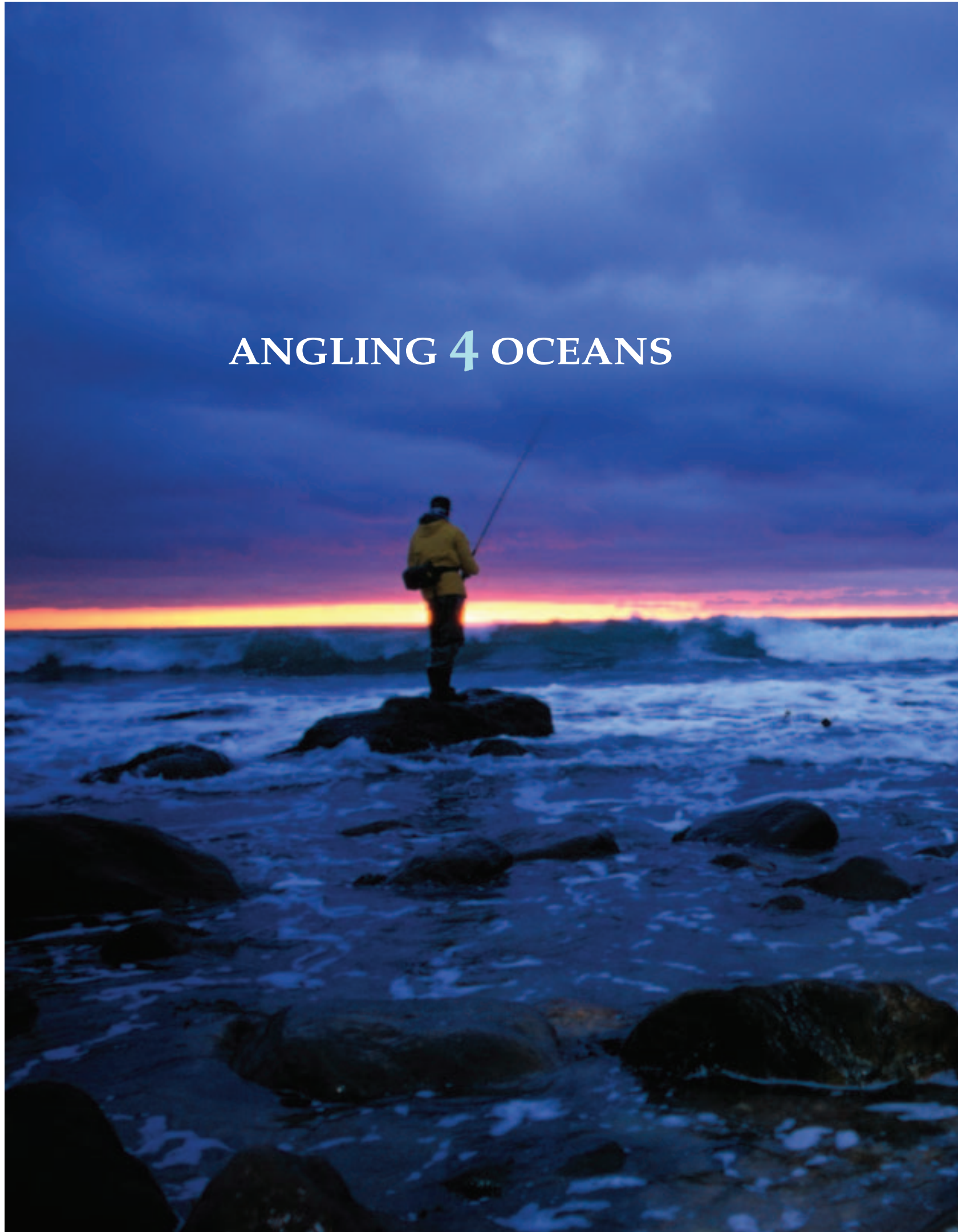


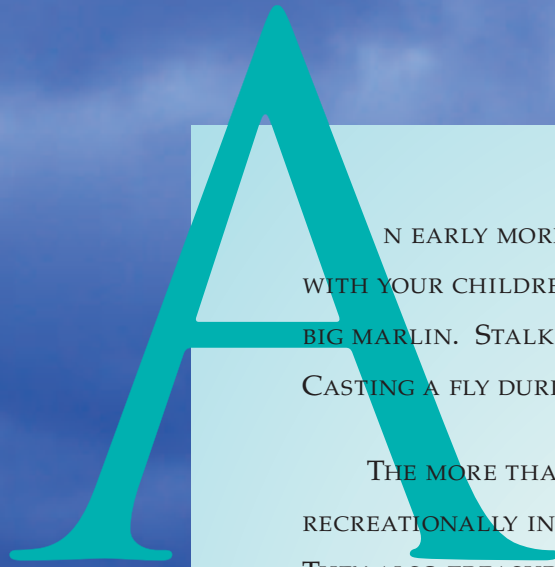
NAVIGATING A FUTURE FOR SALTWATER FISHING



ANGLING 4 OCEANS

# ANGLING 4 OCEANS





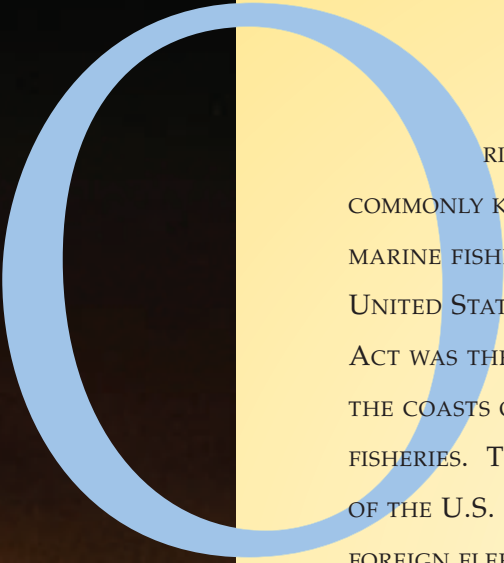
AN EARLY MORNING SPENT SURF FISHING FOR STRIPERS WITH YOUR CHILDREN. GOING OFFSHORE TO CATCH YOUR FIRST BIG MARLIN. STALKING THE INSHORE FLATS FOR REDFISH. CASTING A FLY DURING THE ANNUAL RUN OF COASTAL SALMON.

THE MORE THAN 14 MILLION AMERICANS WHO FISH RECREATIONALLY IN SALT WATER CHERISH THESE EXPERIENCES. THEY ALSO TREASURE THE MARINE AND COASTAL ENVIRONMENTS THAT SUSTAIN THEIR PASTIME. THEY VALUE THE FISH THAT THEY PURSUE. AND COASTAL COMMUNITIES THRIVE FROM THE \$34.6 BILLION IN ECONOMIC BENEFITS GENERATED BY RECREATIONAL ANGLERS EACH YEAR.

## NAVIGATING A FUTURE FOR SALTWATER FISHING

MANY ANGLERS MAY NOT REALIZE THAT EVERY TIME THEY FISH THE OCEAN'S WATERS, THEIR TRIP IS INFLUENCED BY A FEDERAL LAW THAT GOVERNS MARINE FISHERIES MANAGEMENT. ALLOCATION OF FISH STOCKS, DEVELOPMENT OF FISHERY MANAGEMENT PLANS, PROTECTION OF HIGHLY MIGRATORY SPECIES LIKE TUNA AND MARLIN, CONSERVATION OF ESSENTIAL FISH HABITAT, SEASON LENGTHS, CREEL LIMITS, SIZE LIMITS – IT ALL GOES BACK TO THE MAGNUSON-STEVENSON FISHERIES CONSERVATION AND MANAGEMENT ACT.

THIS YEAR, THE MAGNUSON-STEVENSON ACT IS UP FOR REAUTHORIZATION IN THE UNITED STATES CONGRESS. IMPROVEMENTS TO THE BILL COULD BENEFIT SPORT ANGLERS FOR YEARS TO COME ...



ORIGINALLY PASSED BY CONGRESS IN 1976, WHAT IS NOW COMMONLY KNOWN AS THE MAGNUSON-STEVENSON ACT GOVERNS MARINE FISHERIES MANAGEMENT IN THE FEDERAL WATERS OF THE UNITED STATES. THE MOTIVATION BEHIND THE INITIAL MAGNUSON ACT WAS THE RAPID INCREASE OF FOREIGN FISHING FLEETS ALONG THE COASTS OF THE UNITED STATES AND THE ASSOCIATED DECLINE OF FISHERIES. THE MAGNUSON ACT EXTENDED THE TERRITORIAL WATERS OF THE U.S. FROM 12 TO 200 MILES AND INITIATED A PHASE-OUT OF FOREIGN FLEETS WITHIN THIS NEW "EXCLUSIVE ECONOMIC ZONE." IN ORDER TO MANAGE THE FISHERIES, THE LAW ALSO CREATED EIGHT REGIONAL FISHERY MANAGEMENT COUNCILS.

## TACKLING MAGNUSON

ALTHOUGH THE MAGNUSON ACT WAS SUCCESSFUL IN REMOVING FOREIGN FISHING VESSELS, IMPROVED TECHNOLOGY AND A GROWING DEMAND FOR SEAFOOD SPAWNED A DRAMATIC INCREASE IN THE NUMBER AND EFFICIENCY OF DOMESTIC COMMERCIAL FISHING VESSELS. AS A RESULT, ONCE-PLENTIFUL FISHERIES TEETERED ON THE BRINK OF COLLAPSE. TWENTY YEARS AFTER THE ORIGINAL MAGNUSON ACT WAS PASSED, THE SUSTAINABLE FISHERIES ACT OF 1996 AMENDED THE LAW TO PREVENT OVERFISHING AND ENCOURAGE EFFORTS TO REBUILD FISHERIES. IN ADDITION, CONGRESS ENHANCED THE ORIGINAL LAW WITH MEASURES DESIGNED TO MINIMIZE THE BYCATCH OF NON-TARGET



MARINE LIFE, PROTECT ESSENTIAL FISH HABITAT, AND IMPROVE RESEARCH AND MONITORING. THE AMENDMENTS ALSO RENAMED THE ACT THE MAGNUSON-STEVENS FISHERIES CONSERVATION AND MANAGEMENT ACT TO HONOR THE LEAD SPONSOR, SENATOR TED STEVENS FROM ALASKA.

IN THE DECADE SINCE THE LAST CHANGES WERE MADE TO THE MAGNUSON-STEVENS ACT, TWO INDEPENDENT COMMISSIONS, THE U.S. COMMISSION ON OCEAN POLICY AND THE PEW OCEANS COMMISSION, HAVE SOUNDED THE ALARM THAT OUR COASTAL WATERS AND THE FISHERIES THAT SALTWATER ANGLERS ENJOY ARE IN SERIOUS TROUBLE. FISH POPULATIONS ARE DECLINING DRAMATICALLY, AND MANY SPECIES HAVE HIGH CONCENTRATIONS OF CONTAMINANTS FROM POLLUTION, MAKING THEM INEDIBLE OR SUBJECT TO CONSUMPTION WARNINGS. ALGAL BLOOMS SUPPORTED BY FERTILIZERS THAT ENTER THE WATER THROUGH RUNOFF ARE CAUSING MASSIVE DEAD ZONES. DAMAGE TO THE COASTAL ZONE AND SEA FLOOR DESTROYS HABITAT CRITICAL TO THE LIFE CYCLE OF MANY FISH SPECIES.

THE LIST OF CHALLENGES OUR OCEANS AND FISH FACE IS EXTENSIVE – BUT REAUTHORIZING A MAGNUSON-STEVENS ACT THAT IMPLEMENTS SOME OF THE OCEAN COMMISSIONS' RECOMMENDATIONS FOR MARINE FISHERIES WILL BE A CRITICAL FIRST STEP IN TURNING THE TIDE IN FAVOR OF OUR OCEANS.





## ADDING A DASH OF SALT



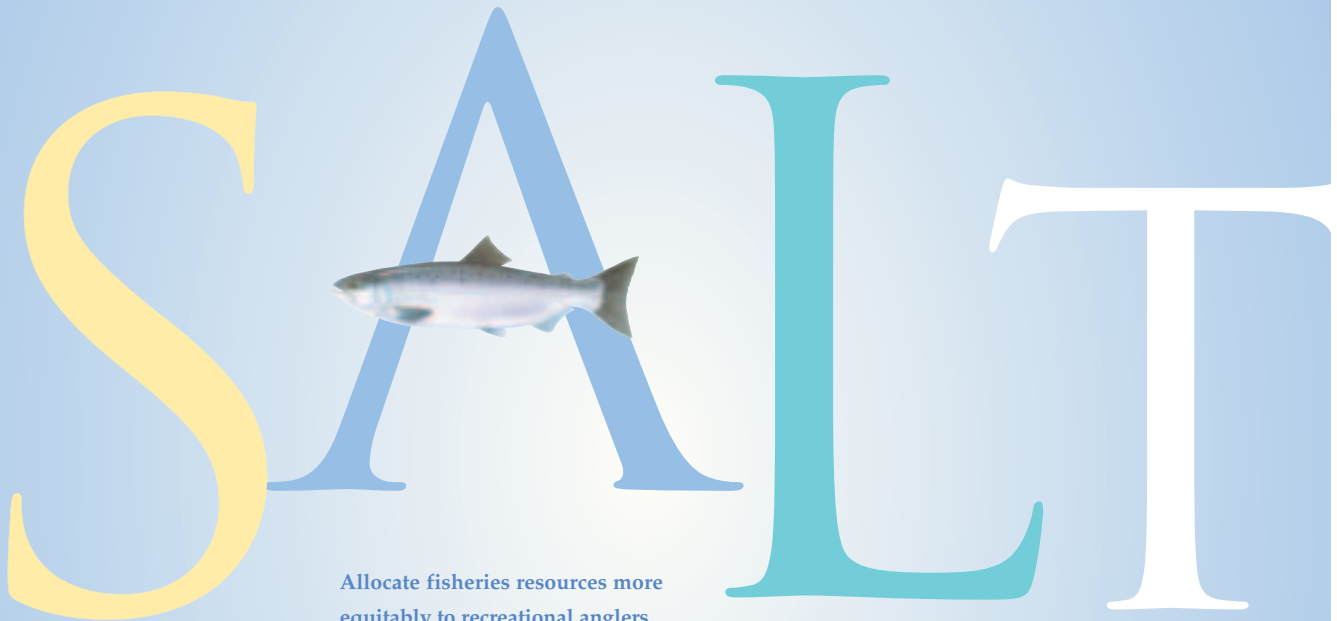
Unless otherwise noted, all statistics in this report come from a suite of original research coordinated by Southwick and Associates and commissioned by the Theodore Roosevelt Conservation Partnership. The full reports can be found at [www.angling4oceans.org](http://www.angling4oceans.org)



AS THE MAGNUSON-STEVENS ACT IS REAUTHORIZED, THERE ARE SOME KEY POLICIES THAT SHOULD BE INCLUDED THAT WILL MAKE A DIFFERENCE FOR RECREATIONAL SALTWATER ANGLERS. THESE POLICIES, CAPTURED UNDER THE ANGLING 4 OCEANS' SALT PRINCIPLES, WILL ENSURE THAT SCIENCE IS USED FOR FISHERIES DECISIONS, ALLOCATION FOR RECREATIONAL FISHING IS EQUITABLE, LICENSED ANGLERS WILL IMPROVE DATA AND FUNDING, AND TACKLE IS LESS DESTRUCTIVE.

IF A LITTLE SALT IS ADDED TO THE BILL, WE CAN COOK UP GOOD POLICY FOR SALTWATER FISHING. AND RECREATIONAL ANGLERS WILL BE STIRRING THE POT TO ENSURE WE DO.

# SALT



## Science must be used in marine fisheries conservation.

Establish appropriate guidelines for Marine Protected Areas that require a scientific basis for designation, a transparent process and periodic review, and include clear criteria for their creation.

Guarantee that an adequate environmental review process is in place when developing fishery management plans and protecting essential fish habitat.

## Allocate fisheries resources more equitably to recreational anglers.

Improve allocation of fish stocks so that the economic impact of all sectors – including commercial, recreational, and charter fishing – and not just the historical catch is considered in determining harvests limits for each fishery. Also, our leaders must ensure science-based rebuilding of stocks that have been commercially over-fished.

Reduce commercial fleets in overcapitalized fisheries through buy out programs that have the dedicated funding sources to make them successful and fair to fishermen remaining in the industry, as well as allowing for continuation of recreational fisheries.

## License saltwater anglers to improve data collection and increase funding.

Implement a uniform, state-based saltwater fishing license that will: (1) determine the number of saltwater anglers in federal and state waters; (2) provide for uniform collection of standardized data on catch levels; (3) utilize and build upon the existing network of state fishing licensing systems for efficiency and ease of availability to the angling public, and (4) provide for federal access to such data to improve recreational harvest statistics.

## Tackle used by anglers should reduce bycatch and not damage habitat.

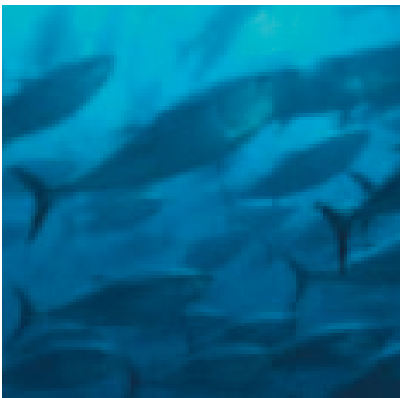
Require that harvesting gear is evaluated and certified as appropriate in each fishery to reduce the use of gear that is destructive to habitat and non-target marine life and encourage the research and use of new technologies.

# SCIENCE MUST BE USED IN MARINE FISHERIES CONSERVATION

A NUMBER OF TOOLS ARE AVAILABLE TO FISHERIES MANAGERS TO MAINTAIN SUSTAINABLE FISHERIES, INCLUDING FISHING QUOTAS, GEAR RESTRICTIONS, TRIP AND CREEL LIMITS, SIZE LIMITATIONS, AND SEASONAL OR TEMPORARY CLOSURES. WHEN THEY ARE MADE USING THE BEST AVAILABLE SCIENCE, THESE MANAGEMENT DECISIONS ARE EFFECTIVE IN RESTORING DEGRADED MARINE ECOSYSTEMS AND DEPLETED FISH STOCKS.

ANOTHER TOOL AVAILABLE TO FISHERIES MANAGERS IS THE ESTABLISHMENT OF SPECIAL RESTRICTED AREAS IN WHICH ALL OCEAN FISHING (BOTH RECREATIONAL AND COMMERCIAL) IS PERMANENTLY PROHIBITED. WHILE THE DESIGNATION OF THESE NO-FISHING MARINE PROTECTED AREAS (MPAs) OR MARINE RESERVES MAY BE APPROPRIATE IN SOME CASES, THE DESIGNATIONS MUST BE BASED ON ADEQUATE, PEER-REVIEWED SCIENCE.

*ANY NEW MARINE POLICY SHOULD ESTABLISH APPROPRIATE GUIDELINES FOR MARINE PROTECTED AREAS THAT REQUIRE A SCIENTIFIC BASIS FOR DESIGNATION, A TRANSPARENT PROCESS AND PERIODIC REVIEW, AND INCLUDE CLEAR CRITERIA FOR THEIR CREATION.*



## *Sticking to the Plan*

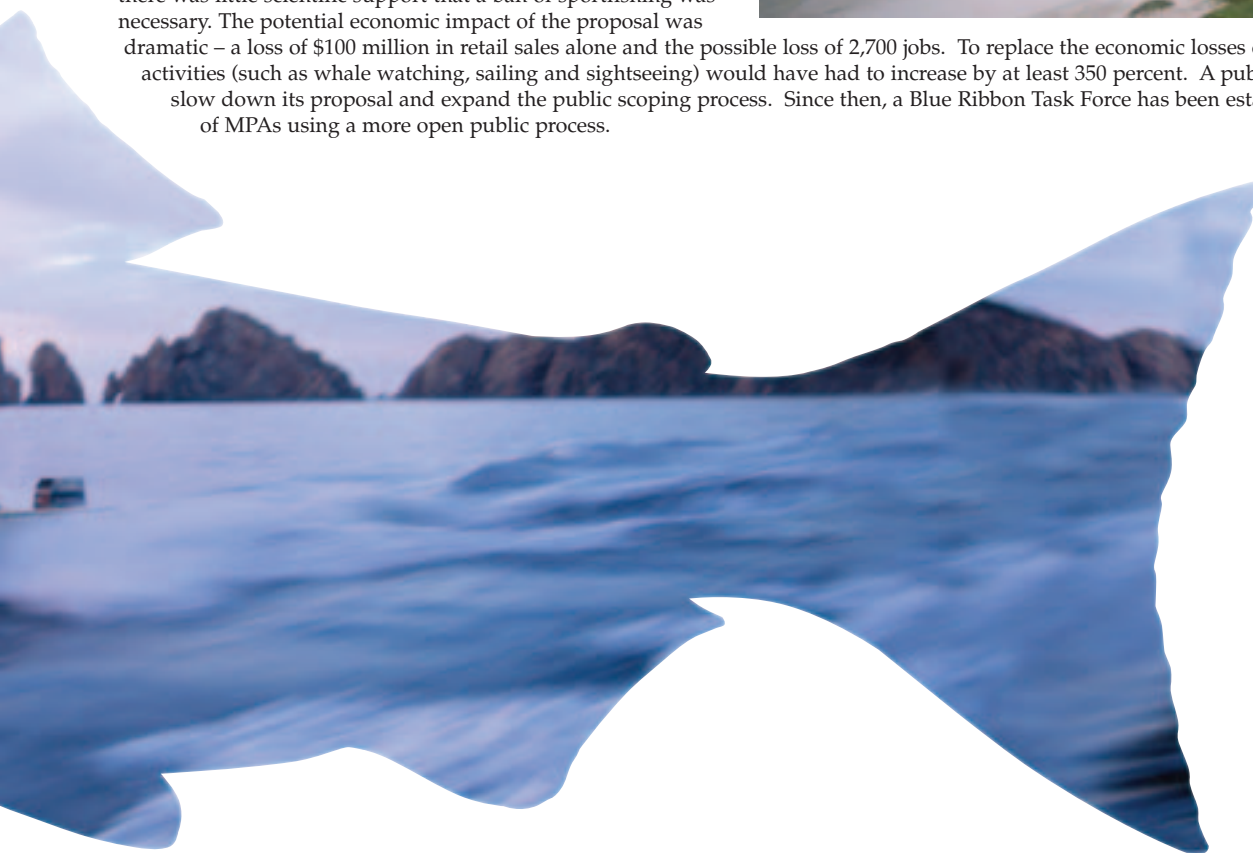
Fishery management plans are essential to ensuring that fisheries are sustainable. From setting allowable catch limits to establishing essential fish habitat, the plans created by the Regional Fishery Management Councils and implemented by the interstate fisheries commissions become the guiding force behind fisheries conservation. When developing fishery management plans, councils should rely more on their Science and Statistical Committees (SSC) and incorporate SSC findings and advice into the decision-making process. Scientific decisions, including stock assessments and determinations of allowable biological catch, should be properly evaluated by SSC's and members of the SSC's should meet stringent scientific and conflict-of-interest requirements to ensure that their recommendations are based on unbiased, sound science. In addition, fishery management plans should require adequate environmental review to ensure that actions that come from the plan do not do unnecessary harm to the marine environment.



## The Channel Islands Example

As part of California's Marine Life Protection Act, a proposal to ban all sportfishing in the Channel Islands National Marine Sanctuary was on a fast track for approval by the California Department of Fish & Game (CDFG) in 2001. The plan would have cut recreational anglers out of an estimated 10 percent of marine fishing opportunities in Southern California, yet anglers were not being included in the decision-making process and there was little scientific support that a ban of sportfishing was necessary. The potential economic impact of the proposal was dramatic – a loss of \$100 million in retail sales alone and the possible loss of 2,700 jobs. To replace the economic losses due to sportfishing bans, other

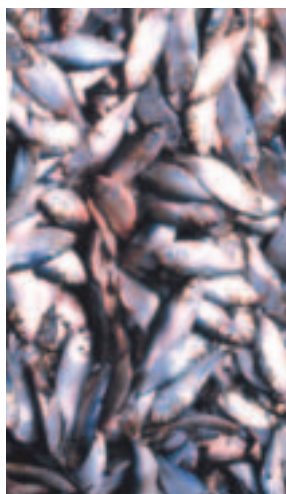
activities (such as whale watching, sailing and sightseeing) would have had to increase by at least 350 percent. A public outcry forced the CDFG to slow down its proposal and expand the public scoping process. Since then, a Blue Ribbon Task Force has been established to construct a network of MPAs using a more open public process.



## Closing out Access

Marine Protected Areas (both "no-take" and other types) can serve a positive function as a management tool in protecting spawning areas, helping restore populations with little connectivity to stocks in nearby unprotected areas, and in protecting critical habitat, which can be damaged by certain fishing methods. The majority of fish stocks in need of protection, however, are too mobile to receive more benefit from permanent no-take areas than from traditional management techniques.

For decades recreational anglers have supported scientifically based management measures that restrict angling, such as season closures, size and bag (possession) limits, catch-and-release requirements and gear restrictions. Seemingly arbitrary decisions to stop all fishing access to certain areas – particularly large expanses – raise concern for anglers. The need to ensure appropriate access can be addressed by having an open process for the designation of no-take areas, a clear management objective for the closure and by basing the designation on sound scientific research.



## Setting Limits

One of the most important steps towards managing fish stocks is setting an appropriate catch level to maintain sustainability. In certain circumstances, both commercial and recreational anglers may exceed their catch limits, leading to a question of how to address the over-harvest. While the concept of reducing the next year's harvest limit seems like the most appropriate response, this method can be unfair to recreational anglers. The data collected on recreational catch are just a rough estimate of the total catch and were never intended to be used for this purpose. Secondly, the concept as proposed only accounts for quota overages and ignores harvest underages and would remove the flexibility of fishery managers to take into account the impact of the harvest on the health of the fishery. Having a measure to hold sectors accountable for their harvest is important but hard total allowable catches and automatic over-harvest deductions are overly simplistic solutions to a very complex problem.

# ALLOCATE FISHERIES RESOURCES MORE EQUITABLY TO RECREATIONAL ANGLERS

RECREATIONAL SALTWATER FISHING HAS A TREMENDOUS IMPACT ON THE ECONOMY – MUCH OF WHICH IS FELT DIRECTLY BY THE LOCAL COMMUNITIES WHERE THE FISHING OCCURS. AS COASTAL POPULATIONS INCREASE, SO WILL THE NUMBER OF MARINE RECREATIONAL ANGLERS, CREATING AN EVEN GREATER BOON TO COASTAL ECONOMIES.

ADEQUATE FISHERIES RESOURCES MUST BE AVAILABLE FOR RECREATIONAL FISHING AND THE CURRENT METHOD FOR ALLOCATING HARVEST SHARE RELIES ON HISTORICAL CATCH RECORDS THAT OFTEN UNDER-REPRESENT SPORT ANGLERS. BOTH COMMERCIAL AND RECREATIONAL FISHING INTERESTS DESERVE AN EQUITABLE HARVEST ALLOCATION, SO A NEW APPROACH IS NECESSARY.

ANY NEW MARINE POLICY SHOULD ESTABLISH AN ALLOCATION FORMULA THAT CONSIDERS THE ECONOMIC IMPACT OF ALL SECTORS AS WELL AS CATCH RECORDS AND OTHER FACTORS.



## Weighing the Benefits

### TOTAL ECONOMIC IMPACT IN COMPARISON

COMMERCIAL FISHING  
9.9 BILLION



\$9.9 BILLION

RECREATIONAL FISHING  
34.6 BILLION



\$10 BILLION

\$20 BILLION

\$30 BILLION

\$34.6 BILLION



COMMERCIAL  
126,000

Saltwater fishing is big business – and coastal communities across the nation have benefited from servicing recreational anglers for years. While commercial fishing's impact is three-and-a-half times greater. From the bait shop where they purchase tackle to the marina where they launch their boat to the jobs they support, recreational anglers support 360,000 full- and part-time jobs. When you weigh the benefits, the scales tip to sport fishing every time.

## Balancing the Scales

For many species with fisheries management plans, commercial anglers receive a far greater allocation than recreational anglers. Take the case of Red Grouper in the Gulf of Mexico – 83 percent of the annual harvest of this popular sport fish is allocated to commercial fishermen. In Florida alone, commercial fishing has harvested an average of 3.5 million pounds more Red Grouper than recreational fishing annually.

Source: Florida Fish and Wildlife Conservation



## Buying in to Sustainable Harvests

As marine fisheries decline, commercial anglers begin to experience a downward spiral. While trying to maintain profitability in a fishery that is overcapitalized, they find few options that will allow them to reduce their harvest. In order to reduce the fleets without excess harm to the fishing-dependent economies, a number of programs have been implemented to “buy out” excess capacity in commercial vessels. Like conservation easements or conservation incentive programs that have been successful in agriculture, well-designed, permanent fleet buy out programs can have a positive impact for both resource sustainability and the commercial fishing businesses. Funding buy out programs for this overcapacity, if done fairly and effectively, would leave a healthy and viable commercial fleet, reduce bycatch and habitat destruction, and support the recovery of most coastal fish stocks.

The impacts of Hurricanes Katrina and Rita were devastating to the fishing industry along the Gulf Coast. But the damage presents an opportunity to test the effectiveness of permanent fleet buy outs to reduce the pressure on overcapitalized fisheries in the Gulf of Mexico. It is estimated that as many as 90 percent of commercial fishing vessels in Louisiana and Mississippi were destroyed in Hurricane Katrina, and onshore processors and marinas also suffered tremendous damage. Funding for permanent fleet buyouts should be included in hurricane assistance, along with funds for rebuilding infrastructure

## Farming for Alternatives

With the U.S. consumption of seafood increasing to 16.6 pounds per person per year and the sustainability of wild fisheries in question, a new alternative for seafood production is gaining attraction – aquaculture. Aquaculture in the U.S. has increased by 300 percent in the last 20 years, but it still only amounts to 10 percent of domestically caught and consumed wild stocks.



Efforts to encourage the increased development of offshore aquaculture and to establish federal authority over permitting present many issues for recreational anglers. Environmental concerns such as water pollution, the potential for weakening the gene pool or introducing disease into wild stocks of fish, and the inadvertent introduction of undesired non-native species into natural environments are just some of the possible side effects of aquaculture. In addition, states that do not currently allow aquaculture due to concerns about wild stocks may find themselves with facilities off their shorelines. While aquaculture can play an important role in meeting future protein demands of society, it must be conducted in ways that do not actually harm the environment or wild stocks of fish that support recreational and commercial fisheries.



### TOTAL JOBS SUPPORTED IN COMPARISON



Commercial fishing may appear to have the most immediate influence on coastal economies, but at the restaurant where they swap stories about the one that got away, recreational

# LICENSE SALTWATER ANGLERS TO IMPROVE DATA COLLECTION AND INCREASE FUNDING

INCOMPLETE DATA AND LIMITED BUDGETS OFTEN PUT RECREATIONAL FISHING INTERESTS IN THE BACKSEAT WHEN IT COMES TO ALLOCATING MARINE FISHERIES RESOURCES. IDENTIFYING A MORE RELIABLE WAY OF COLLECTING INFORMATION ABOUT RECREATIONAL ANGLERS AND FUNDING COASTAL FISHERIES MANAGEMENT IS CRITICAL TO QUALITY SPORT FISHING EXPERIENCES.

ESTABLISHING SALTWATER FISHING LICENSES IN ALL STATES AND STANDARDIZING THE DATA COLLECTED WILL HELP FEDERAL AND STATE AGENCIES MORE EFFECTIVELY MANAGE MARINE FISHERIES TO BENEFIT RECREATIONAL ANGLERS. THE END RESULT OF A STATE SALTWATER FISHING LICENSE WILL BE IMPROVED DATA ON THE RECREATIONAL HARVEST, INCREASED FUNDING FOR FISHERIES MANAGEMENT, AND BETTER MANAGEMENT DECISIONS AT STATE AND FEDERAL LEVELS. PERHAPS MOST IMPORTANT WILL BE THE ENHANCED RECOGNITION OF THE CRITICAL ROLE THAT RECREATIONAL ANGLERS PLAY IN MARINE CONSERVATION AND THE ECONOMIC BENEFITS THAT THEY GENERATE.

*ANY NEW MARINE POLICY SHOULD ENCOURAGE THE CREATION OF UNIFORM, STATE-BASED SALTWATER FISHING LICENSES AND ESTABLISH A NATIONAL REGISTRY OF RECREATIONAL ANGLERS TO SERVE IN THE INTERIM.*

## *A Licensing Case Study*

When the South Carolina Department of Natural Resources was looking for feedback on their saltwater recreational fishing programs, they were able to tap into their database of license holders for an angler survey. The survey, completed in 2005, gave the Marine Resources Division comprehensive information on the species anglers fished for, the number of trips they took, their catch and release behavior, and much more. The survey even asked about possible regulation and bag limit changes and was able to gauge support for different management alternatives.

More important to the agency was the well-deserved pat on the back that they received. Ninety percent of respondents were very or somewhat satisfied with their fishing experience off the coast of South Carolina and 78 percent were very or somewhat satisfied with the Marine Resources Division. Three-quarters of active anglers said that saltwater fishing opportunities and the division's management of the saltwater fisheries resources in South Carolina were excellent or good. And since the survey was based on a random sample of more than 1,500 anglers who were known to have fished in the last two years, the results gave the agency the solid information it needed to move forward with its programs.

*Source: Responsive Management "South Carolina Saltwater Anglers' Participation in and Satisfaction with Saltwater Fishing and Opinions on Saltwater Fisheries Management."*



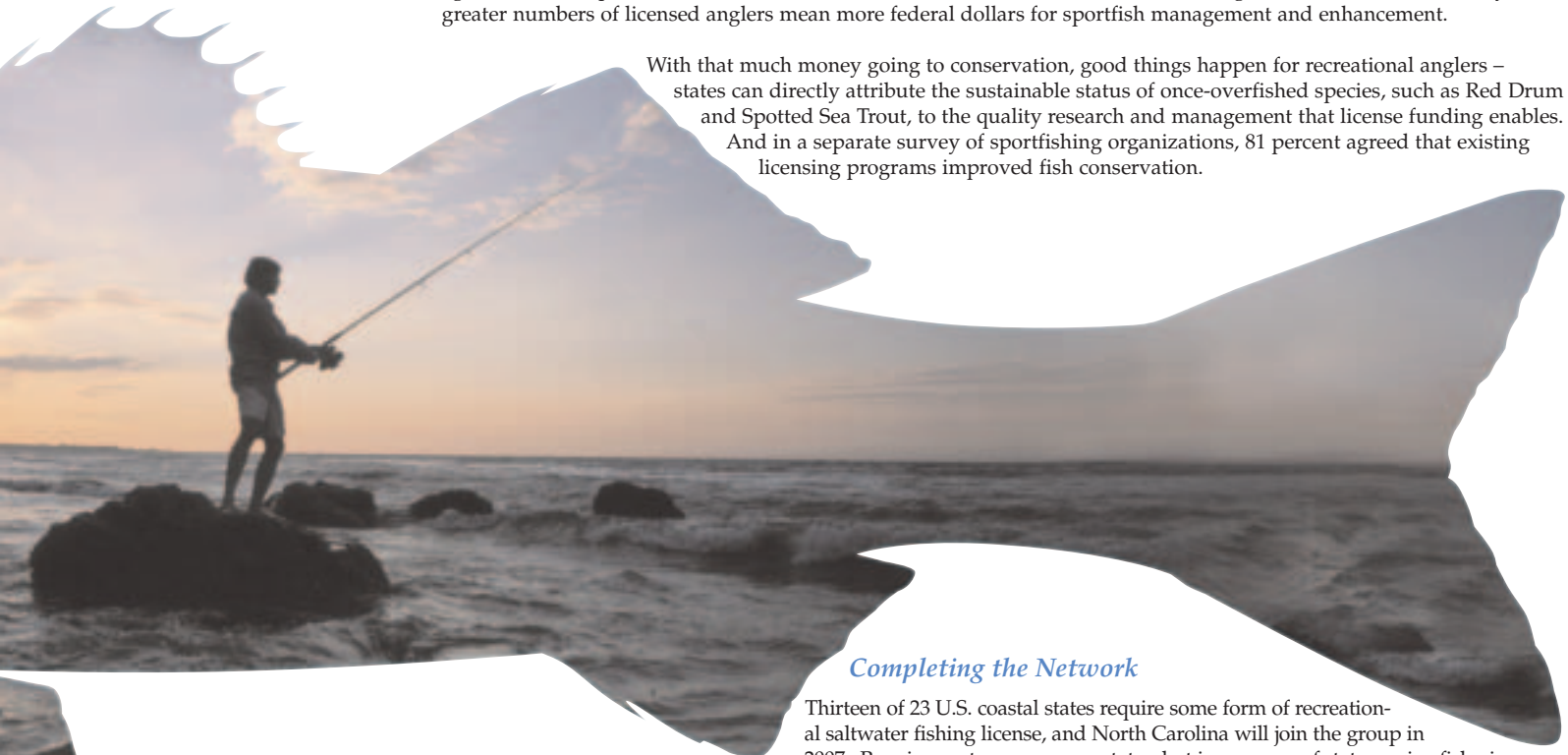


### Show Me the Money

Saltwater fishing license revenues in large states like Florida can provide more than \$17 million annually for marine fisheries management, and even smaller states can benefit substantially from revenues in the one-to three-million dollar range. But it is not the state that profits from these licenses. Every state surveyed reported that the existence of a saltwater fishing license improved its agencies' ability to manage marine resources and support angling opportunities because the revenues from license sales were dedicated for resource management, enforcement and enhancement programs.





Additionally, licensing could affect the amount of federal Sportfish Restoration funding that state receives each year. Sportfish Restoration funding, which comes from taxes on fishing gear and motorboat fuel, is allocated to state fisheries agencies based upon a formula that factors the water area and number of licensed anglers in each state. Generally, greater numbers of licensed anglers mean more federal dollars for sportfish management and enhancement.

With that much money going to conservation, good things happen for recreational anglers – states can directly attribute the sustainable status of once-overfished species, such as Red Drum and Spotted Sea Trout, to the quality research and management that license funding enables. And in a separate survey of sportfishing organizations, 81 percent agreed that existing licensing programs improved fish conservation.



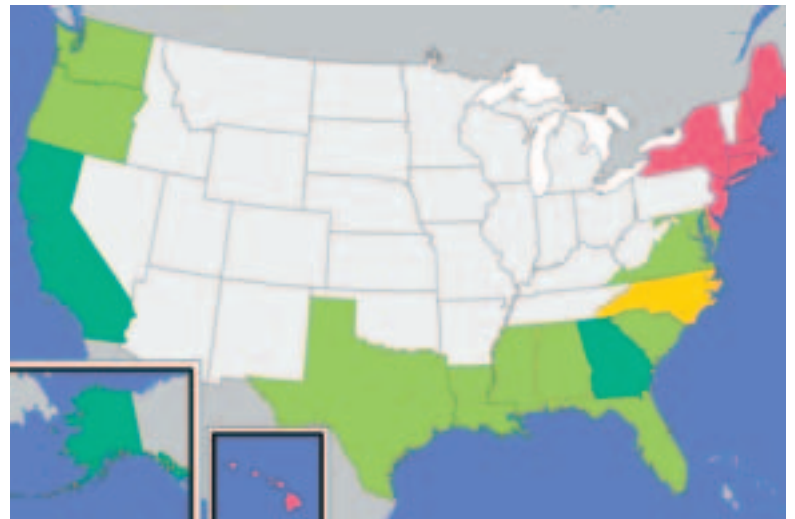
### Completing the Network

Thirteen of 23 U.S. coastal states require some form of recreational saltwater fishing license, and North Carolina will join the group in 2007. Requirements vary among states, but in a survey of state marine fisheries management agencies, 78 percent of nine responding coastal states have or will soon have the ability to sample license holders. None of the states felt that the current system to survey recreational anglers, the National Marine Recreational Fisheries Statistics Survey (MRFSS), was adequate in its current form and most felt that a national registry of anglers should not be required in addition to existing licenses. Having a complete network of state-based licenses will make quality information about recreational catch and effort much easier to obtain.

-  License for saltwater fishing
-  License for freshwater and saltwater fishing
-  License for saltwater fishing (in effect 2007)
-  No License (Chesapeake Bay - license required)

### Supporting the Cause

Eighty-nine percent of responding states felt that recreational anglers in their state were supportive of their saltwater licenses. That is probably because licenses provide another important thing to anglers – a seat at the table. More than three-quarters of states interviewed have a formal process for anglers to participate in management decisions. And four out of five sportfishing organizations say that they have greater influence over marine fisheries decisions as a result of licensing.



# T

## TACKLE USED BY FISHERMEN SHOULD REDUCE BYCATCH AND NOT DAMAGE

CERTAIN TYPES OF FISHING GEAR CAUSE SEVERE DAMAGE TO UNDERWATER ECOSYSTEMS AND CAN IMPERIL NON-TARGET MARINE LIFE. BOTTOM TRAWLING CAN CAUSE SUCH SIGNIFICANT DAMAGE TO THE SEA FLOOR THAT THE FISH STOCKS THAT DEPEND ON THESE HABITATS CANNOT RECOVER. BYCATCH, THE UNWANTED OR UNINTENTIONAL SPECIES THAT ARE CAUGHT IN GEAR, SUCH AS LONG-LINES, PURSE SEINES, TRAWLS AND GILLNETS, OFTEN DIE BEFORE THEY CAN BE RELEASED OR FROM DAMAGE CAUSED BY THE GEAR.

EXISTING FISHING GEAR MUST BE BETTER EVALUATED TO GAUGE ITS EFFICIENCY AND THE DAMAGE IT CAUSES TO NON-TARGET SPECIES, WATER QUALITY AND HABITAT.

MINIMUM STANDARDS FOR REDUCING BYCATCH AND HABITAT DAMAGE MUST BECOME THE TOP TWO CRITERIA FOR GEAR CERTIFICATION. IN ADDITION, REGIONAL FISHERY MANAGEMENT COUNCILS SHOULD DEVELOP BYCATCH REDUCTION PLANS THAT ADDRESS THE BROAD ECOSYSTEM IMPACTS OF BYCATCH FOR AREAS UNDER THEIR JURISDICTION. FINALLY, NEW FISHING GEAR TECHNOLOGIES THAT WILL HELP REDUCE ENVIRONMENTAL IMPACTS SHOULD BE RESEARCHED AND DEVELOPED.

*ANY NEW MARINE POLICY SHOULD REDUCE THE USE OF DESTRUCTIVE GEAR BY REQUIRING GEAR TO BE EVALUATED AND CERTIFIED AS APPROPRIATE IN EACH FISHERY. IT ALSO SHOULD ENCOURAGE THE RESEARCH AND USE OF NEW, SAFER TECHNOLOGIES.*



### *A Catching Problem*

In 2002, the United States had one of the highest discard-to-landing ratios in the world – 3.7 million tons of fish were landed and another 1.06 million tons of fish were discarded. This number is increased largely due to the very high discard-to-landing ratio of shrimp fisheries, at 2.95 for the East Coast of the U.S. and as high as 4.56 for the Gulf of Mexico shrimp fleet.

## HABITAT



### Catch & Release with Circle Hooks

Recreational anglers are applying an old commercial technology to reduce the mortality from catch-and-release fishing. Circle hooks catch fish in the corner of the mouth, limiting gut hooks and making it easier to release undersized fish.



### Catching More than Fish

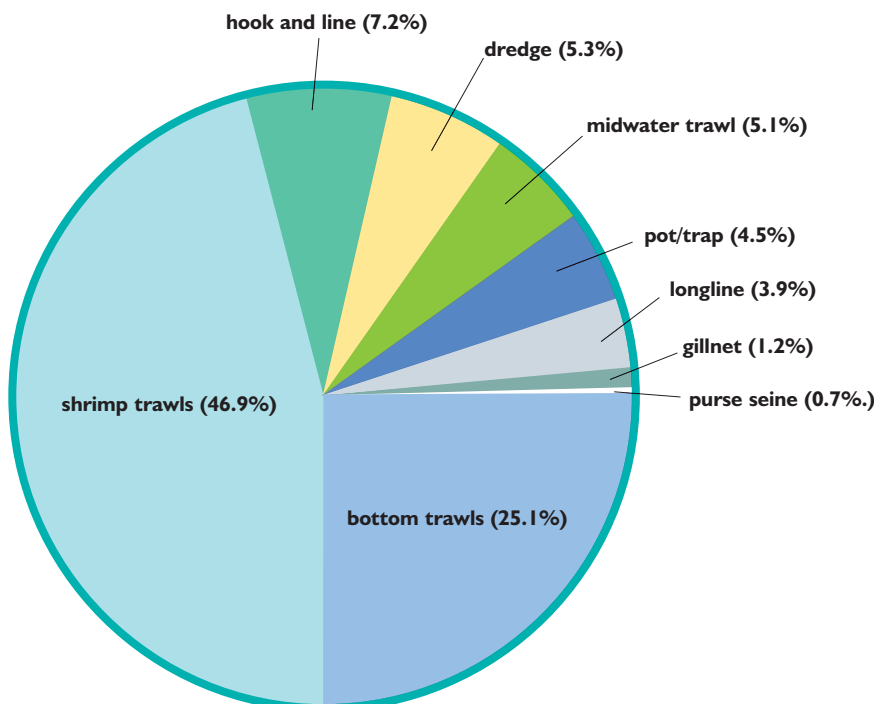
Fishing gear doesn't just catch fish – many gear types affect marine mammals, turtles, sea birds and even the habitats necessary to sustain marine life. Many people are familiar with the problems of catching dolphin with tuna nets or turtles with shrimp trawls, but

sea birds caught on hooks or whales caught in gill nets are just as prevalent. From 1990 to 1999, the mean yearly bycatch of dolphins, whales, seals and sea lions was 6,215 animals. More than 250,000 sea turtles were estimated to have been taken by the global longline fishery in the year 2000, and hundreds of endangered Kemp's Ridley Sea Turtles and threatened loggerheads are taken in shrimp trawl nets. Longline and driftnet fisheries also kill millions of birds such as albatross, shearwaters and petrels.

Beyond the obvious impacts to marine life, many gear types can also dramatically alter marine habitats. In particular, damage to the sea floor from bottom fishing gear has been compared to the clear-cutting of forests – but the area of sea floor damaged yearly by mobile fishing gear is 150 times the land area that is lost to clear-cutting. Bottom trawls crush, bury and expose marine organisms, reducing the structural diversity of the sea bottom. These systems often require long periods of time to reestablish.

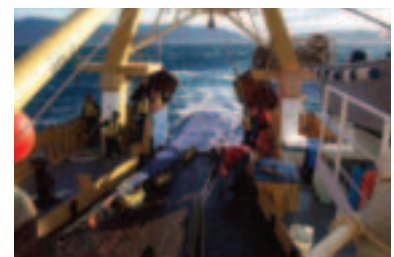
The good news is that technology such as Turtle Excluder Devices (TEDs), acoustic alarms and line weights are making improvements in reducing impacts on marine life. Seasonal adjustments and reducing the number of trawls in an area can help with habitat damage. But research and development of new gear types that can limit the damage – and legislation that can mandate reduction in the use of the most detrimental gear – are essential.

Bycatch by Gear Type for 2002/2003



### Catching up with Technology

New technology and gear types could make a big difference. From 25 to 64 percent of bycatch could be reduced if global fishing fleets could match somewhere between the minimum and median performance of experimental gear documented in various studies. Legislative changes that mandate the use of new technologies would also have a strong benefit.



# COMPARATIVE ECONOMIC IMPACTS FROM RECREATIONAL AND COMMERCIAL FINFISH FISHERIES, 2004

State	Recreational Fisheries			Commercial Fisheries **			Commercial Impacts are X% of Recreational Impacts
	Sales Impacts	Salaries & Earnings	Jobs	Sales Impacts	Salaries & Earnings	Jobs	
Alabama	\$523,216,038	\$208,878,951	8,869	\$17,361,858	\$10,235,775	237	3.32%
Alaska	n/a	n/a	n/a	\$2,943,642,898	\$1,735,440,244	40,175	n/a
California	\$1,591,997,434	\$712,775,270	18,379	\$230,939,892	\$136,151,835	3,152	14.51%
Connecticut	\$203,953,751	\$92,361,120	2,370	\$17,132,994	\$10,100,847	234	8.40%
Delaware	\$128,298,991	\$50,050,868	1,682	\$3,488,056	\$2,056,402	48	2.72%
Florida	\$7,175,891,860	\$3,003,421,827	100,899	\$221,671,569	\$130,687,646	3,025	3.09%
Georgia	\$281,296,192	\$115,594,547	4,199	\$3,364,862	\$1,983,772	46	1.20%
Hawaii	n/a	n/a	n/a	\$166,922,583	\$98,410,092	2,278	n/a
Louisiana	\$1,377,306,264	\$524,808,181	19,674	\$90,690,166	\$53,466,867	1,238	6.58%
Maine	\$64,695,471	\$27,228,130	1,092	\$130,802,779	\$77,115,471	1,785	202.18%
Maryland	\$372,063,673	\$158,937,028	4,922	\$13,457,208	\$7,933,768	184	3.62%
Massachusetts	\$561,973,061	\$247,108,557	7,266	\$324,410,228	\$191,257,766	4,428	57.73%
Mississippi	\$182,922,395	\$73,902,824	3,018	\$2,839,331	\$1,673,943	39	1.55%
New Hampshire	\$57,146,884	\$24,866,954	774	\$18,797,074	\$11,081,915	257	32.89%
New Jersey	\$841,045,986	\$341,116,412	9,583	\$85,009,446	\$50,117,768	1,160	10.11%
New York	\$458,411,993	\$192,380,198	5,494	\$64,557,237	\$38,060,060	881	14.08%
North Carolina	\$1,776,718,793	\$707,977,518	28,409	\$102,123,755	\$60,207,600	1,394	5.75%
Oregon	\$115,415,147	\$50,660,303	1,567	\$145,163,172	\$85,581,716	1,981	125.77%
Rhode Island	\$93,189,234	\$39,505,198	1,411	\$131,337,324	\$77,430,614	1,792	140.94%
South Carolina	\$460,225,852	\$183,824,727	7,323	\$14,761,548	\$8,702,749	201	3.21%
Texas	n/a	n/a	N/a	\$31,362,349	\$18,489,839	428	n/a
Virginia	\$364,164,892	\$148,313,216	5,110	\$58,690,743	\$34,601,438	801	16.12%
Washington	\$134,518,340	\$59,974,784	1,654	\$161,463,451	\$95,191,632	2,204	120.03%
<b>U.S.</b>	<b>\$34,633,867,338</b>	<b>\$13,569,529,752</b>	<b>359,813</b>	<b>\$9,883,630,575</b>	<b>\$6,015,492,003</b>	<b>126,477</b>	<b>28.54%</b>

\* Of the three states without available recreational fisheries impact estimates, Alaska is expected to receive greater benefits from commercial fisheries, Texas is expected to have larger impacts from recreational fisheries, and Hawaii is unknown. Excluding Hawaii, approximately 18 of 22 states receive greater economic impacts from recreational fisheries.

\*\* Please note that the commercial fisheries reported above include significant fisheries such as hake, pollock and other offshore fisheries not targeted by recreational anglers.



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ANGLING 4 OCEANS, A PARTNERSHIP OF RECREATIONAL FISHING ORGANIZATIONS, THE FISHING INDUSTRY AND STATE AGENCIES IS WORKING TO MOTIVATE AND ACTIVATE RECREATIONAL ANGLERS TO IMPROVE MARINE CONSERVATION SO THAT AMERICA'S MORE THAN 14 MILLION RECREATIONAL SALTWATER ANGLERS CAN CONTINUE TO ENJOY FISHING. WITH YOUR HELP, WE'RE NAVIGATING A FUTURE FOR SALTWATER FISHING.



The Theodore Roosevelt Conservation Partnership is a coalition of leading conservation organizations and individual grassroots partners, working together to conserve fish and wildlife and their habitat, increase funding for conservation and management, and expand access to places to hunt and fish.

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