CONTRIBUTING TO OUR NATION'S FISHERIES

Making Drug Approval Efforts Matter

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OUR NATION'S FISHERIES…?

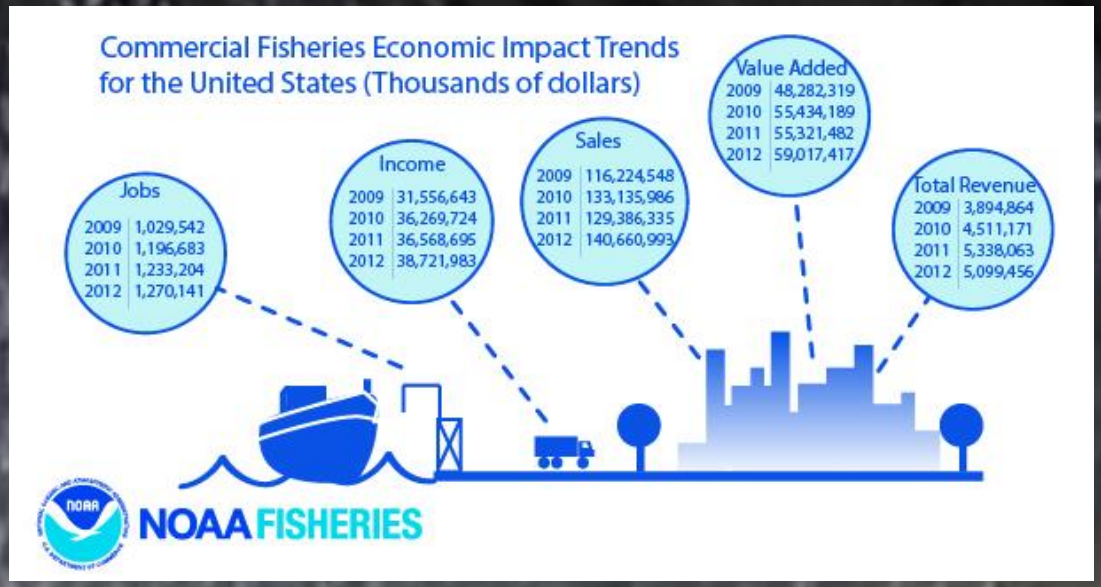
FISHING FOR A LIVING

The value of commercial fisheries landings is on the rise in the U.S.

Freshwater fisheries are small in comparison, but significant

- ***~14 million lbs. landed in Florida annually, worth $5+ million***

National Marine Fisheries Service. 2014. Fisheries economics of the United States 2012. NOAA Technical Memorandum NMFS-F/SPO-137.



Commercial fishing puts food on the table and pays the bills for millions of Americans

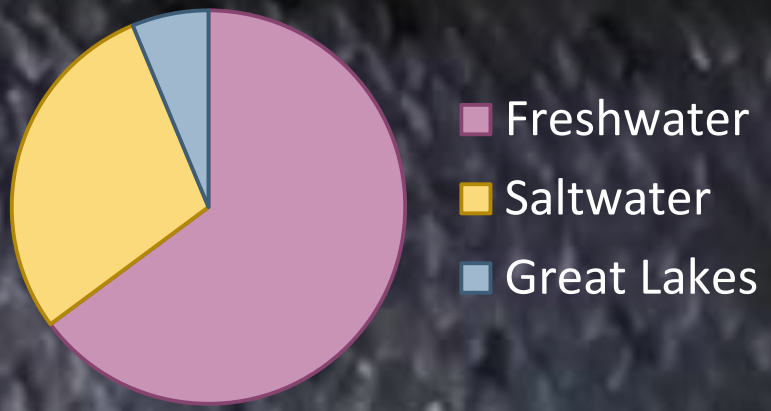
FISHING FOR FUN

If recreational fishing were a company, it would rank #51 on the Fortune 500™ list

Roughly 60 million American anglers are responsible for…

$115 billion in economic output
$15 billion in state/federal taxes
828,000 jobs

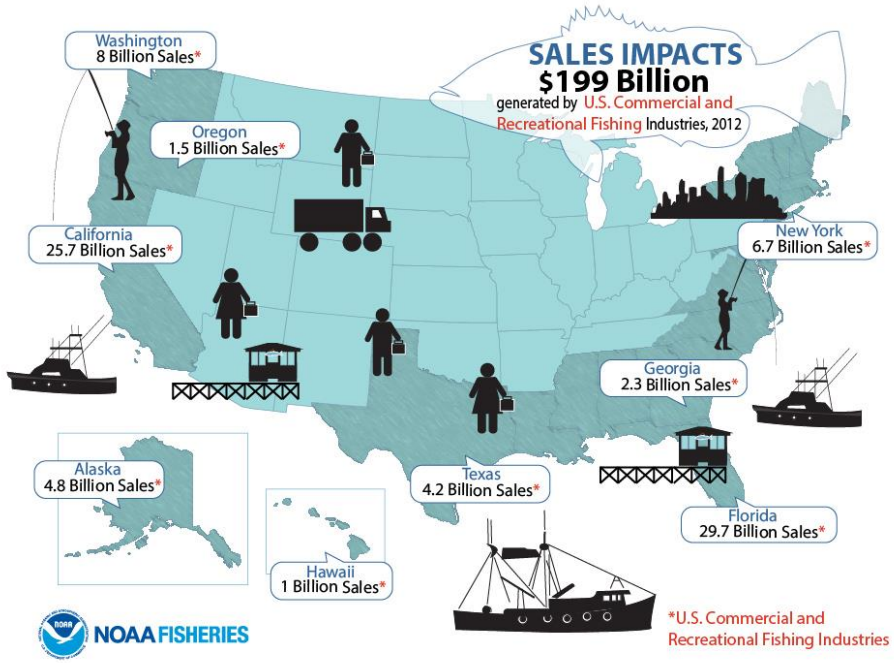
Total Contribution to GDP = $62 billion

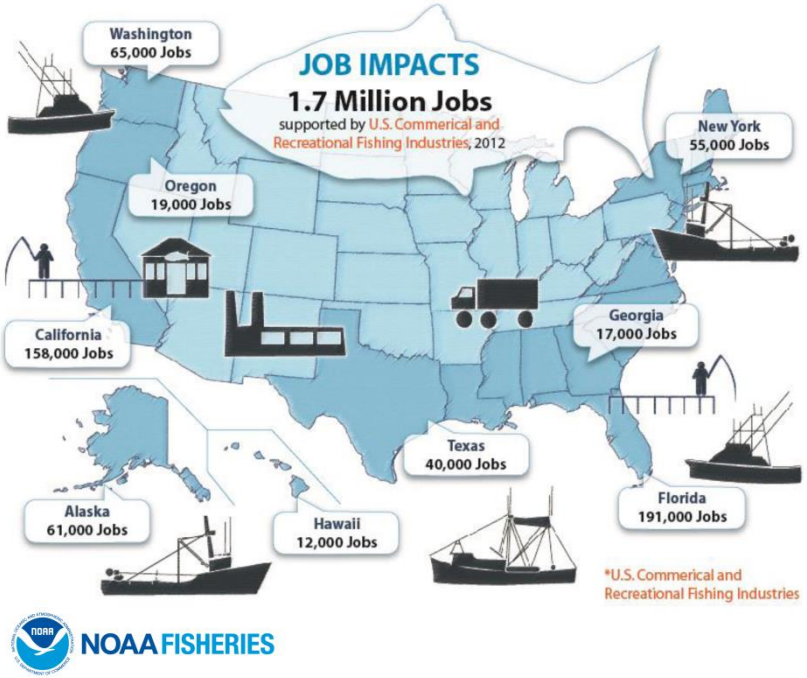


Southwick Associates. 2013. Sportfishing in America, an economic force for conservation. American Sportfishing Association.

Recreational fishing creates economic opportunity and supports aquatic resource conservation

FISHERIES IN DOLLARS AND CENTS





National Marine Fisheries Service. 2014. Fisheries economics of the United States 2012. NOAA Technical Memorandum NMFS-F/SPO-137.

Commercial and recreational fisheries help drive the U.S. economy

TRIBAL TRUST RESPONSIBILITIES

Fish and fishing are central to the subsistence and ceremonial practices of many indigenous people

The U.S. government must fulfill various treaty and statutory obligations to tribal nations guaranteeing the right to fish

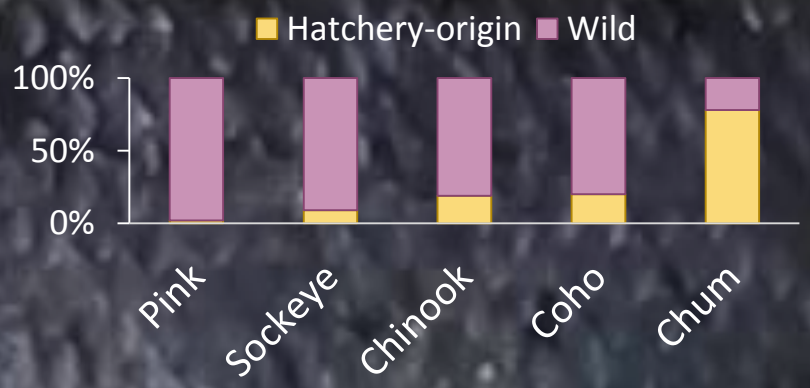
Fishing is a part of cultural identity

HATCHERIES SUPPORT OUR NATION'S FISHERIES

Impacts of NHFS Stocking Programs 2006
13.5 million angler days
$554 million in retail sales
$903 million in industry output
8,000+ jobs

Charbonneau, J.>, and J. Caudill. 2010. Conserving America's fisheries, an assessment of economic contributions from fisheries and aquatic resource conservation. U.S. Fish and Wildlife Service.

Contributions to Southeast Alaskan Salmon Harvest 2005-2009



Heard, W.R. 2011. Overview of salmon stock enhancement in southeast Alaska and compatibility with maintenance of hatchery and wild stocks. Environmental Biology of Fishes 94:273-283.

Hatcheries put fish in the nets of anglers, commercial fishermen, and tribal communities

NOT ALL TOURISTS ARE ANGLERS

D.C. Booth Historic National Fish Hatchery and Archives generates…

$2.1 million in business revenues
$141,000 in local/state taxes & fees
7 non-hatchery jobs

"Nature Deficit Disorder"

Spencer, D.M., and C. Nsiah. 2013. The economic consequences of community support for tourism: a case study of a heritage fish hatchery. Tourism Management 34:221-230.

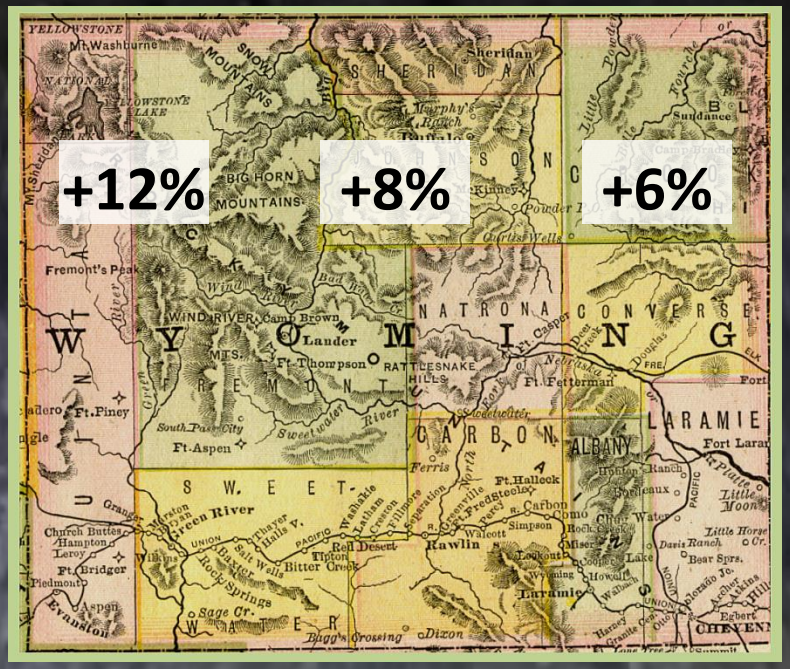
Fish hatcheries are tourist attractions and the 'storefronts' of aquatic resource conservation

PROPERTY VALUE IS LINKED TO FISHING QUALITY

Fishing is a valuable environmental amenity

Angling productivity increases the statewide value of agricultural land in Wyoming by nearly 10%!

Wasson, J.R., D.M. McLeod, C.T. Bastian, and B.S. Rashford. 2013. The effects of environmental amenities on agricultural land values. Land Economics 89:466-478.

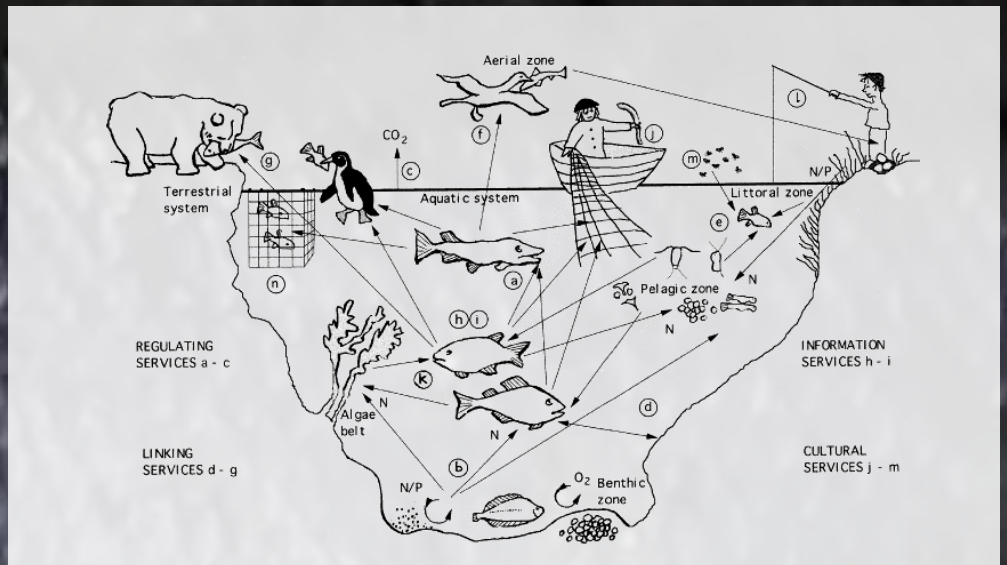


Productive fisheries increase property values and benefit landowners

MORE THAN DOLLARS AND CENTS

As mobile reservoirs of nutrients and energy, fish provide linking services

Fish also provide regulatory and stabilizing services related to food web dynamics, nutrient cycles, etc.



Holmlund, C.M., and M. Hammer. 1999. Ecosystem services generated by fish populations. Ecological Economics 29:253-268.

Fisheries provide a wide range of non-market services that benefit humans

PRICING THE PRICELESS

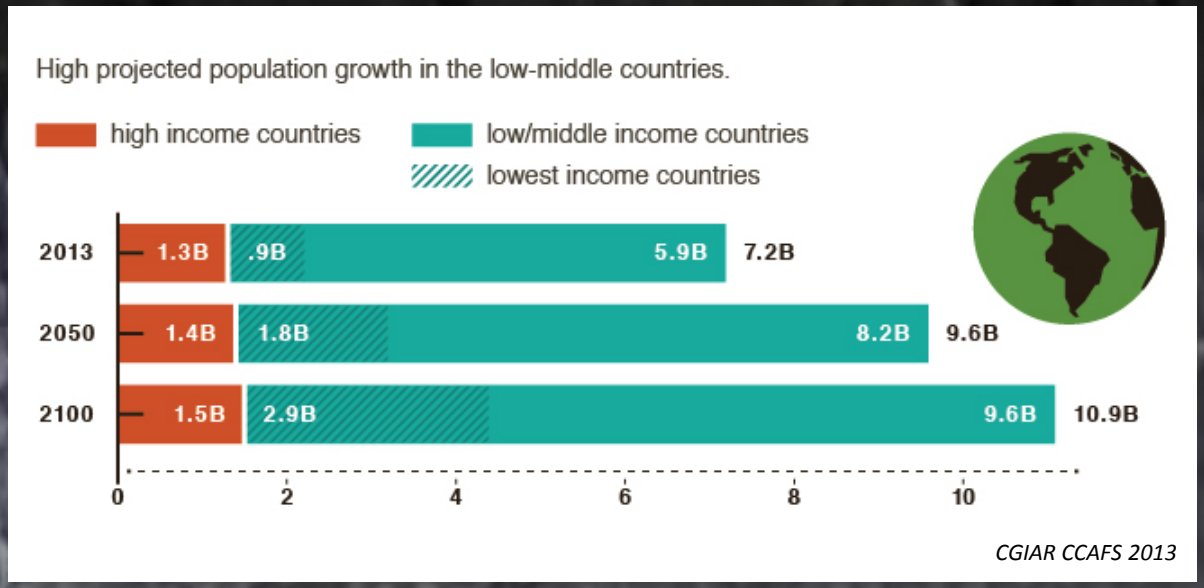
Biodiversity and imperiled species have value, though it may be difficult to monetize

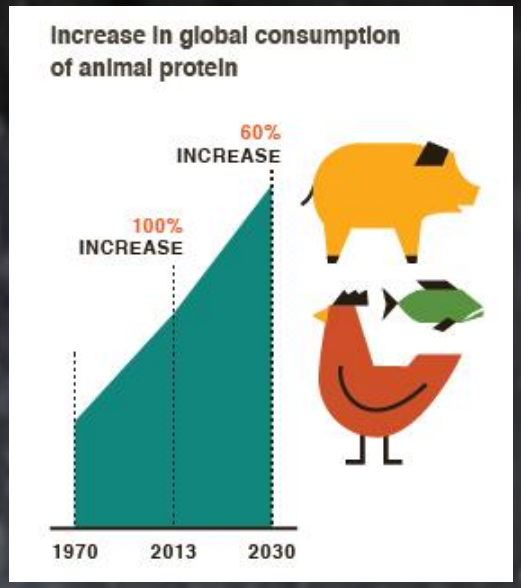
Even for 'high cost' restoration activities, the cost of recovery is typically far exceeded by the public's willingness to pay

Loomis, J.B., and D.S. White. 1996. Economic benefits of rare and endangered species: summary and meta-analysis. Ecological Economics 18:197-206.

Imperiled fisheries restoration preserves the tangible and intangible benefits of biodiversity

THE WORLD IS HUNGRY

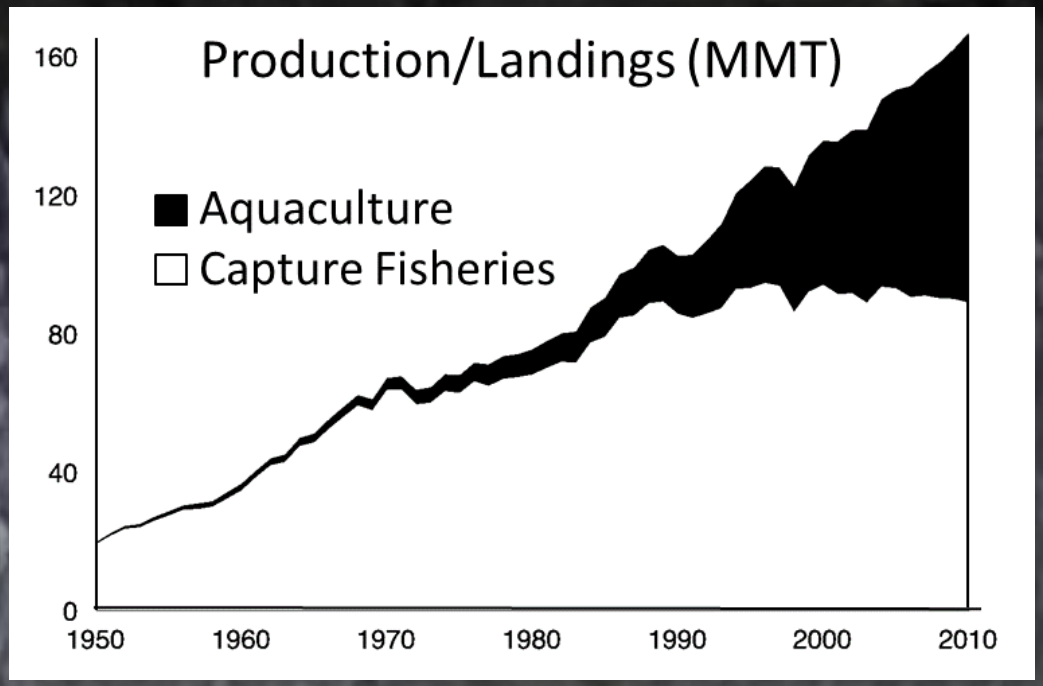




We will need 60% more food by 2050

Population growth, urbanization, and changing diets driving shifts in per capita consumption and eating habits *(WHO 2002, CGIAR CCAFS 2013)*

FISH FARMS ARE THE FUTURE OF SEAFOOD

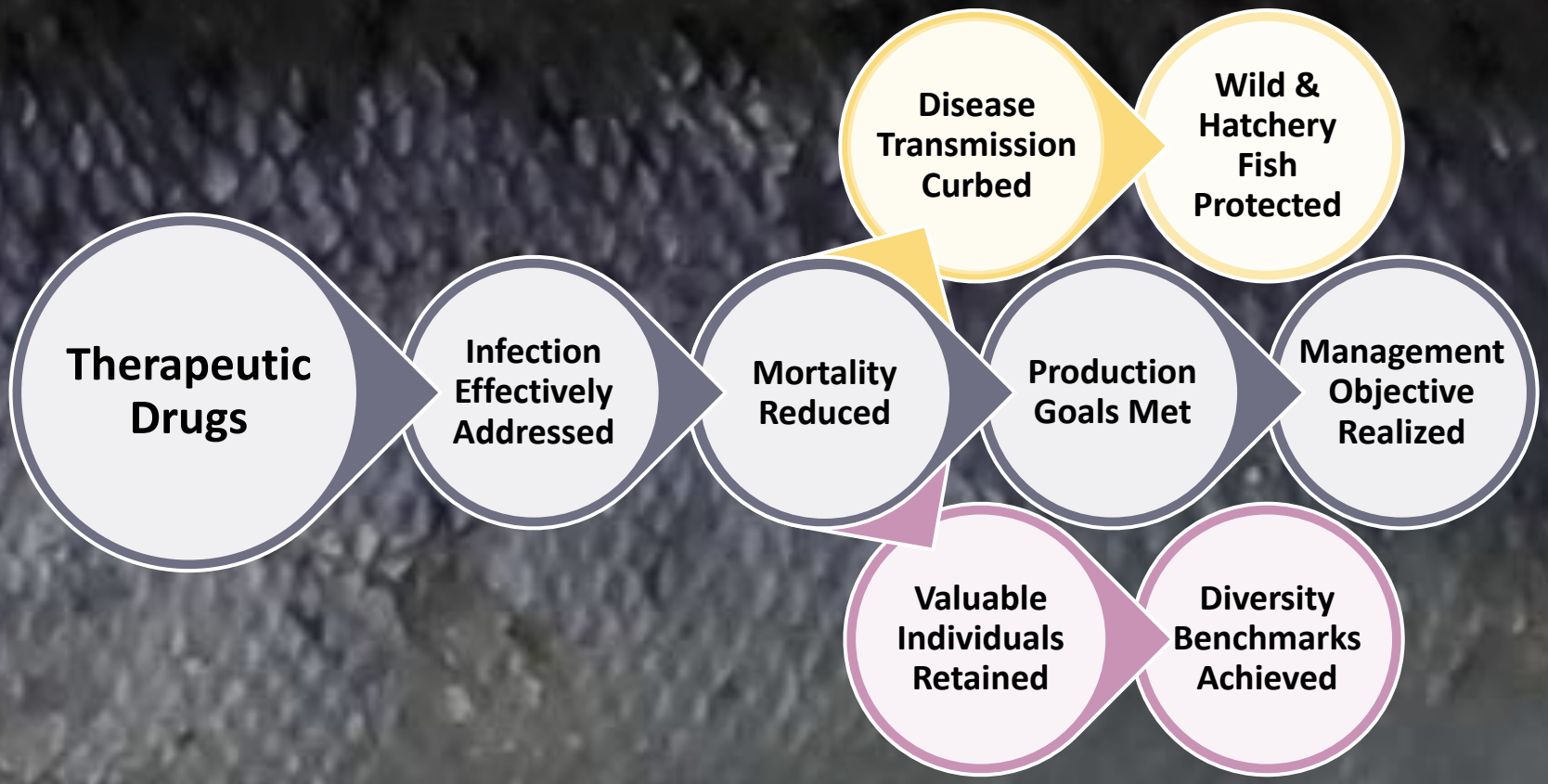


We are unlikely to get more food from our oceans

80% of fish stocks are fully exploited or in decline (FAO 2012)

OUR NATION'S FISHERIES

HOW FISH DRUGS MAKE A DIFFERENCE



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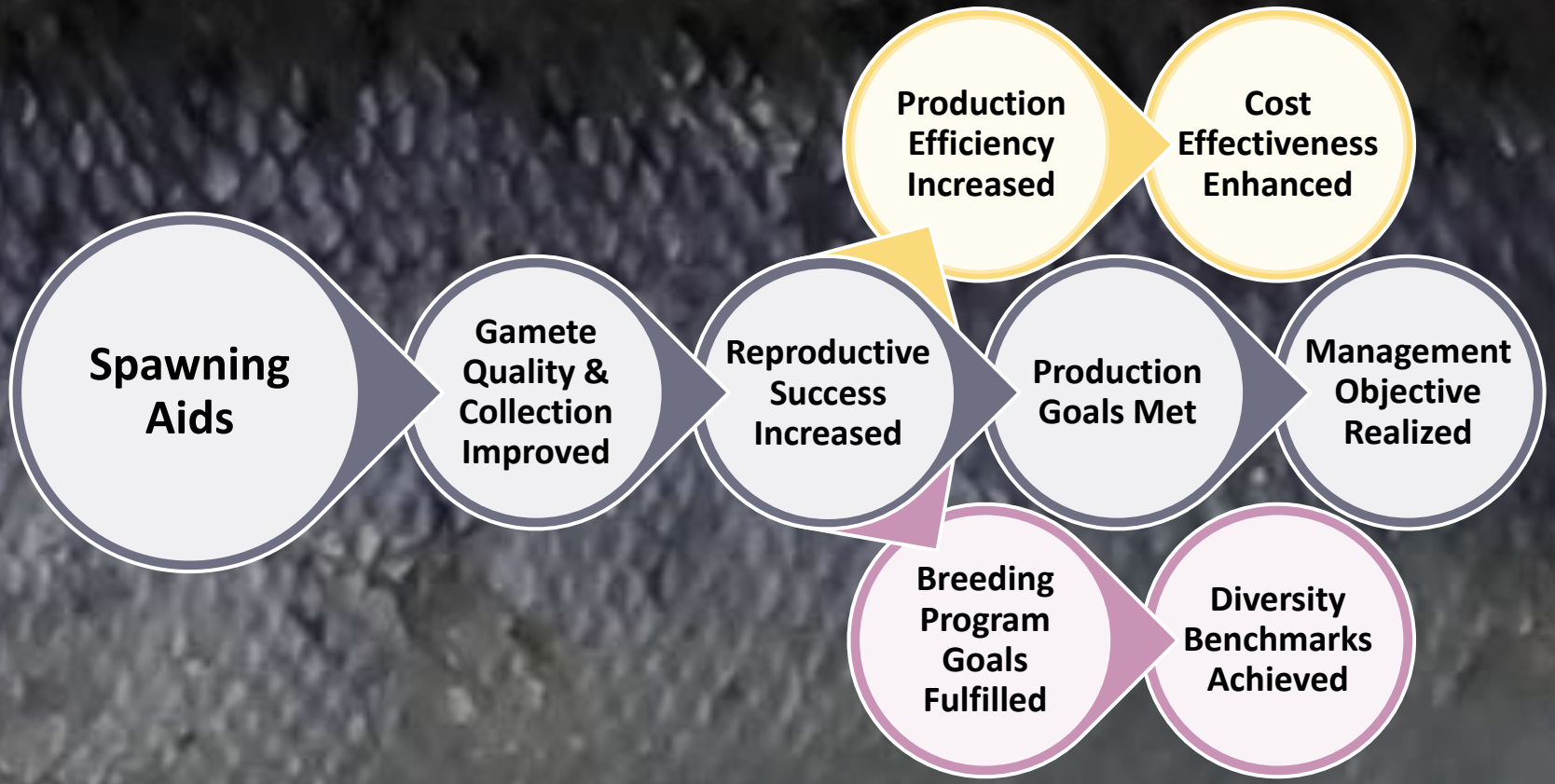


HOW FISH DRUGS MAKE A DIFFERENCE

HOW FISH DRUGS MAKE A DIFFERENCE

DRUG APPROVAL EFFORTS MATTER

Our Nation's fisheries help define us

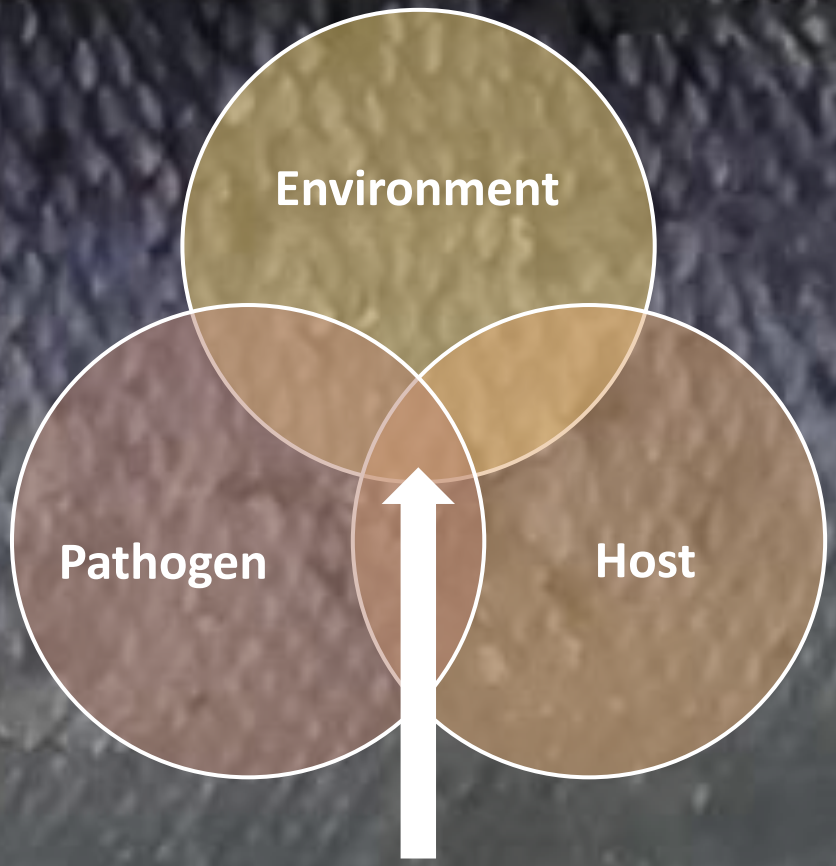
Who we are
How we live
What our future will look like

Hatcheries support commercially, recreationally, culturally, and ecologically significant aquatic resources

Aquaculture is the future of seafood

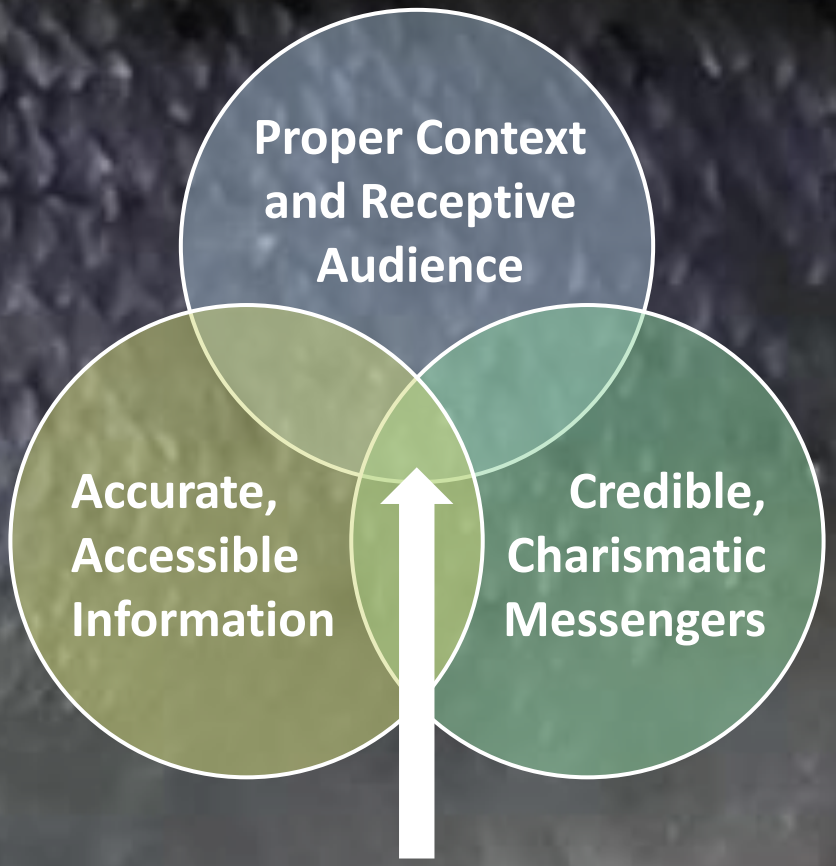
Therapeutants, spawning aids, marking agents, and sedatives all play a role

Disease Transmission



Disease

Information Transmission



Effective Message

GETTING THE MESSAGE ACROSS

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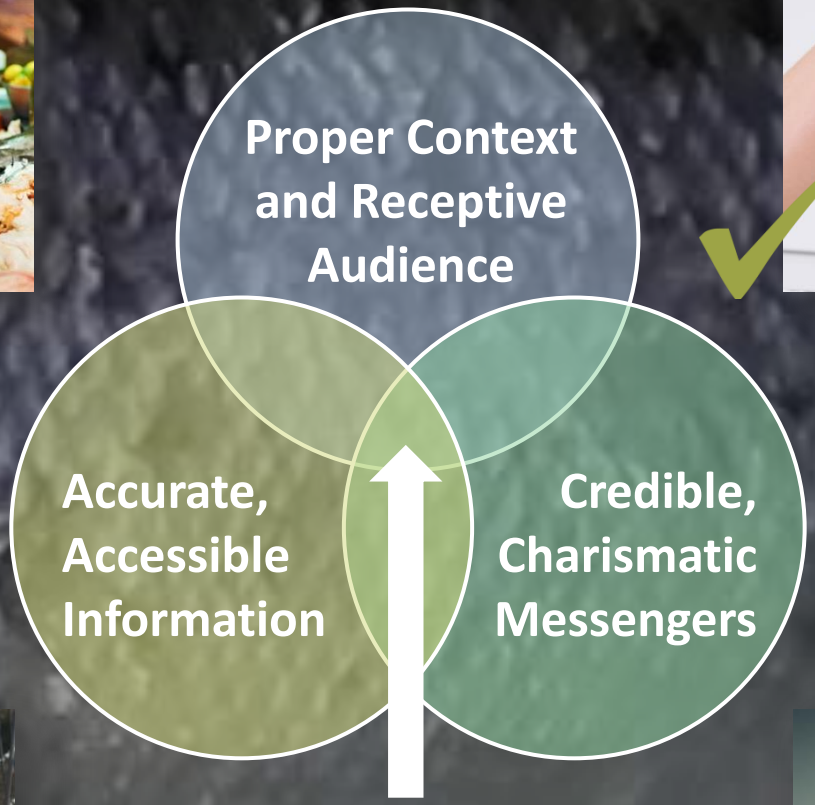

Better Messaging About Fish Drugs