

## Global Seafood

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Seafood makes up 1/5 of animal protein in the human diet worldwide

- Bycatch and IUU Fishing
- Aquaculture
- Sustainable Seafood Campaigns



### Restoring Institutional Trust: A Systemic Approach

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## Bycatch

### Thecasesolutions.com

"Bycatch: non-selective fishing practices that threaten non-targeted sea life, causing ecological degradation, and biological and economic waste"  
Historically was not acknowledged by scientists, cause/volume, fisheries managers  
Purse-Seine Tuna fisheries in eastern Pacific in late 60s-early 70s: Dolphin Safe Tuna and the Marine Mammal Protection Act (1972)



27 million tons in 1994, decreased since then but difficult to estimate  
Technical approach, regulatory approach, social approach to management

## Illegal, Unreported, and Unregulated Fishing

Debris

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Illegal, unreported, and unregulated fishing (IUU) is a global problem that threatens the sustainability of fisheries and the livelihoods of millions of people. IUU fishing is a complex issue that involves a variety of factors, including lack of enforcement, weak governance, and economic incentives. The casesolutions.com website provides a comprehensive overview of IUU fishing, including its definition, types, and impacts. It also offers a range of resources, including a glossary, a list of IUU fishing hotspots, and a list of organizations working to combat IUU fishing.

## Wild Fisheries

### Thecasesolutions.com

"Fisheries are the last major world industry exploiting wild natural resources for food, yet we do not think of the industry in such terms. Consider the US National 'Fish' and 'Wildlife' Service, a name that implies fish are perceived and managed as something other than wildlife"

Dynamic market, changes over time:  
Halibut in New England (1830),  
Atlantic Bluefin Tuna (1930), Rock  
and Jonah Crabs.  
Changing market reflecting  
the change in ocean  
ecosystems?



## Aquaculture

### Thecasesolutions.com

Farmed salmon in Norway (2010) from salmonid.org  
7.4 of all fish globally consumed by humans comes from aquaculture. Production and handling of farmed fish is complex, and involves a range of factors, including disease, environmental impacts, and animal welfare. The casesolutions.com website provides a comprehensive overview of aquaculture, including its definition, types, and impacts. It also offers a range of resources, including a glossary, a list of aquaculture hotspots, and a list of organizations working to improve aquaculture practices.



## spreading the word: sustainable seafood

### Thecasesolutions.com

### Seafood Awareness Campaigns



### So how can we achieve a "sustainable seafood" industry?

Increased international governance/cooperation, enforcement

Reassessment of aquaculture operations

Transparency of the industry and accurate/honest labeling

Importance of public awareness: impact of consumers and environmental organizations on the industry

# Restoring Institutional Trust: A Systemic Approach



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# Illegal, Unreported, and Unregulated Fishing



## Definitions

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- Illegal: conducted by a vessel operating under fisheries management but violates regulations, operates in a country's waters without permission, on the high seas without flags or identification
- Unreported: catches that are underreported, misreported, or entirely unreported to relevant authorities by fishing vessels or the flag state
- Unregulated: activity of vessels that do not participate in fisheries management or fly the flag of a state that does not participate in fisheries organizations

Economic incentives to participate in IUU fishing vs. enforcement efforts

Implications for management and economic impacts



# Aquaculture

## Thecasesolutions.com

Fastest growing food industry: 9.2% per year since 1970

1/4 of all fish directly consumed by humans comes from aquaculture

Problems with biological efficiency: salmon, 25-50 kcals inputs = 1 kcal salmon protein



Fishing down and farming up the food web  
Environmental impacts: habitat destruction, introducing non-indigenous species, pollution  
Will it relieve pressure on wild fish stocks?

# spreading the word: sustainable seafood

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## Seafood Awareness Campaigns

### Issues

- Concerns about criteria (LCA)
- Conflicting information
- Lack of transparency
- Inaccurate labeling



### Seafood Guides

200+ sustainable seafood guides - MBAq "Seafood Watch" one of the most popular/widespread



Thecasesolutions.com

Impact of seafood guides on consumers

Impact of seafood guides on the seafood industry: distributors and fisheries

### Eco-Labeling

Unilever + World Wildlife Fund = Marine Stewardship Council (1997)

2007: 25 MSC certified fisheries, 34 countries, 857 different MSC certified products

32 more fisheries undergoing certification, rise in demand for sustainably sourced seafood



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