

# Know Your Fish Farm

Paula Daniels

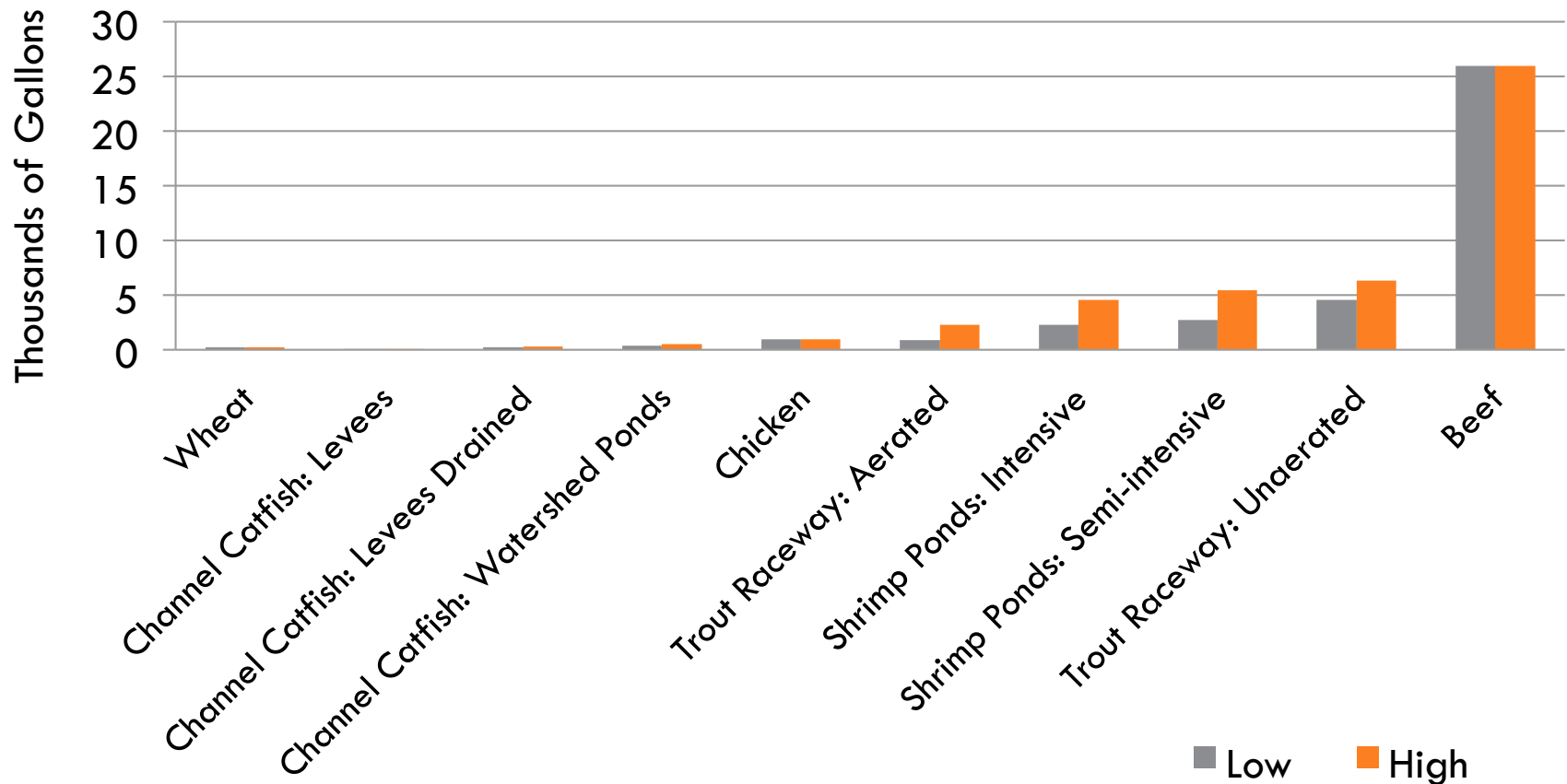
# Why Fish?

## Health Benefits of Fish

- Important Health Benefits
  - Omega-3s: benefit reproduction system, vision, nervous system
- American Heart Association
  - Oily fish **twice a week**

# Why Fish?

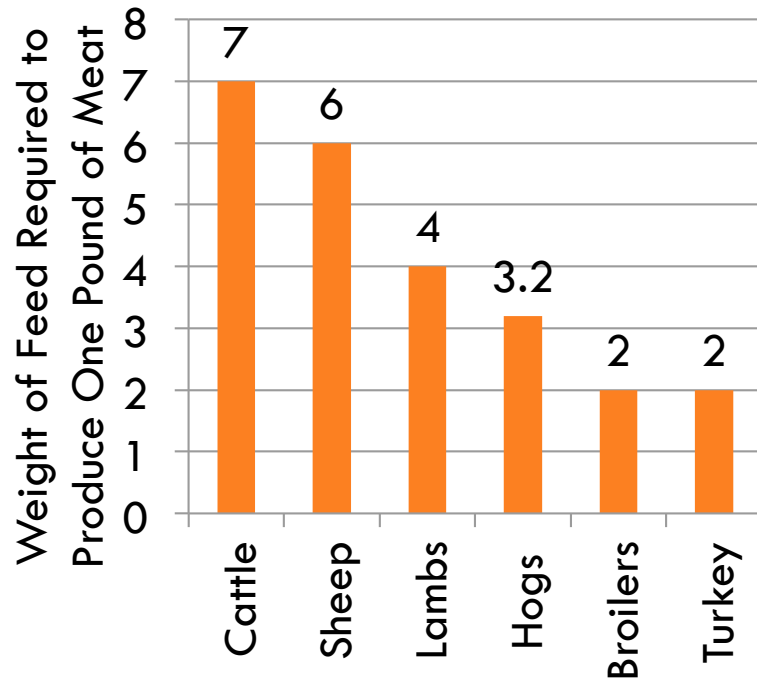
## Water Required Per 1kg of Product



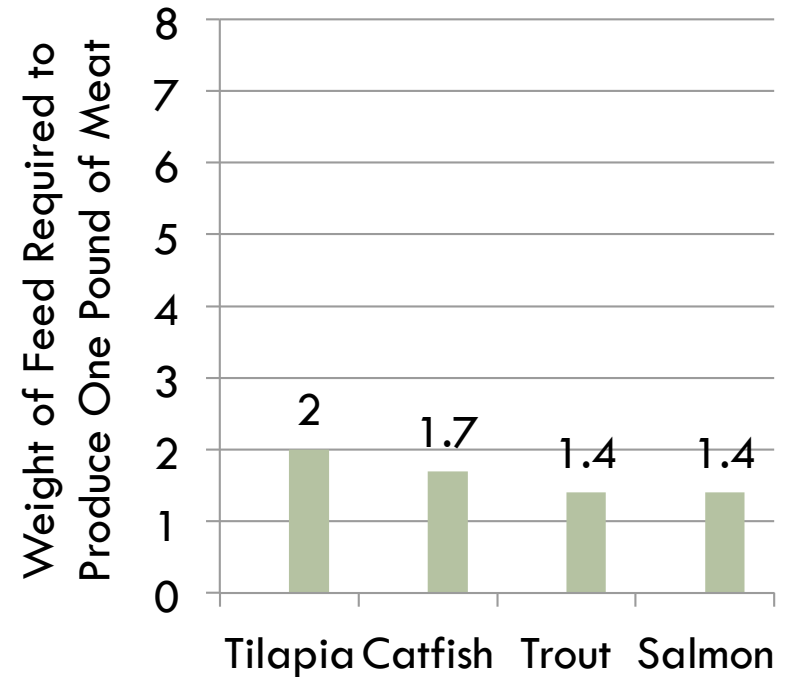
Source: Verdegem, Bosma and Verreth for water used for fish feed; Pimentel, Berger, et. al for water used for livestock feed.

# Why Fish?

## Feed Conversion Ratio: Livestock



## Feed Conversion Ratio: Fish





# Why Fish?

## Section One: Fish Facts

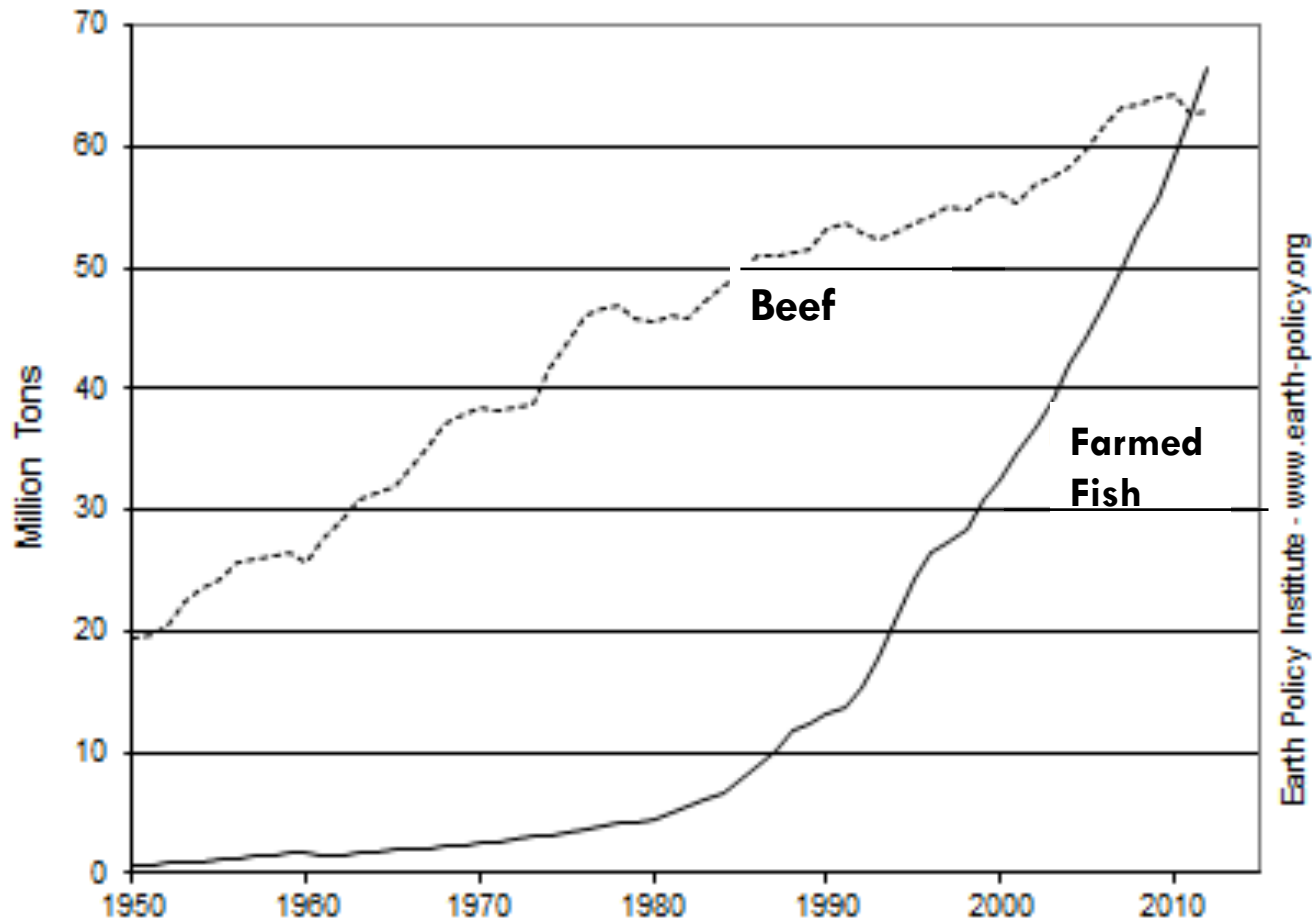
### Public Health Concerns: Large CAFO's

- High Intensity of Antibiotic Use
  - Contributes to bacteria resistance
  - Higher rates of infection
- **70-80%** of Antibiotics Used in CAFOs
- **However:** also used in farmed fish, particularly in Asia

# Where's the Fish?

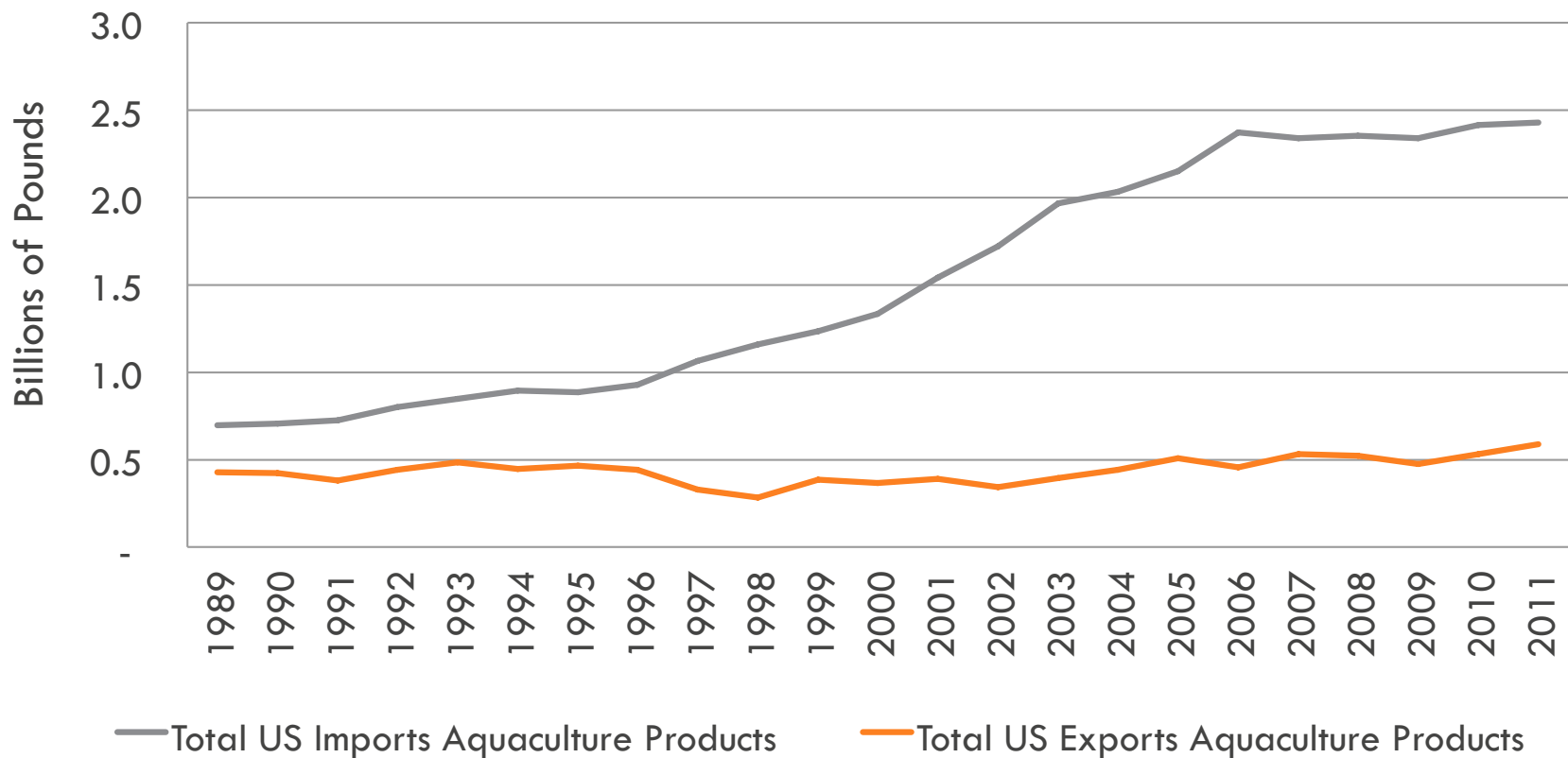
- Over **\$10 billion** – second to petroleum in trade deficit
- **\$7 billion** from aquaculture

World Farmed Fish and Beef Production, 1980-2012



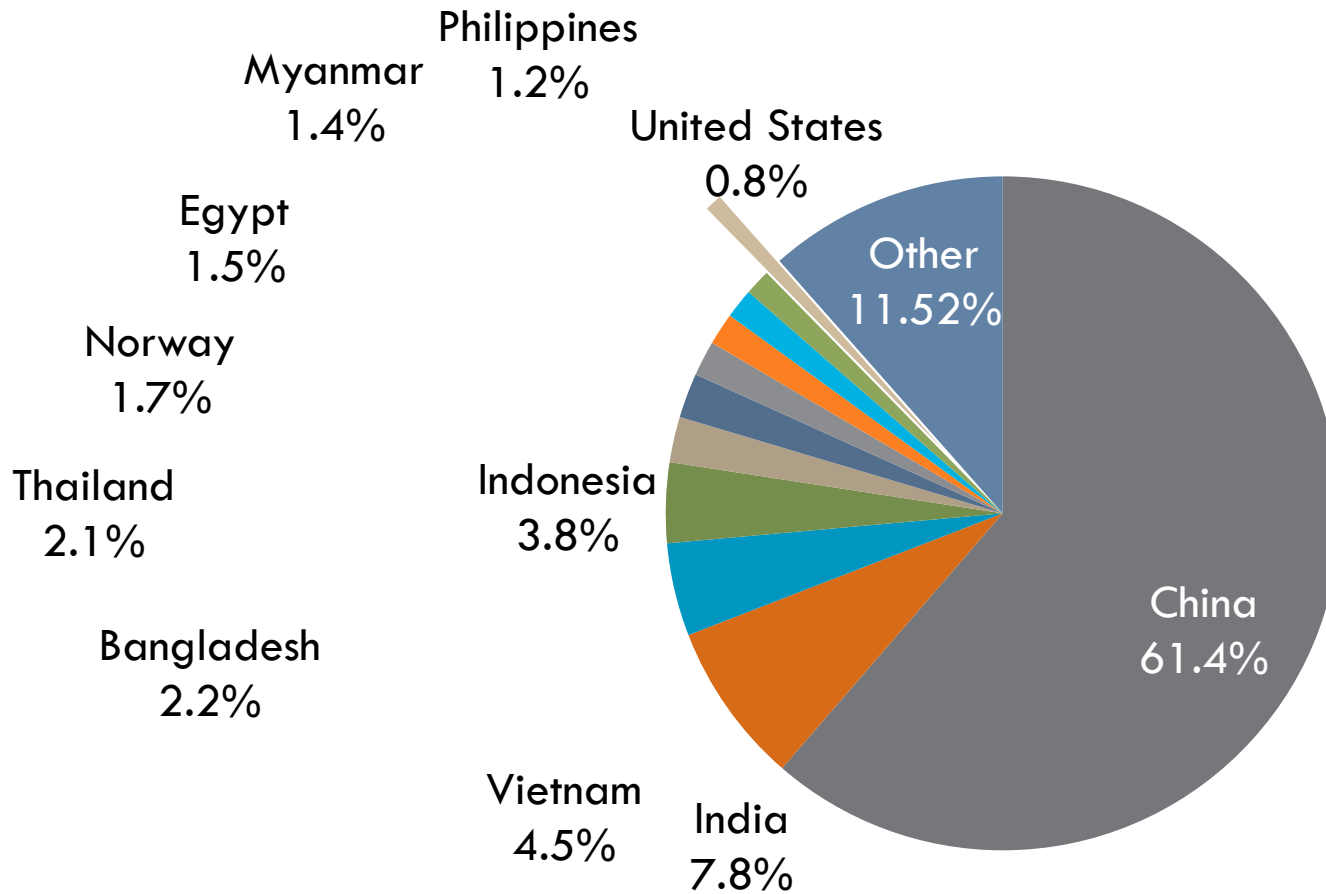
# Where's the fish?

## United States Aquaculture Imports & Exports



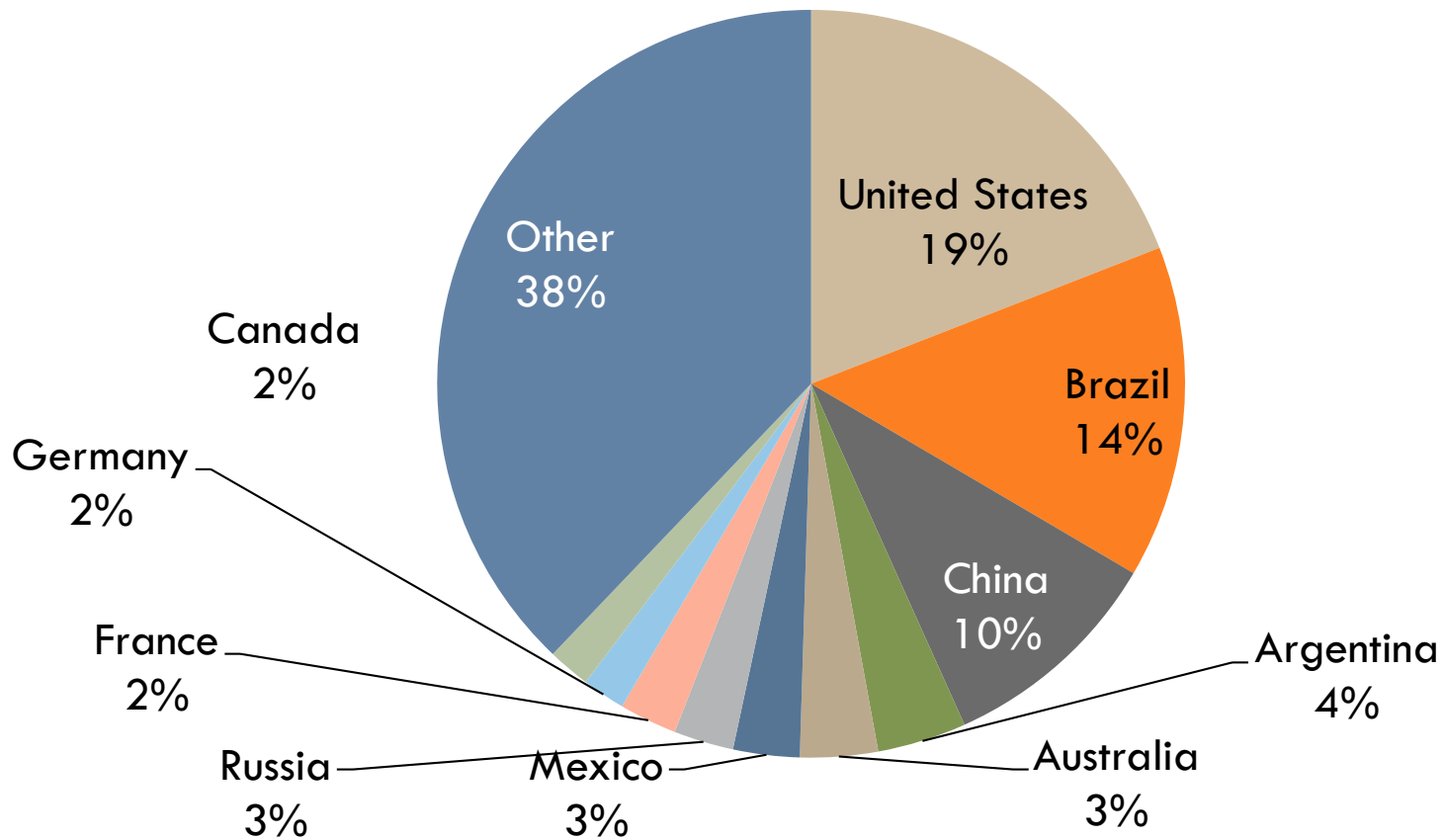
# The American Fishscape

## US and World Aquaculture Production, 2012



# The American Fishscape

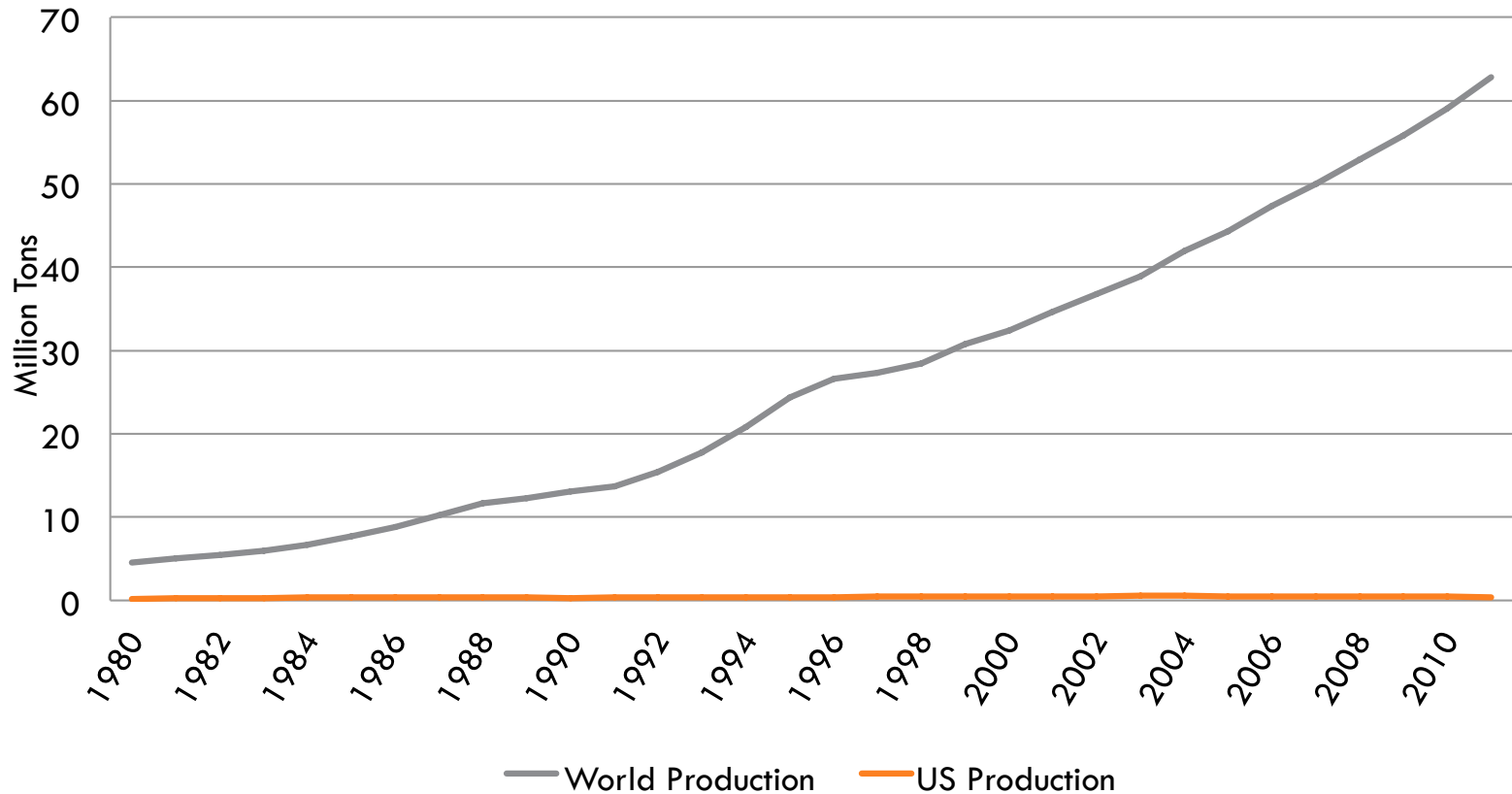
US and World Beef Production, 2012



Source: UN Food and Agriculture Organization, 2011

# The American Fishscape

## World & U.S. Aquaculture Production, 1980-2010



# So....where's the fish?

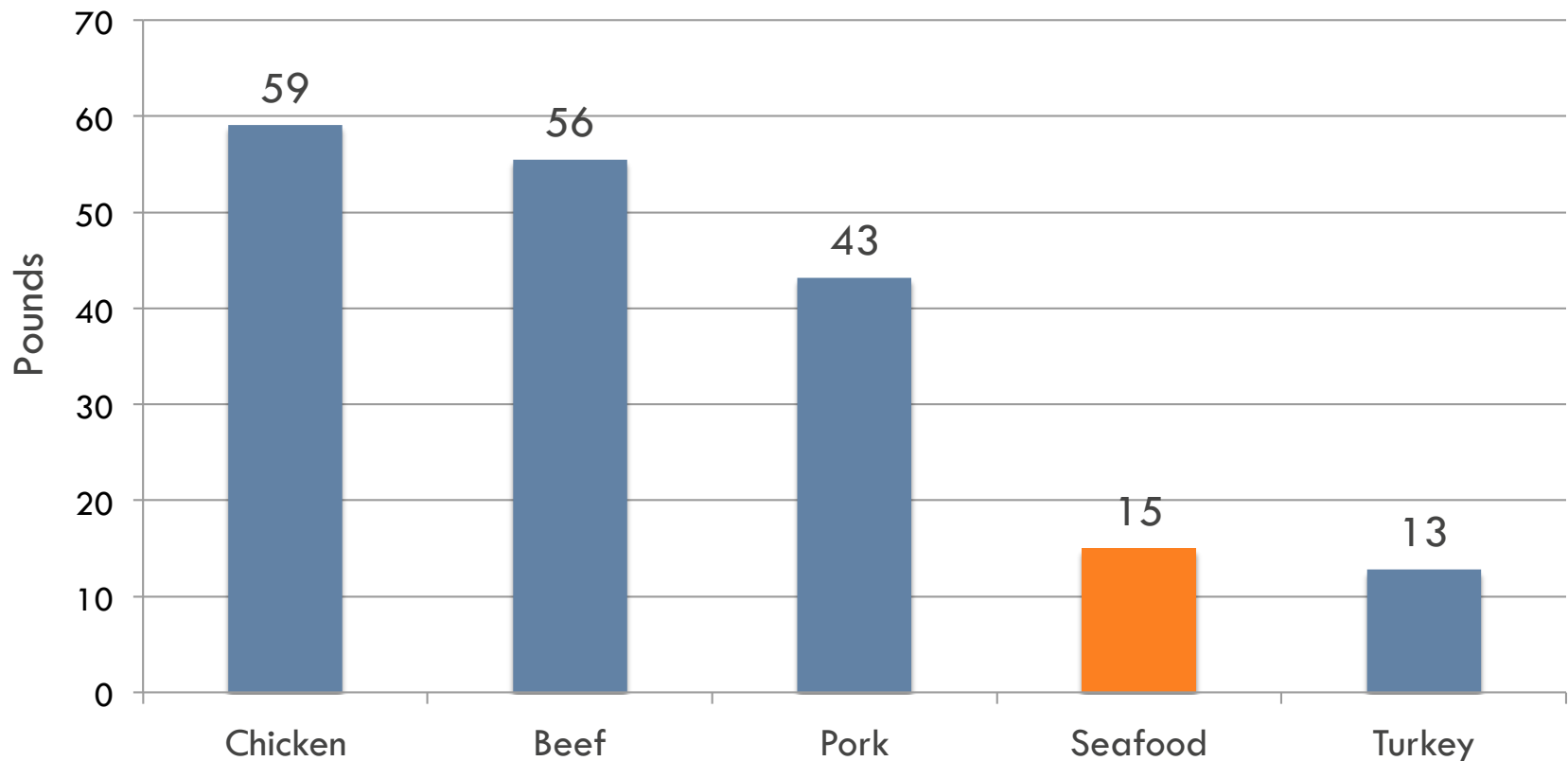
Cheaper imported fish is found in local markets



# The American Fishscape

## Consumption

Per Capita Consumption of Animal Protein, US 2011

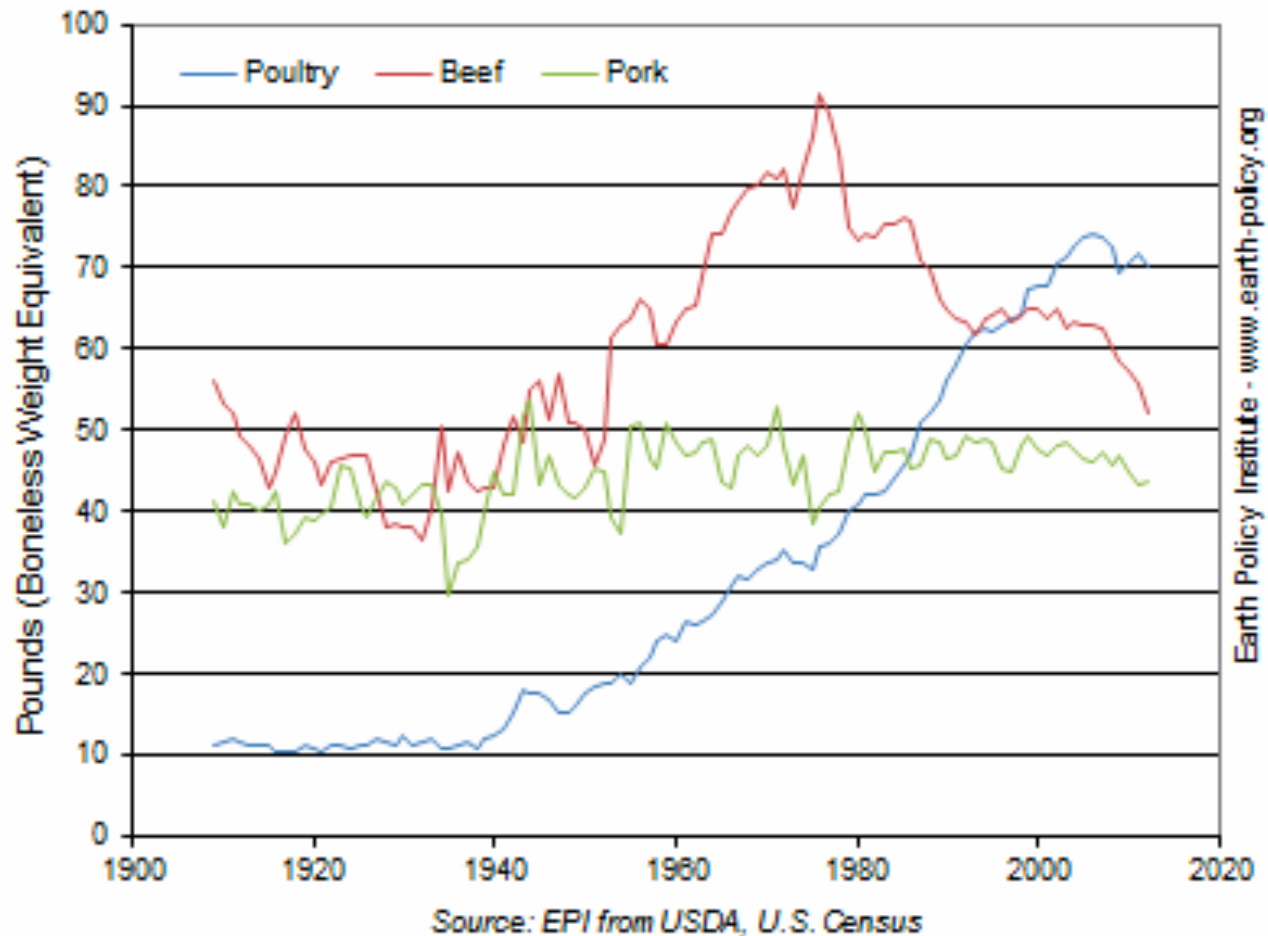




# The American Fishscape

## Consumption

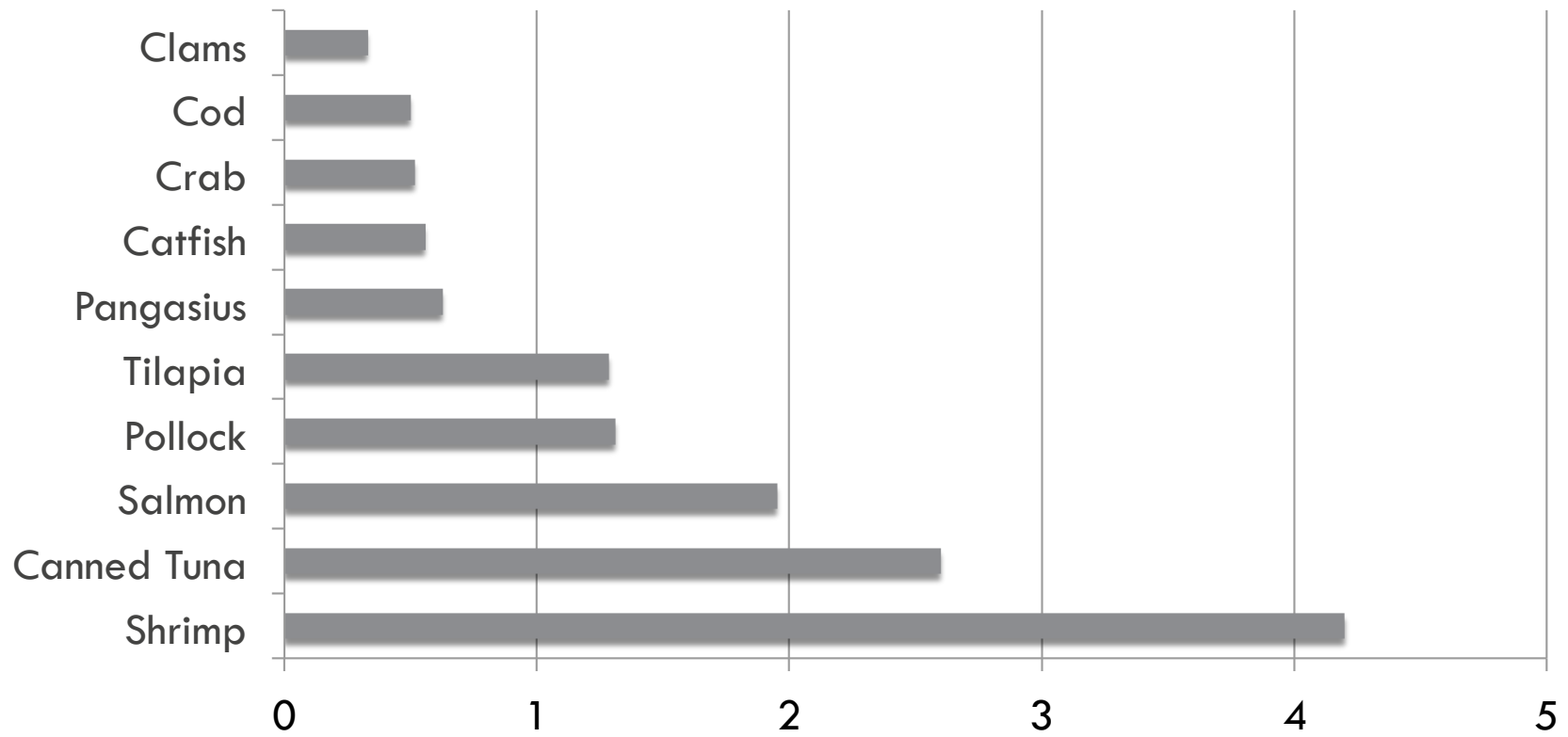
US Consumption of Animal Protein, 1910-2011



# The American Fishscape

## Consumption

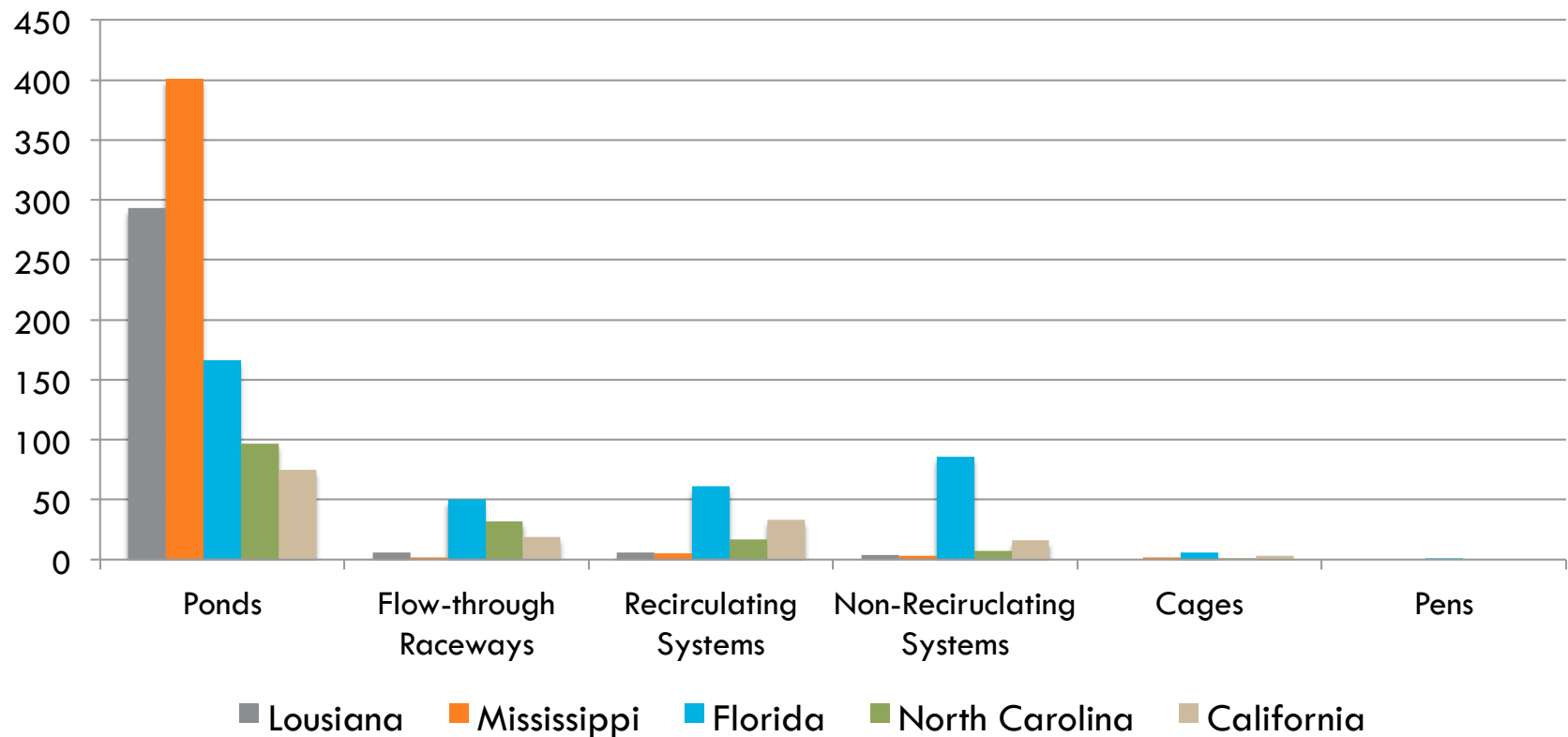
U.S. Seafood Consumption, 2012



# The American Fishscape

## Production

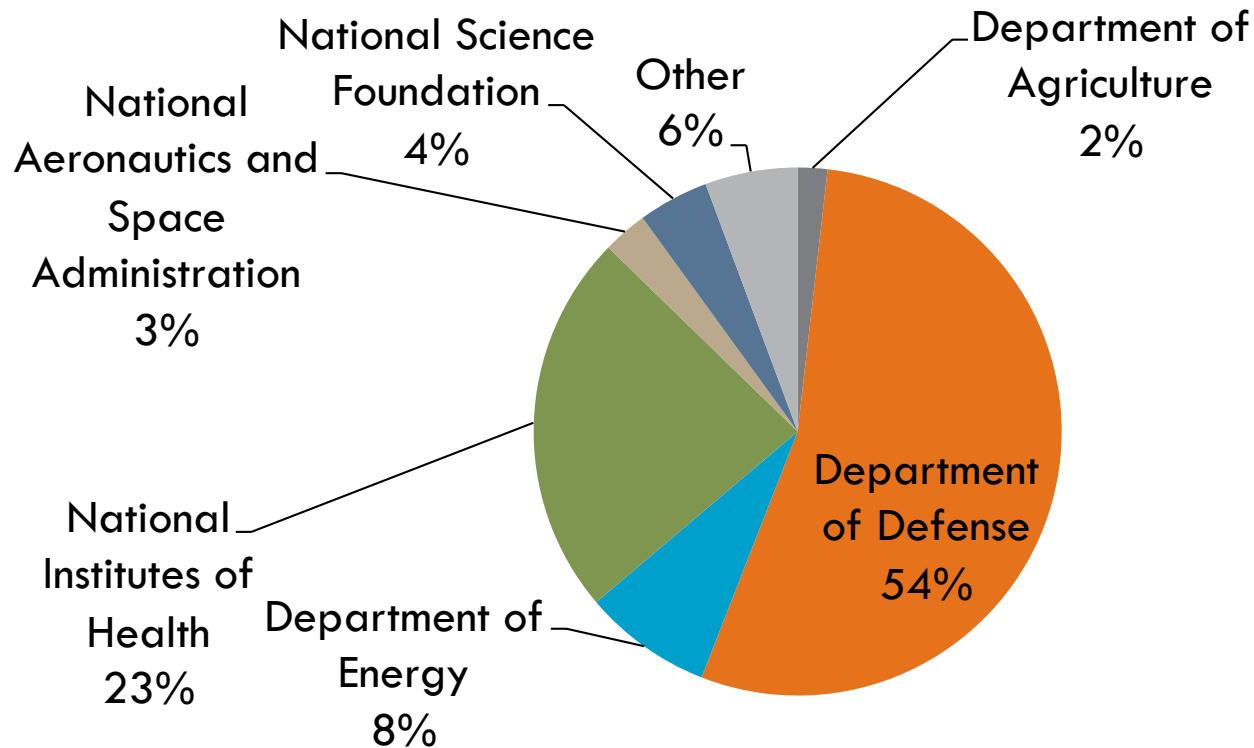
### Top Three Aquaculture States by Farm + NC+ CA



# The American Fishscape

## Federal Funding

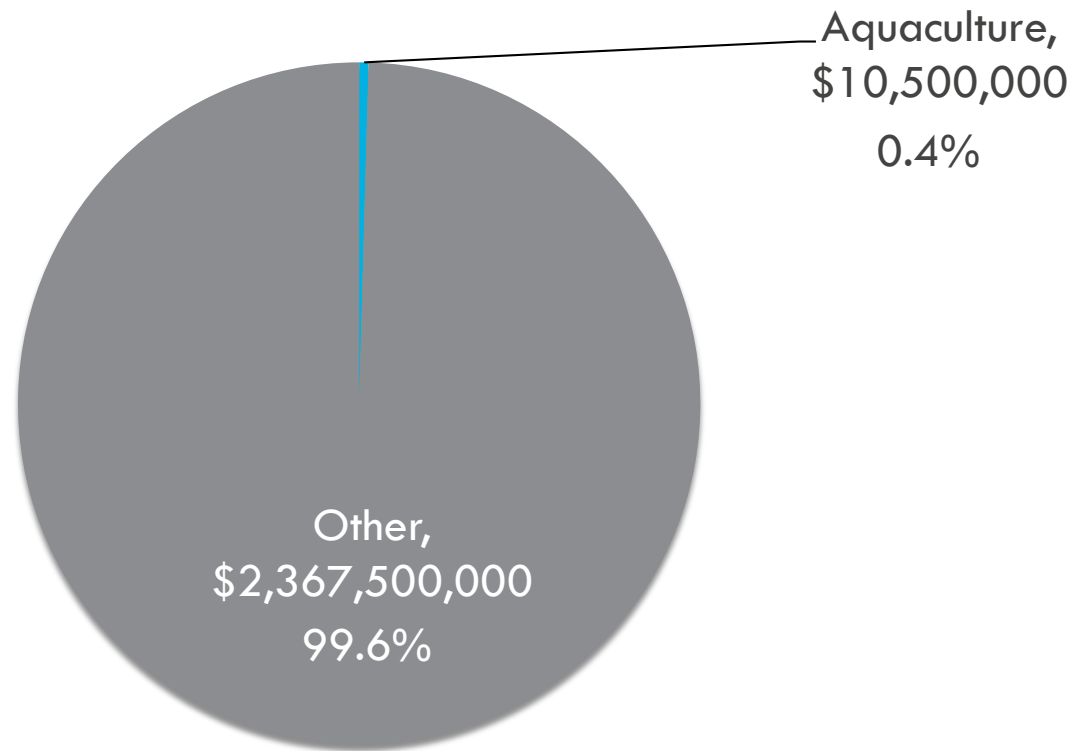
U.S. Federal R&D by Department, 2012



# The American Fishscape

## *Federal Funding*

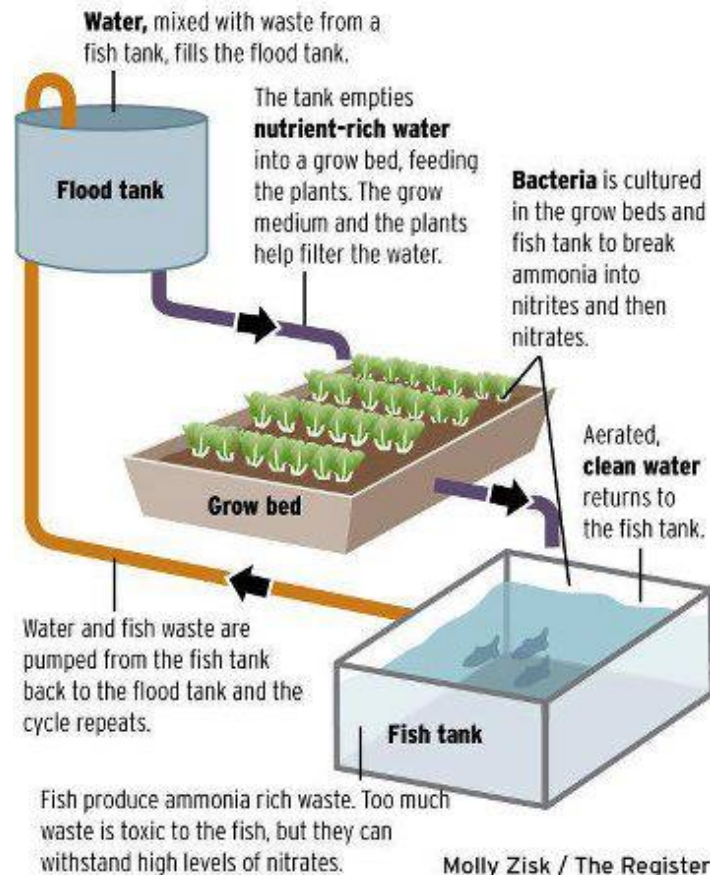
### Department of Agriculture Funding, 2012



# Rising Tide

## Emerging Ideas, *Urban Aquaculture*

### How aquaponics works







# Rising Tide

## *Emerging Ideas, Urban Aquaculture*



### Growing Power Milwaukee, Wisconsin





# Rising Tide

## *Emerging Ideas, Urban Aquaculture*

Cabbage Hill Farm  
Foundation  
Mt. Kisco, NY



Brooklyn College





# Rising Tide

## *Emerging Ideas, Urban Aquaculture*



Solutions Farms  
San Diego  
CA

# Rising Tide

## *Emerging Ideas, Urban Aquaculture*



Westchester High  
School

Los Angeles, CA

# What next?

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[www.KnowYourFishFarm.info](http://www.KnowYourFishFarm.info)