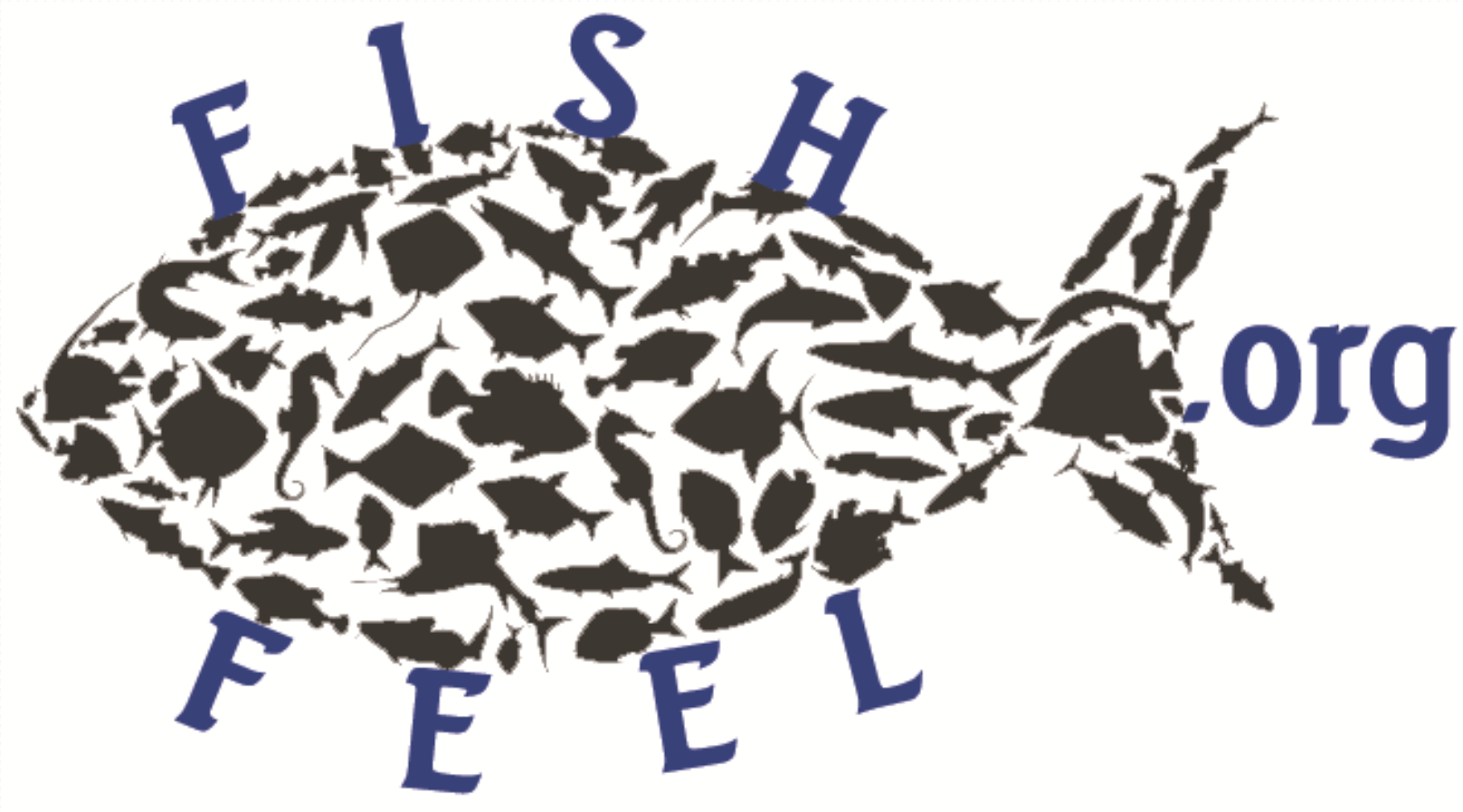


# Fish Feel




# Fascinating Fishes

Earth is home to an estimated 33,000 known species of fishes, which is more than all the other kinds of vertebrate animals combined.



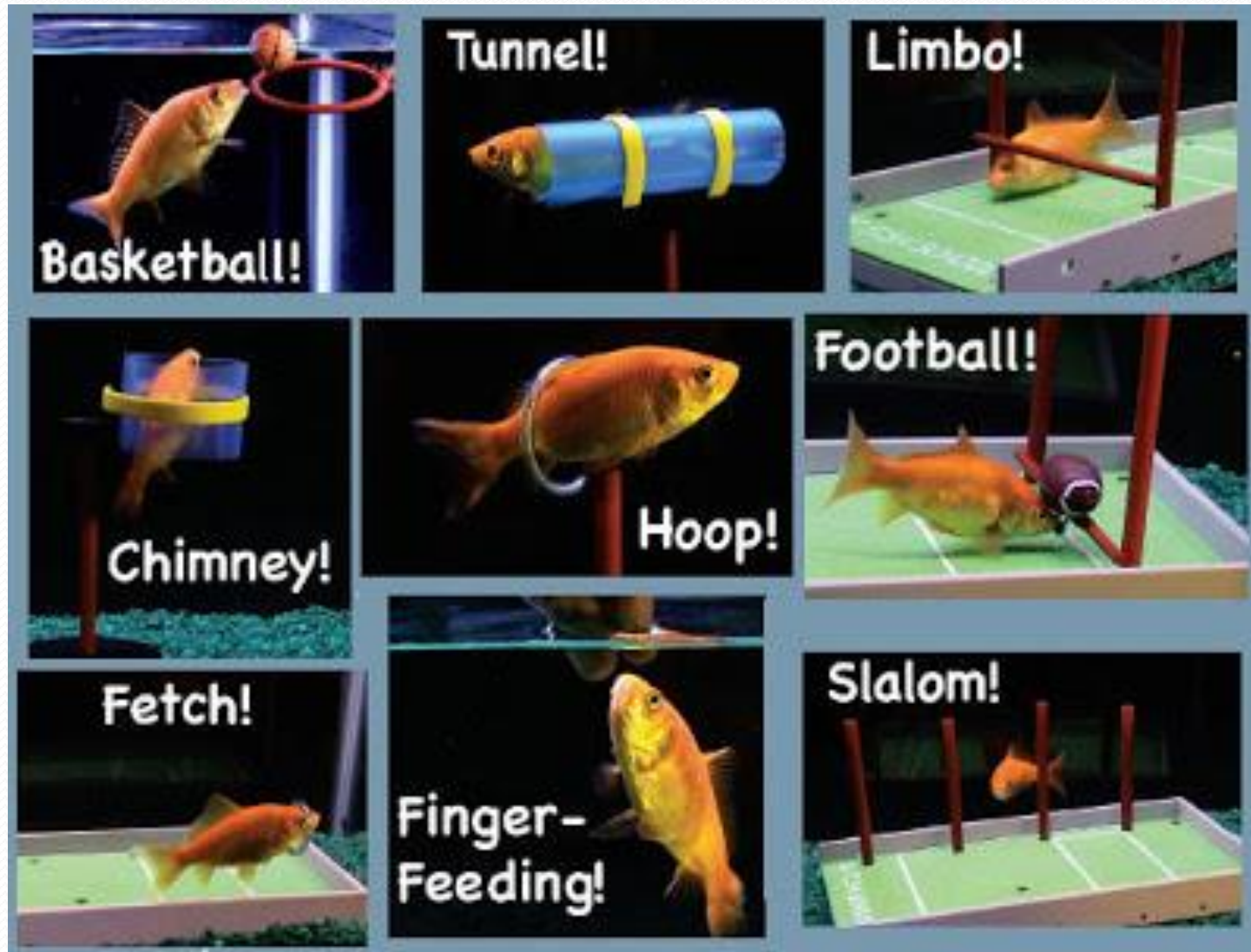





Fish are amazingly diverse and truly fascinating. Did you know, for example, that fish are fast learners with long-term memories and a keen sense of time? They recognize other individuals, can keep track of complex social relationships, and work cooperatively with other species.

They are inquisitive and perceptive. For example, Albert Einstein is the name of a goldfish listed in Guinness World Records as the fish with “the largest repertoire of tricks.”

# Fish Feats



<http://www.youtube.com/watch?v=15Xi-IUKj7A>



Such feats help to dispel the ridiculous myth that fish have 3-second memories. Salmon, for example, remember their way home often years later and from thousands of miles away.


Fish learn from and communicate with each other, and they pass knowledge from generation to generation. Research has also shown that fish can recognize other individuals and their social status, and they can keep track of relationships.

Scientists have observed fish using tools, cooperating with other species for mutual benefit, and carefully caring for their young. (See our Fish are Fintastic! fact sheet for more fascinating facts about fish.)

# Fish Are Sentient

The nervous systems of fish are similar enough to those of birds and mammals to indicate that they can experience pain.

Fish behave in ways that exhibit pain when they are subjected to stimuli that would cause physical pain to other animals. They learn to avoid unpleasant encounters, like electric shocks, and painkillers reduce symptoms of pain that they would otherwise display.



"I have argued that there is as much evidence that fish feel pain and suffer as there is for birds and mammals -- and more than there is for human neonates and preterm babies."

- Dr. Victoria Braithwaite, professor of fisheries and biology at Penn State University, author of "do fish feel pain" (p. 153).

(See our Fish Sentience fact sheet for additional acknowledgement by the scientific community that fish can experience fear, feel pain, and suffer.)




Tragically:

- ❖ Fish are the largest category of exploited animals;
- ❖ They are subjected to arguably the worst abuses;
- ❖ They receive the least protection or concern for their well-being – even from the animal protection community.





Fish Count is a European organization that published a remarkable report in 2010 which estimates the number of fish who are captured globally each year by commercial fishing, along with a great deal of other revealing information.



Using data obtained from the United Nation's Food and Agriculture Organization, Fish Count divided fisheries capture tonnages and aquaculture production tonnages by estimated average weights for the various fish species to determine the number of fish killed globally each year.

# Global Fish Kill and Use

- ❖ Fish Count estimated that, each year:
- ❖ 970 – 2,700 billion fishes are caught from the wild, of which
- ❖ 450 – 1,000 billion fishes are caught to make fishmeal and fish oil [mainly to feed farmed fish].
- ❖ Additionally, 37 – 120 billion farmed fishes are killed for human food.

<http://fishcount.org.uk/fish-count-estimates>

## Fish Count:

“[I]t is estimated that between 0.97 and 2.7 trillion\* fish (i.e., 970,000,000,000 to 2,700,000,000,000) were caught from the wild globally each year for 1999-2007.”

\* rounded to 2 significant figures

<http://fishcount.org.uk/fish-count-estimates>

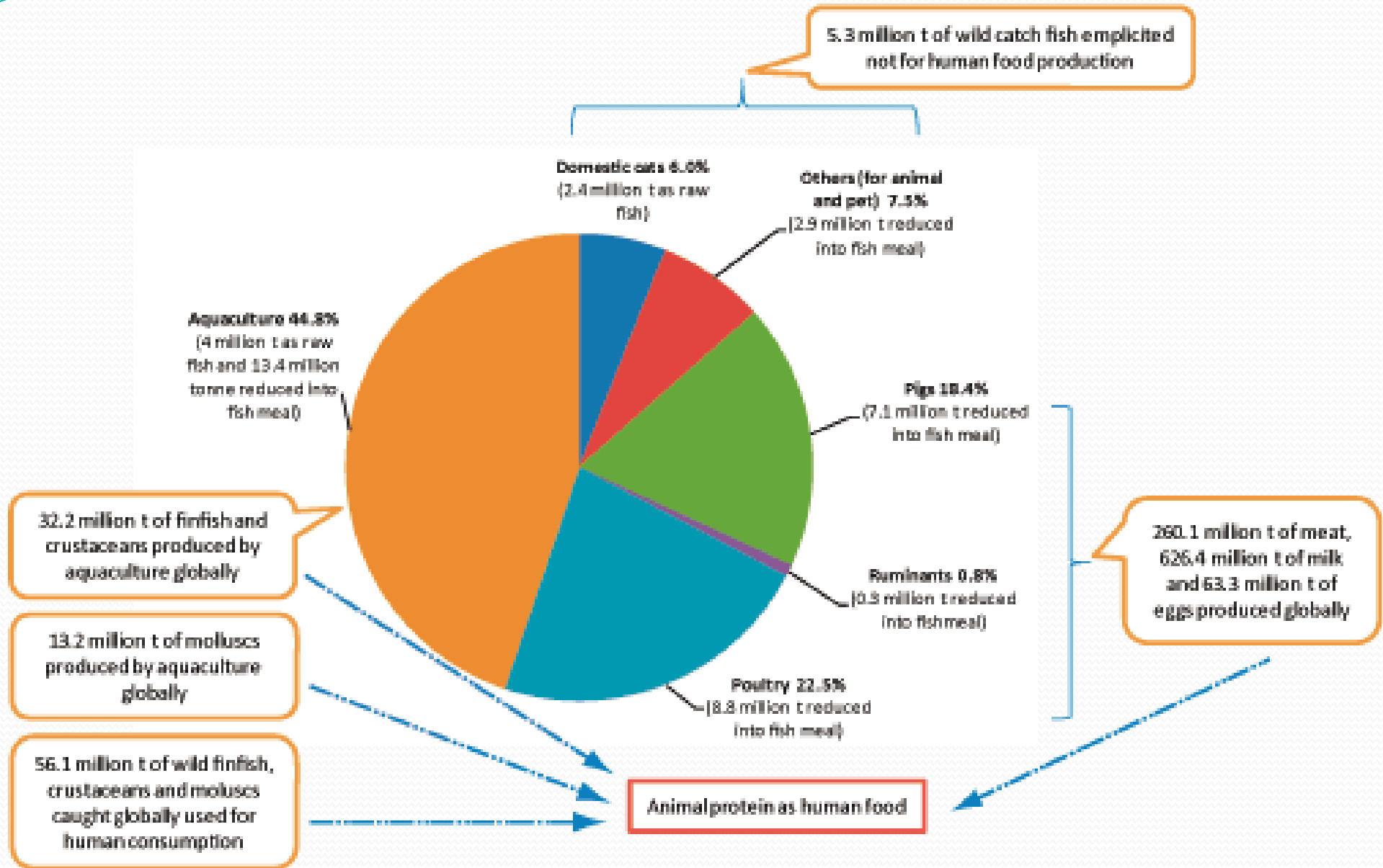


# What is a Trillion?

❖ To get an idea of what a trillion looks like, see:  
<http://www.pagetutor.com/trillion/index.html>

❖ Also, see: Shark Assaults:  
<http://ilovecharts.tumblr.com/post/49358928279>

# Where the Fish Go



# Per Person Consumption

Fish is commonly turned to as an alternative to other meat, and fish oil is an extremely popular dietary supplement.

“Last year, global fish consumption hit a record high of 17 kg (37 pounds) per person per year...On average, people eat four times as much fish now than they did in 1950.”

How the World's Oceans Could be Running Out of Fish

BBC News, Gaia Vince, September 21, 2012

<http://www.bbc.com/future/story/20120920-are-we-running-out-of-fish>



# World Production of Fish to Hit Record Level

“Total world production of fish will reach 161.2 million metric tons by the end of this year for the first time, a change of 2.9% compared to 2012.”

-Undercurrent News, June 19, 2013

<http://tinyurl.com/kjxwuk7>



# Bycatch

"...bycatch represents 40.4 percent of global marine catches..."


[“Bycatch” refers to the animals who are unintentionally captured – the nontarget prey, the unintended victims. ]

Defining and Estimating Global Marine Fisheries Bycatch, Marine Policy, R.W.D. Davies et al., 2009  
[assets.panda.org/downloads/bycatch\\_paper.pdf](http://assets.panda.org/downloads/bycatch_paper.pdf)









Shrimp fisheries alone are responsible for one third of the world's discarded catch, despite producing less than 2% of global seafood.

Squandering the Seas, Environmental Justice Foundation, 2003

<http://www.ejfoundation.org/shrimp/squandering-the-seas-report>

# Shrimp Bycatch

In 1997, FAO determined the bycatch to catch ratios from global shrimp fisheries to be as high as 20:1, with an average of 6:1.

Discards and Bycatch in Shrimp Trawl Fisheries,  
Ivor Clucas, 1997 (FAO Fisheries Circular).


<http://en.wikipedia.org/wiki/Bycatch>



Per the World Wildlife Fund, each year, fishing causes the deaths of:

- ❖ Over 300,000 small whales, dolphins, and porpoises;
- ❖ Over 250,000 endangered loggerhead turtles and critically endangered leatherback turtles;
- ❖ As many as 320,000 seabirds.

[http://awsassets.panda.org/downloads/bycatch\\_apr\\_2006.pdf](http://awsassets.panda.org/downloads/bycatch_apr_2006.pdf)



“Imagine being served a plate of sushi. But this plate also holds all of the animals [who] were killed for your serving of sushi. The plate might have to be five feet across.”

- Eating Animals, Jonathan Safran Foer, p. 50  
<http://www.eatinganimals.com/site/book>



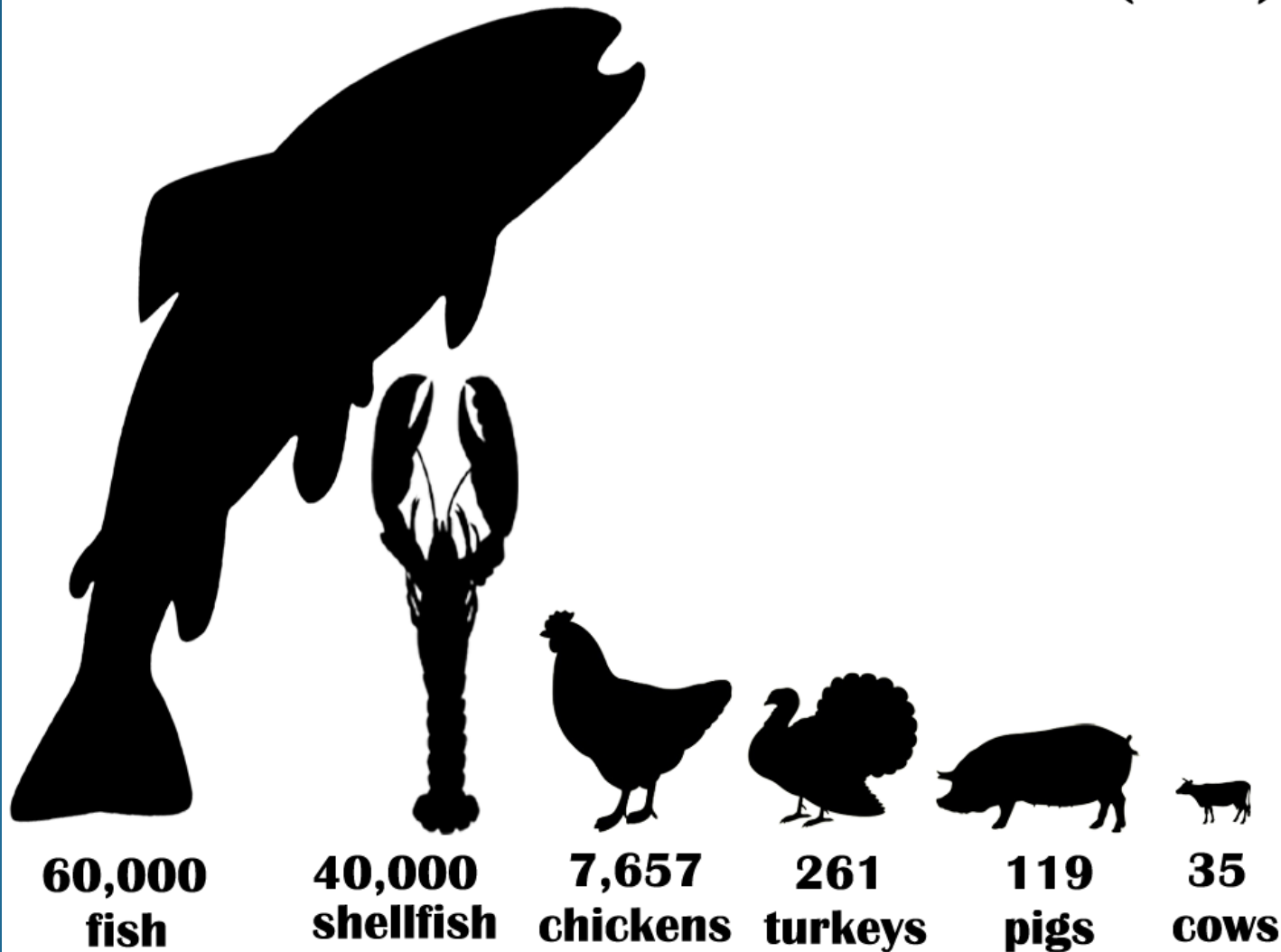
For U.S. consumers, some 60 **B**illion wild fish are killed each year, along with over 371 million aquacultured fish.

These conservative figures were determined by Harish Sethu of Counting Animals, based in part on Fish Count's calculations.

They do not include the unintended victims, who are often thrown back dead or dying, or fish caught noncommercially (i.e, so-called "recreational" fishing).

<http://www.countinganimals.com/how-many-animals-does-a-vegetarian-save>

# Number of Animals Killed Annually in the U.S. for Food\* (2010)



(Numbers are in the millions.  
Images are not to scale.)

\*<http://tinyurl.com/87t34ds>

<http://tinyurl.com/oll3ea3>



"A vegetarian saves more than 225 fish each year."  
-Harish Sethu, [CountingAnimals.com](http://CountingAnimals.com)

Harish calculated that a vegetarian spares at least 1 aquacultured fish (weighing about 11 pounds) and 224 wild-caught fish (weighing an average of 0.176 pounds). In other words, 225 fish are killed to supply the average U.S. nonvegetarian with fish each year.

This is because half of the fish consumed as human food in the U.S. are aquacultured and an immense number of wild fish are caught as food for them.

# Caught for Naught

Percentage of the Edible Weight that Enters the U.S. Retail Market as Food but is Not Eaten:

Fresh/Frozen Fish - 45.2%

Fresh/Frozen Shellfish - 45.6%

Canned Fish and Shellfish - 22.9%

(based on USDA Economic Research Service data)

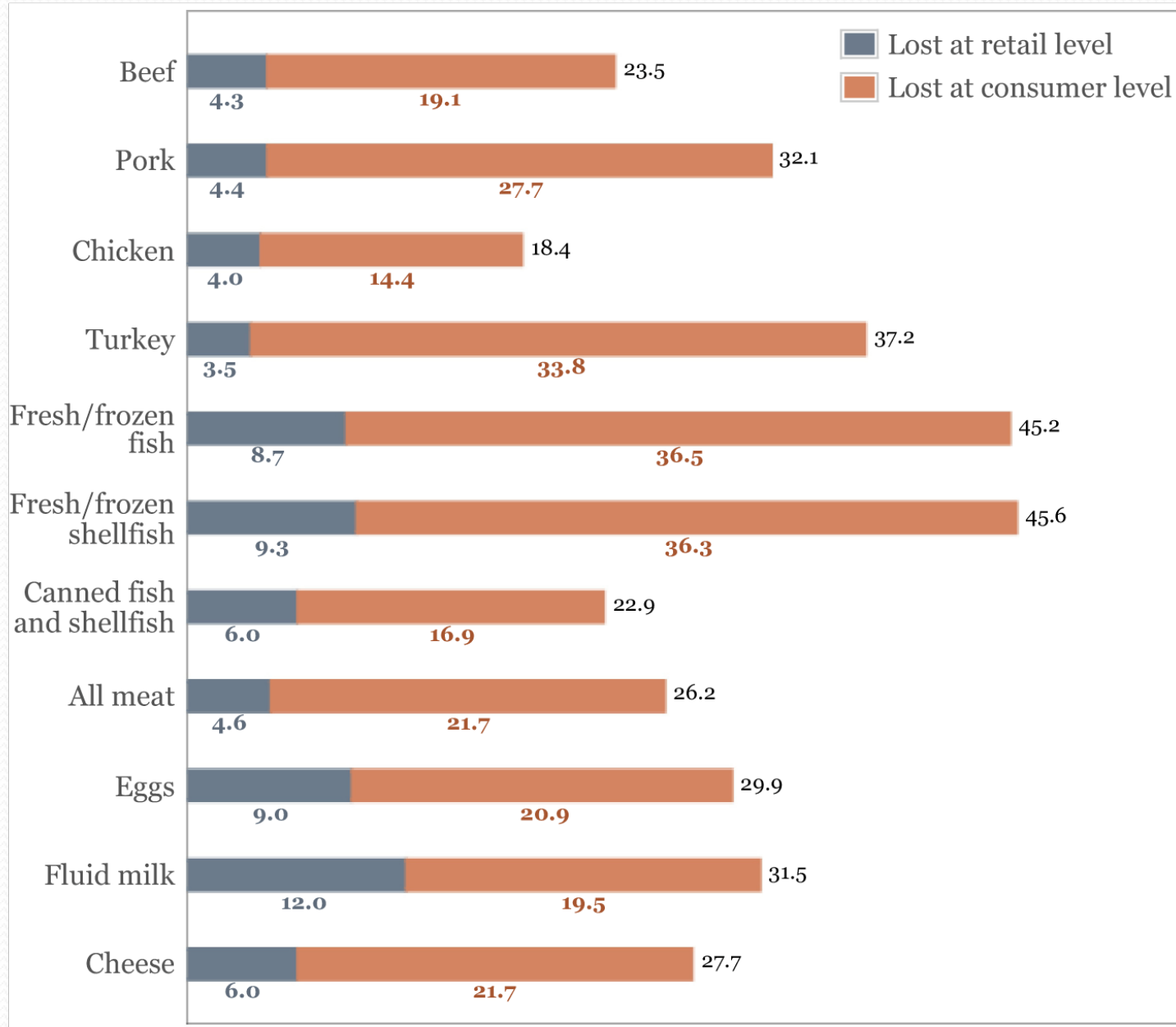
[CountingAnimals.com](http://CountingAnimals.com)

"[W]e waste a larger percentage of fish and shellfish than of any other animal product...Eliminating just half of the waste at just the consumer level could spare the lives of more than 15 billion fish and shellfish who are killed for the US food supply each year."

- Harish Sethu, Animals We Use and Abuse for Food We Do Not Eat

<http://www.countinganimals.com/animals-we-use-and-abuse-for-food-we-do-not-eat/>

Percentage of the edible weight of animal products  
that enters the retail market as food but is *not* eaten



# Magnitude of Animal Suffering

## Fish Count:

"The total magnitude of animal suffering may be quantified with the equation:

Severity [of suffering] x Duration x Numbers =  
Magnitude of Welfare Problem

<http://fishcount.org.uk/fish-count-estimates>



# Severity and Duration of Suffering

## Fish Count:

“Most wild-caught fish are likely to die from being crushed in nets or from suffocation, freezing or live dissection after landing. This process will probably take many minutes, or even hours.

Most of the world's farmed fish are also killed by slow and inhumane methods."

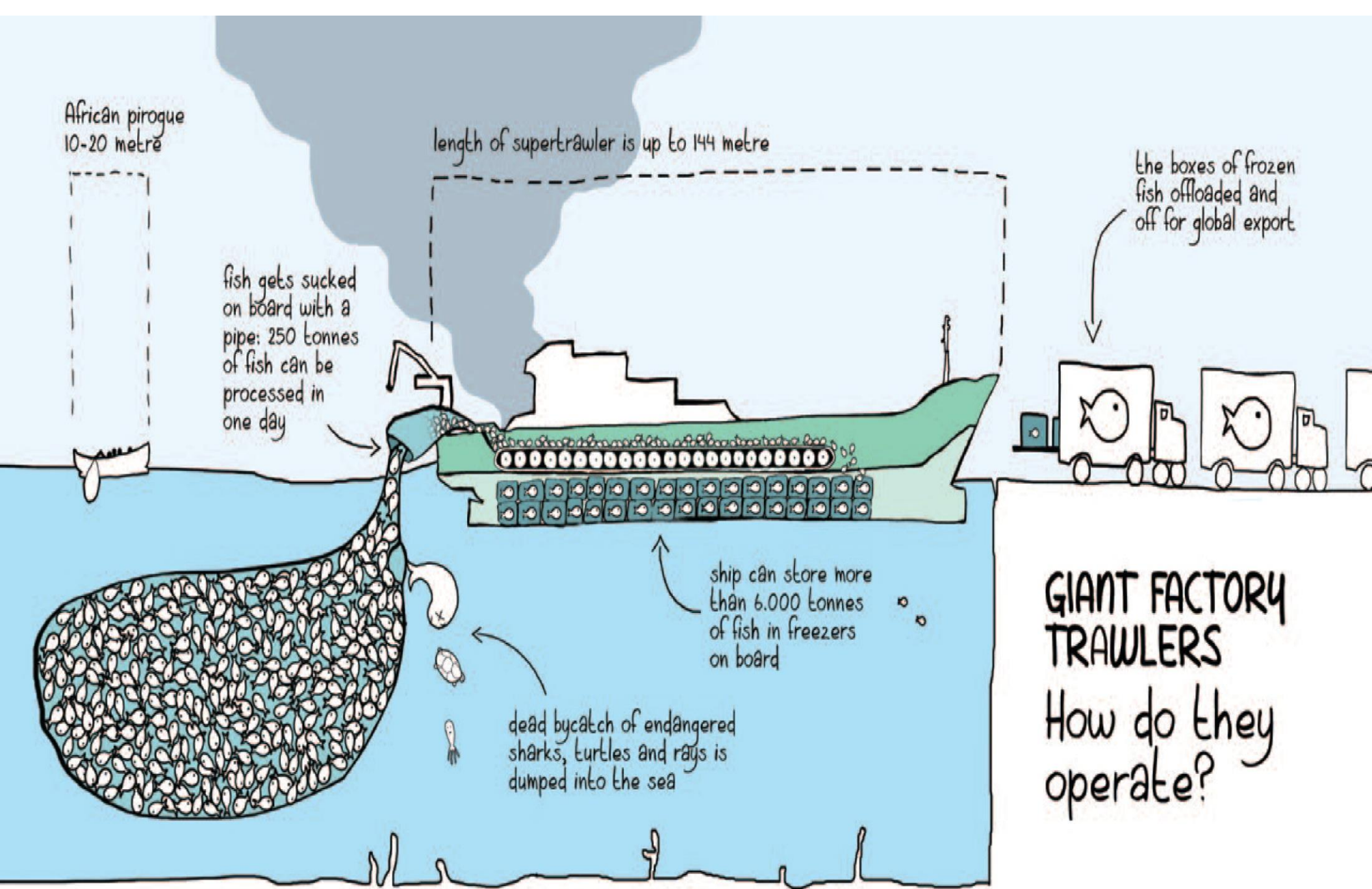
<http://fishcount.org.uk/fish-count-estimates>

# The Cruel Catching of Wild Fish

Trawlers and Long-Line Fishing: “[H]undreds of different species are crushed together, gashed on corals, bashed on rocks --for hours-- then hauled from the water, causing painful decompression (the decompression sometimes causes the animals' eyes to pop out or their internal organs to come out of their mouths).

On long lines, too, the deaths animals face are generally slow. Some are simply held there and die only when removed from the lines. Some die from the injury caused by the hook in their mouths or by trying to get away. Some are unable to escape attack by predators.”

Eating Animals, Jonathan Safran Foer, p. 192-193

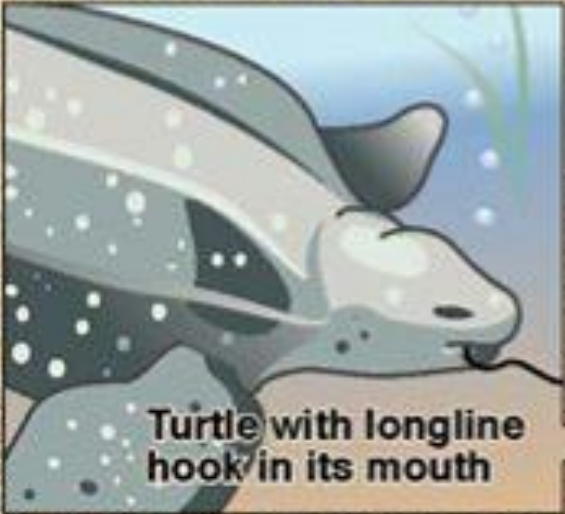
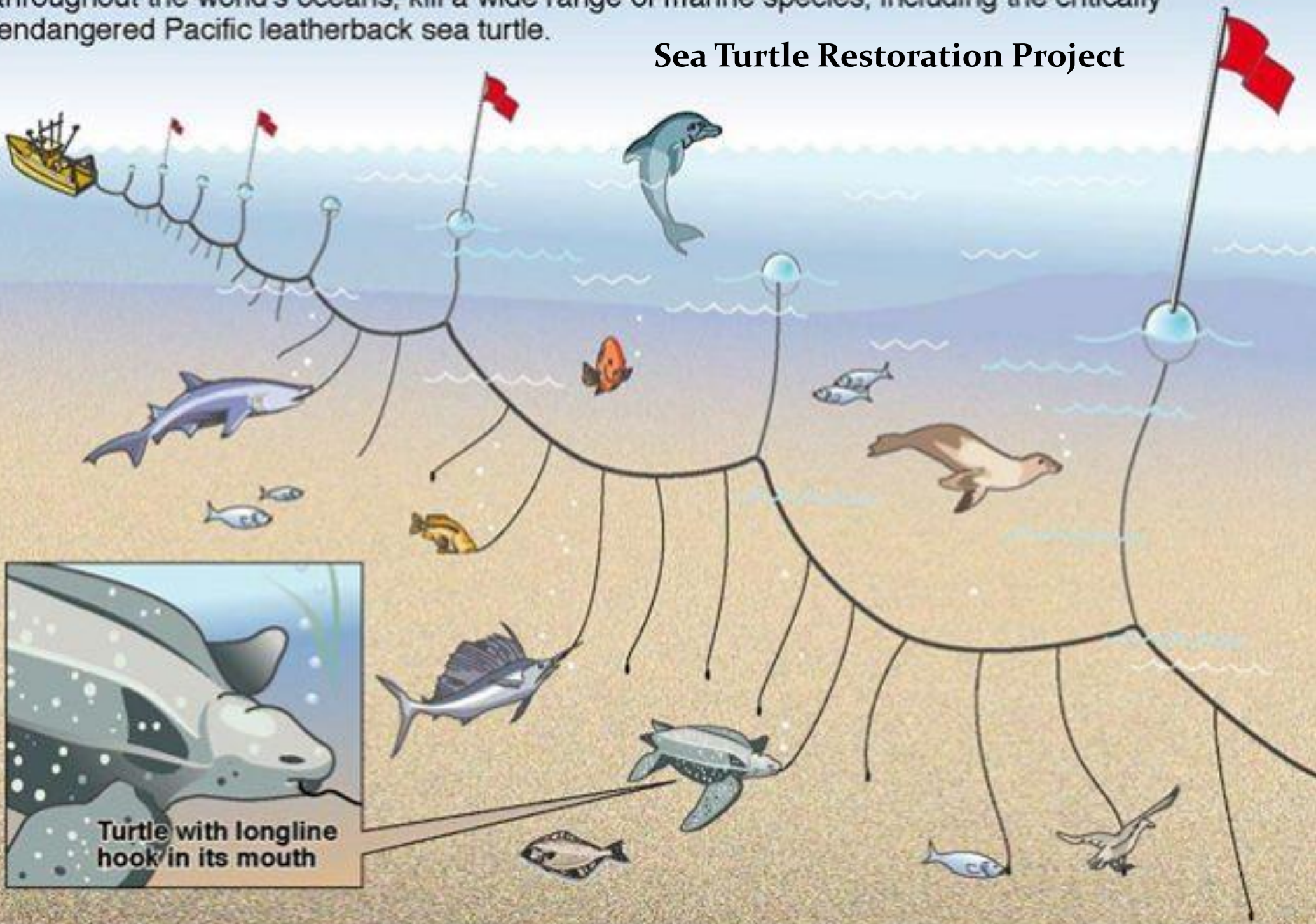


Greenpeace



Longlines, which set up to 5 million baited hooks set each day on 100,000 miles of line throughout the world's oceans, kill a wide range of marine species, including the critically endangered Pacific leatherback sea turtle.

## Sea Turtle Restoration Project



Turtle with longline hook in its mouth

# Aquaculture: Fish Farming

Captive fish suffer foul water conditions, intensive crowding, abusive handling, rampant disease and parasites, and starvation.

They are often killed by suffocation, hemorrhaging, electrocution, or by being cut up alive.



# Lack of Legal Protection

There are no U.S. state or federal laws regarding how fishes who are used for food can be treated or killed.

# “Skinned Alive”

A Mercy for Animals hidden camera investigation of a catfish slaughterplant in Texas documented:

“Workers using pliers to pull the skin off of live fish;

Dozens of fish crammed into buckets and baskets, gasping for oxygen;

Skinned fish still moving and gasping on the cutting table;

Fish flailing and struggling to escape the workers' knives;

Live fish sliced and split in half;

Workers tearing the heads off of live fish.”

<http://www.mercyforanimals.org/fish/>

# Preventing the Most Suffering

Based on the severity and duration of suffering caused by the average meat-eater, Farm Sanctuary's Nick Cooney and author Ben Davidow determined:

“Chickens (both meat and egg-laying) and **farm-raised fish** endure roughly 92% of the [combined] number of days of suffering farm animals endure.”

– Farm Sanctuary's Nick Cooney and author Ben Davidow

# Protecting the Most

Considering the number of animals involved and the duration of their suffering, they concluded:

“If we see farm animals as individuals, and we want as many individuals as possible to be protected from cruelty, then our focus needs to be on getting the public to give up chicken, farmed fish, and eggs.”

Bowling Without Blindfolds, Nick Cooney and Ben Davidow,  
February 27, 2013

<http://tinyurl.com/pj7v6j5>



# “Recreational” Fishing

An estimated 345 million saltwater fish were caught noncommercially in the U.S. in 2011.

The number of freshwater fish who are caught noncommercially is unknown, but there are nearly three times as many “anglers” (33 million) as hunters in the U.S., according to a 2011 survey by the U.S. Fish & Wildlife Service.

# “Catch and Release”

60% of the 345 million marine fish who were noncommercially caught in 2011 were released alive. - National Marine Fisheries Service, 2013

Researchers found that up to 89% of fish who are caught and released die as a result, depending on the species.  
source: Hooking Mortality: a Review for Recreational Fisheries, Muoneke, M.I. & Childress, W.M., Reviews in Fisheries Science, 1994

Switzerland and Germany have banned the practice on humane grounds for noncommercial fishing.

# Bait and Debris

Fish and other animals are also used as live bait. They are often impaled while alive, and suffer stress, injury, pain, bites and a grueling death. Animals used as bait can spread hazardous organisms between ecosystems.

Fishing debris is a major cause of injury and death to marine life, birds, and other animals.

# Experimental Victims

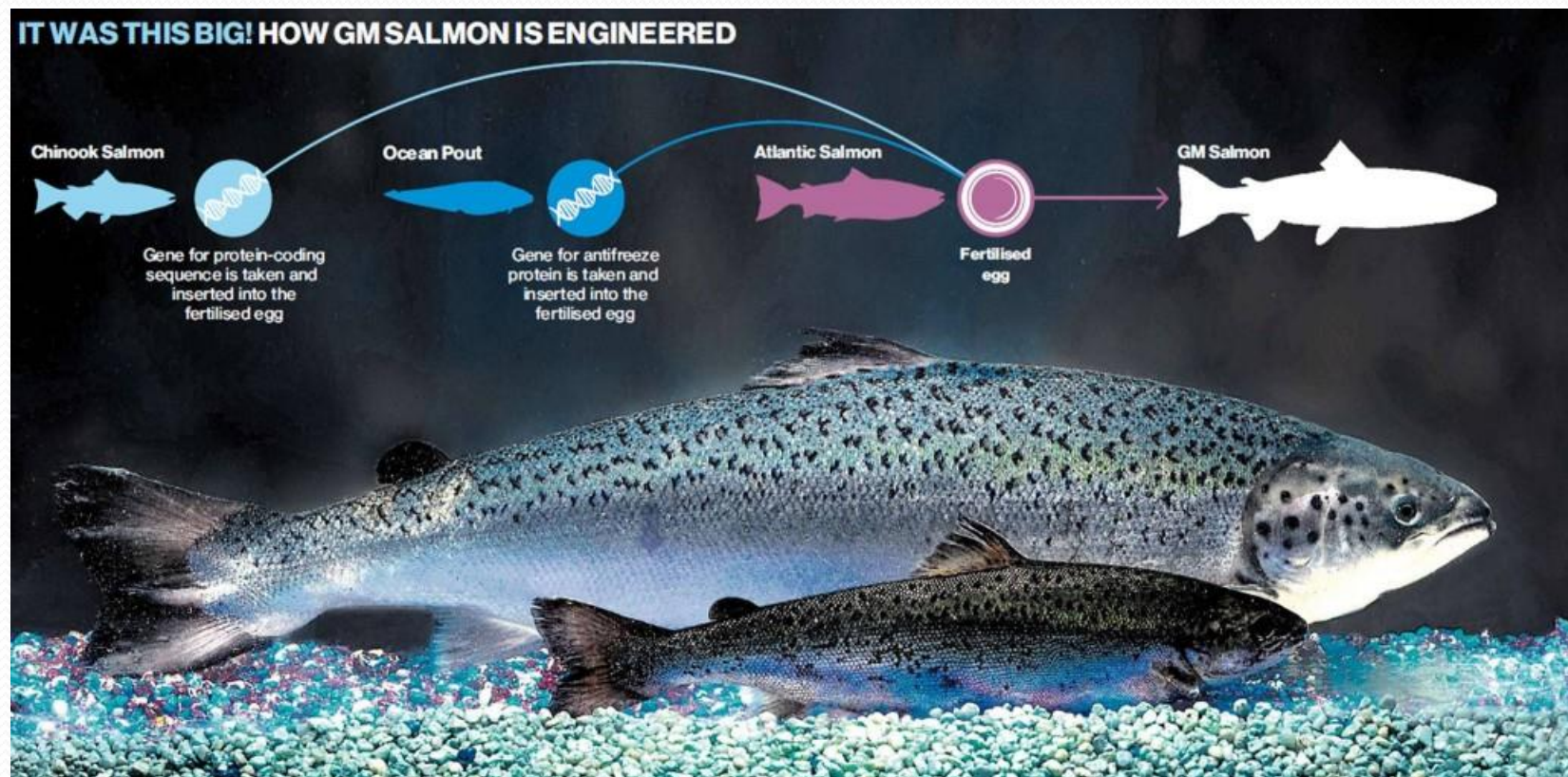
For the past two decades, fish have been increasingly used in biomedical research. Because they are small, inexpensive, and reproduce quickly, they are used in tremendous numbers and considered expendable.

Approximately one-quarter of all animal use for research and education in North America are fish.

They are not protected by the Animal Welfare Act.

# “AquAdvantage” Salmon

The so-called AquAdvantage salmon is the first transgenic animal for whom government approval for human consumption is being sought.



credit: Organic Lifestyle Magazine



# Safer Seafood

Mercury, PCBs, dioxins and other toxins accumulate in fish and are passed on to consumers. Fish oil is similarly hazardous and prone to rancidity.

The nutritional benefits derived from fish, such as omega-3s, can more safely be obtained from plant sources. Good vegan sources of omega-3s include ground flaxseed, chia seeds, flaxseed oil, canola oil, soy products, hemp products and walnuts. Supplements made of algae –the same substance from which fish obtain omega 3s- are also available.

Many vegan seafood resources can be found at:  
<http://www.fishfeel.org/seafoodresources.php>

# Fish Feel

More information can be found at: [www.FishFeel.org](http://www.FishFeel.org)

Please also visit and Like the Fish Feel Facebook page:  
<https://www.facebook.com/FishFeel.org>

# You Are What You Eat



VS



by Giuseppe Arcimboldo