacific Council, at its March meeting, started moving away from this anachronistic gear towards more "environmentally and economically sustainable" types of fishing. The Council continued its support for existing regulations meant to prevent entanglement of endangered leatherback turtles and whales, while stepping up research into alternative fishing gears.

In the early 1980s, California's swordfish fishery transformed from primarily a harpoon fishery to a drift gillnet fishery. Almost immediately, drift net bycatch discussions focused on avoiding turtle and sperm whale interactions, and determining acceptable "takes" of these protected species. During this time, regulation of the drift net fishery continued to take the Council down the wrong path, expending valuable staff resources and funding on increased oversight and management of a way of fishing that is, inescapably, a regulatory dead-end. In the end, even if the Council could manage the fishery to avoid interaction with and mortality of marine mammals and sea turtles, it could not reduce its catch of vulnerable species like marlin and shark or marketable species like opah (sunfish), if needed, without taking the nets out of the water.

At the March meeting, we asked the Council to instead implement "best fishing practices" that support small-scale, high-yield, locally

supplied fisheries, commercial as well as recreational, using the latest technological developments in sustainable fishing. It is part of a progressive shift away from so-called modern, "efficient" methods of fishing that are wasteful and ultimately unmanageable.

In order to facilitate the transition away from drift nets on the west coast (the last place in the country that this indiscriminate and wasteful gear is still in use) while making sure they are replaced by safe and sustainable gears, *Wild Oceans* proposed "performance criteria" to evaluate the results of ongoing research into alternative fishing methods, such as buoy-gear, harpoons or deep-set longlines. In order for the public to have confidence in management decisions based on the research, we told the Council, the precise aims and objectives against which the results will be assessed must be developed through a transparent process and then clearly spelled out.

The Council and representatives of the National Marine Fisheries Service endorsed the need for specific criteria to guide and evaluate alternative gear research and tasked its Highly Migratory Species (HMS) Management Team with drafting protocols for the June meeting, using the *Wild Oceans* recommendations as a starting point. The HMS Team will meet in May to discuss research and use of alternative gear types, a federal limited access permit program for new gears and a long-term transition plan to move away from drift gillnets. We're working on making that long-term transition begin sooner. ■

Mid-atlantic river herring & shad cap in effect

On April 4th, river herring and shad began receiving greater protection at sea. NOAA Fisheries implemented a river herring and shad cap that will close the mackerel fishery if the cap is reached. The Mid-Atlantic Fishery Management Council developed the conservation measure through Amendment 14 to its Atlantic Mackerel, Squid and Butterfish Fishery Management Plan (MSB FMP).

Prior to final approval of Amendment 14, NOAA Fisheries proposed draft regulations for public comment. In February, *Wild Oceans* weighed in supporting the cap, but expressing "serious concerns about the ability of NOAA Fisheries to monitor and enforce the cap, given that key measures proposed by the Council in Amendment 14 were disapproved." Measures rejected by the agency include 100% observer coverage for industrial-scale trawlers, and incentives to prevent dumping catch before it is sampled by a fisheries observer. Ultimately, these critical enforcement components were not approved in the final version of Amendment 14. However, the Mid-Atlantic Council is working with NOAA Fisheries to revise the measures for implementation through follow-up actions amending the MSB FMP.

To address the continuing need to monitor and enhance river herring and shad conservation in ocean waters, the Mid-Atlantic Council formed a River Herring & Shad Committee, which held its first meeting on April 8th. The Committee's responsibilities include recommending the cap level for future fishing years and enhancing coordination with the New England Council, whose herring fishery overlaps with the mackerel fishery but will operate under a separate river herring and shad catch cap. ■



New ways to contact Wild Oceans


Need to contact us? We would love to hear from you! Here's how to reach us:

- 1. **Wild Oceans website.** We have a "Contact Us" page on **WildOceans.org** (<http://wildoceans.org/contact-us/>) that allows you to quickly send a message directly to our office. The website is the fastest and most reliable way to get in touch with us. (And to make a donation!) We receive messages even when we are traveling away from the office.
- 2. **Phone.** Our main office number is (703) 777-0037.
- 3. **Mail.** Send correspondence to our **new** address in Waterford, Virginia:

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 P.O. Box 258
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Your mailing label includes your membership renewal date.



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