


SAD Economics: The Real Cost of a Meat-Based Diet

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This is Brian

On a limited budget, he purchases a lot of ground beef because it's cheap and versatile

The average American consumes 195 pounds of meat (beef, poultry, fish) per year

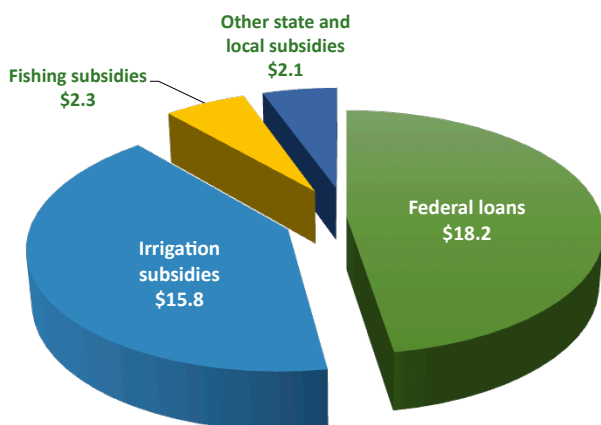
Average Cost Ground Beef:
3.77/lb = \$735 per year

But what is the real cost?

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Meat Production is Subsidized

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Total: \$38.4 Billion

Federal Loans

Direct support of farmers – loans, insurance, research, marketing assistance

Irrigation Subsidies

Central Valley farmers pay fees that are 2% of what Los Angeles residents pay for water

Fishing Subsidies

Direct payments to farmers that reduce costs and encourage overfishing

Other State and Local Subsidies

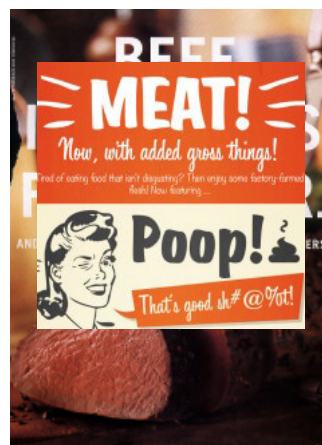
Primarily irrigation

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Why does it matter?

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- » We all pay it
- » Subsidies reduce the price of meat
 - » When the price of something is lower, people consume more of it



Did you know?

Each year, USDA-managed programs spend **\$550 million** to bombard Americans with slogans like these urging us to buy more animal foods.

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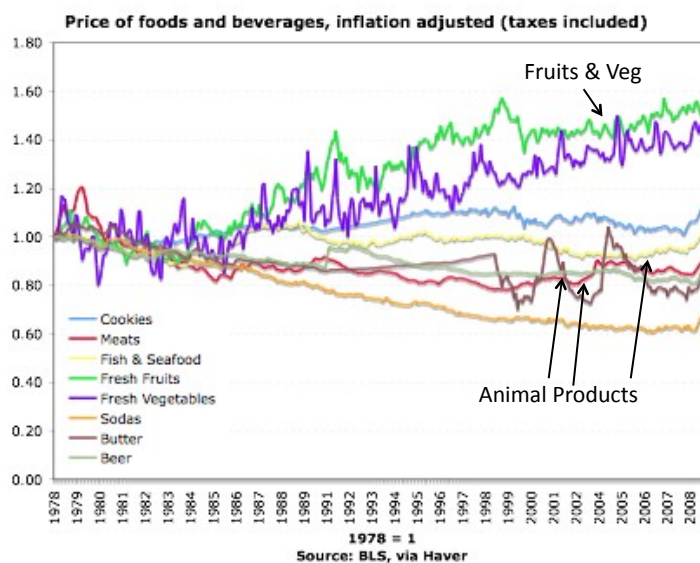
Price Comparison

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Animal products have gotten cheaper while fruits and vegetables have gotten more expensive.

The price of meat is in red

Subsidies and production “efficiencies”



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Externalized Costs

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ENVIRONMENT



Soil Erosion

Livestock production is responsible for 55% of US soil erosion, resulting in flood damage and siltation of reservoirs

Climate Change

Animal farming is likely responsible for 12-15% (and perhaps up to 51%) of human-made greenhouse gas emissions

Pesticides and Fertilizers

Poisons and nutrients damage lakes and ground water, affecting bird losses, drinking water, toxic resistance in pests

Real Property Devaluation

Proximity to CAFOs – fumes

Manure Remediation

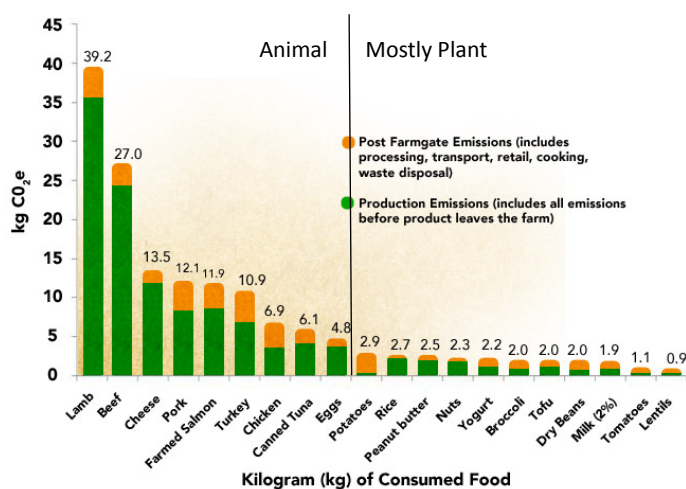
Ground water in 1/3 of US states is contaminated with animal waste

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Greenhouse Gas Emissions

Animal based proteins clearly have a larger footprint. Need information on emissions per unit of protein to be sure.

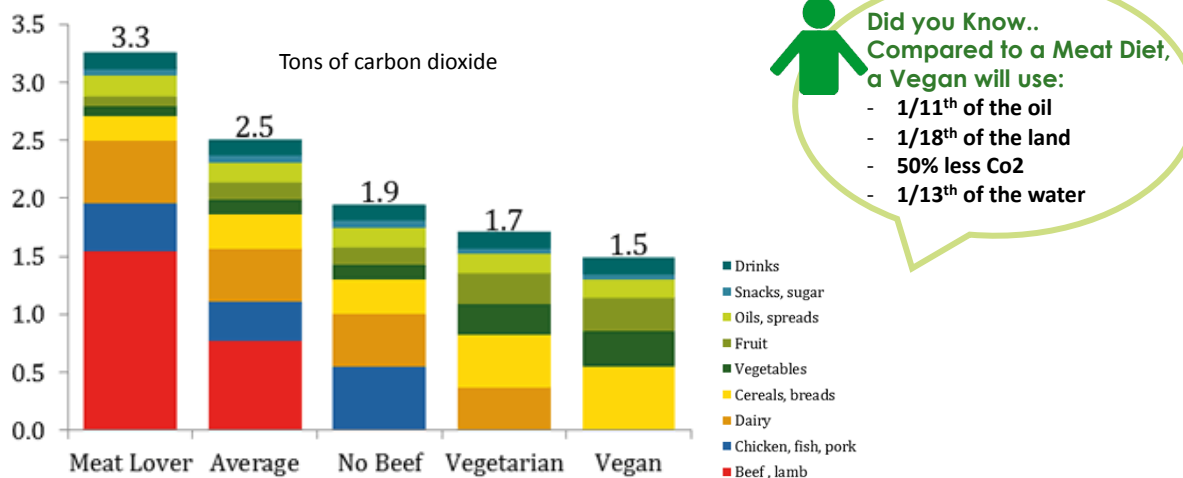


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Carbon Footprint by Diet Type

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Sources: ERS/USDA, various LCA and EIO-LCA data

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Anthropogenic Sources of Methane Emissions

(Human)

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UNITED STATES

- No.1 - Livestock (30%)
- No.2 - Landfill (25%)
- No.3 - Oil & Gas (24%)

BRAZIL

- No.1 - Livestock (75%)
- No.2 - Land use change (14%)
- No.3 - Wastes (6%)

UNITED KINGDOM

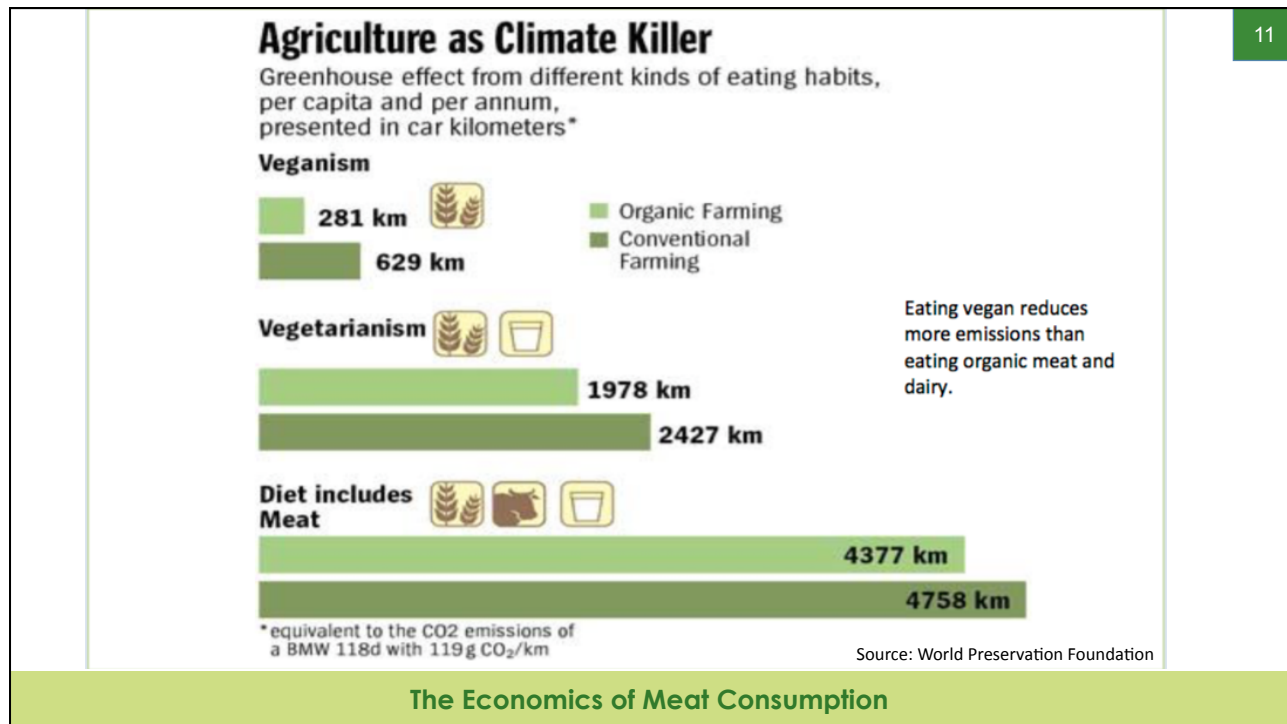
- No.1 - Livestock (43%)
- No.2 - Landfill (18%)
- No.3 - Oil & Gas (17%)

GERMANY

- No.1 - Livestock (62%)
- No.2 - Landfill (13%)
- No.3 - Oil & Gas (11%)

Source: World Preservation Foundation

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California Water Usage

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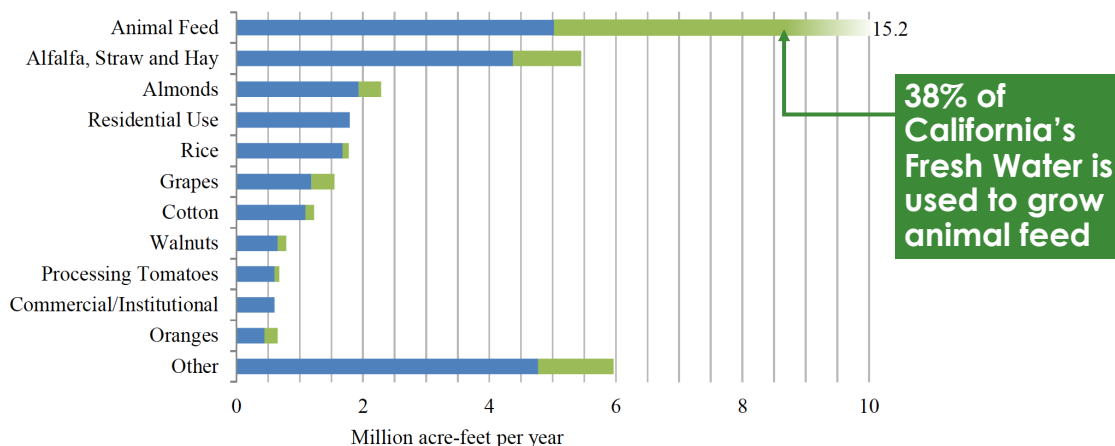
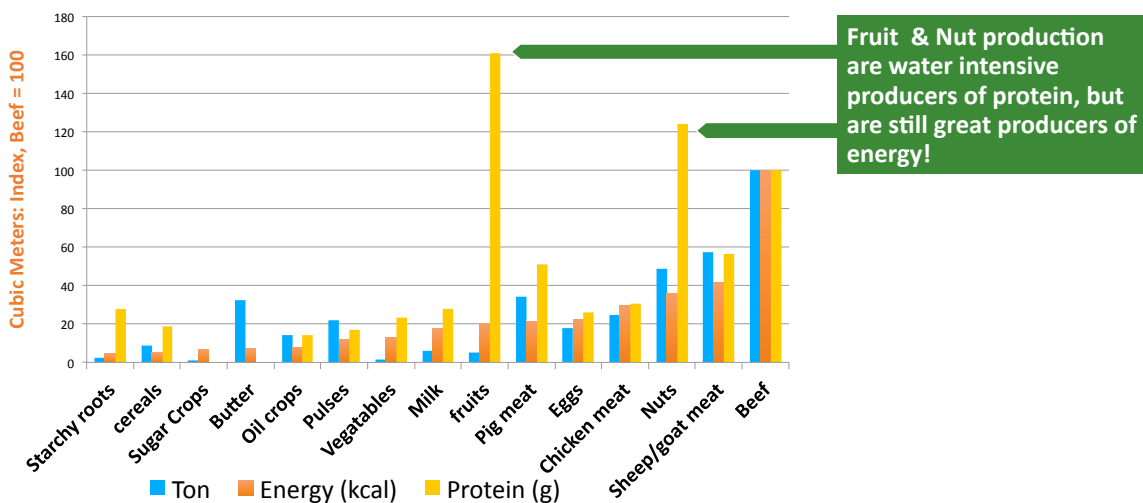


Figure 7. Blue and Green Water Footprints of Goods and Services Produced in California, by Product
Note the scale discontinuity for animal feed

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Water Consumption: Relative to Beef

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Type of Water Matters Too

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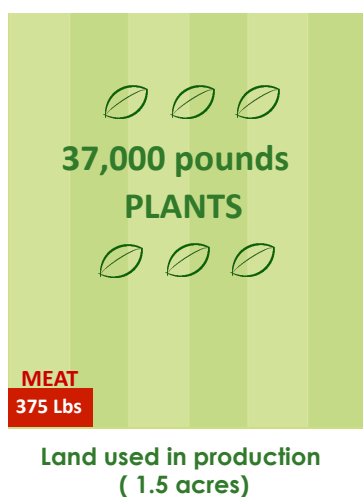
Blue water is fresh surface and groundwater, in other words, the water in freshwater lakes, rivers and aquifers

Food Source	All Water Gallons/Ton	Blue Water Gallons/Ton
Vegetables	85,000	11,300
Starchy Roots	102,200	4,200
Beef	4,000,000	145,000

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Reducing our Environmental Footprint!

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Heart Disease

12 servings of chicken/month, 3 times more likely to suffer from heart disease - Americans eat 30 servings/month

Cancer

Meat eaters prone to: prostate, breast, colon

Diabetes

One daily serving of red meat = 35% higher chance of type 2 diabetes

Antibiotic Resistance

Farm animals fed 28 million lbs of antibiotics/year
Low level dosages foster new and virulent strains of bacteria

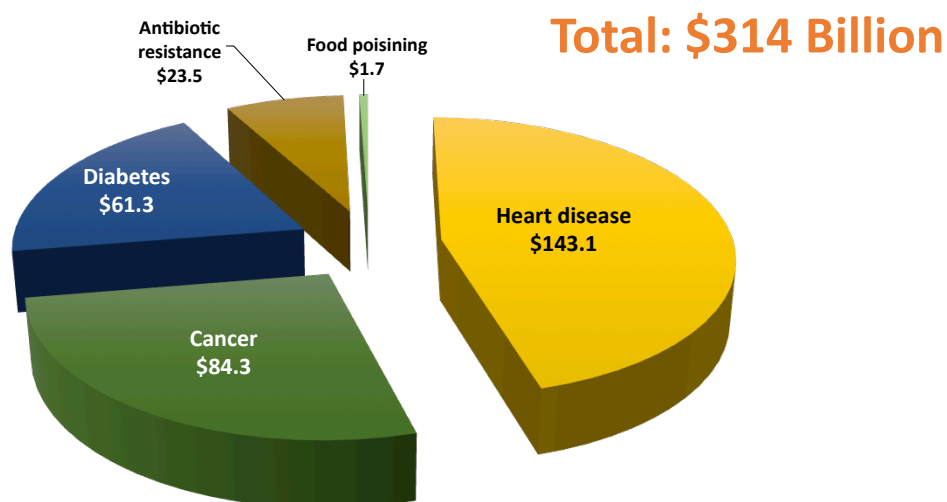
Food Poisoning

Fecal contamination in 4/5 red meat samples
E coli in 9/10 chicken breasts

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Health Care Costs of Meat

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These costs are those associated with providing health care to those afflicted.

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Meat can impact how long you live

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“There is clear evidence that regular consumption of red meat, especially processed meat, contributes substantially to premature death”

“A daily serving of cold cuts or hot dogs was associated with a 50% increased risk of developing diabetes”

“One serving a day increment in red meat intake during adolescence was associated with a 22% higher risk of premenopausal breast cancer”

Taken from research conducted by Dr. Frank Hu of the Harvard School of Public Health

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Number of animals killed each year for food in U.S.:

- **9.1 billion land animals**
 - » 8.7 billion chickens
 - » 400 million cows, pigs, ducks, and turkeys

- **53.5 billion aquatic animals**

Animal deaths per person in U.S.:

- 29 land animals per year
- 175 aquatic animals per year
- 15,000 over a lifetime

Mistreatment while still alive

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The Ethics of Factory Farming

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Over 99% of farm animals in the U.S. are raised in factory farms, which focus on profit and efficiency at the expense of the animals' welfare

Unnatural growth

Fast and disproportionate growth due to selective breeding causes ailments including chronic pain, mobility problems and heart problems.

Non-therapeutic medicating

So they can survive the filthy conditions and grow faster, some industries feed their animals antibiotics and/or hormones.

Unnatural reproduction

Many female farm animals spend virtually their entire lives pregnant, putting them under chronic strain.

Absent veterinary care

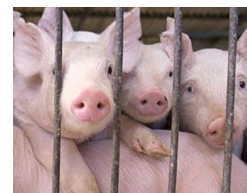
Most factory farms deny animals individualized veterinary care, including humane euthanasia.

Mutilations

Many farm animals undergo painful mutilations to their tails, testicles, horns, toes or beaks, without painkillers.

Shortened lives

Factory farmed animals are generally slaughtered at "market weight" well before the end of their natural life spans.



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The Costs of Cruelty

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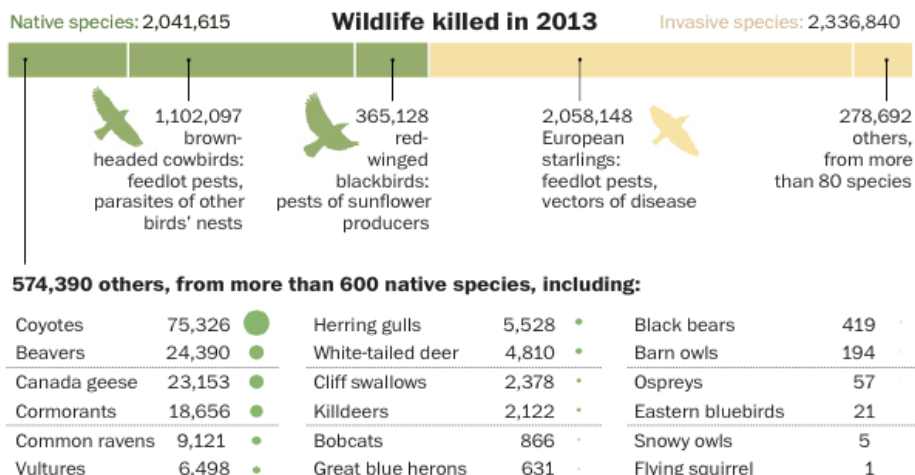
- **How do we measure?**
 - Ask people!
- **What do we ask them?**
 - How much would you pay to do away with a particular cruel practice.
- **What practices have been studied?**
 - Hens from cage to free range
 - Sows to pasture from confinement crates
 - Ending rapid growth of boiler chickens
 - End inhumane slaughter of farmed fish
- **How much would people pay?**
 - \$20.7 Billion is the cost of cruelty each year in the U.S.



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Government Provided “Wildlife Services”

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Every animal contributes and has value in our ecosystem.

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Family Farm has disappeared

A handful of companies dominate each livestock sector and exert tremendous control over the prices farmers receive, and they micromanage the day-to-day operations of many farms. The real price that farmers receive for livestock has fallen steadily for the last two decades.

Tough Working Conditions

Called “One of the worst jobs” - working in a slaughterhouse is physically and physiologically demanding. The combination of long hours and repetitive motion directly leads to increased risk of injury.

Not sustainable

Some 40% of the world’s land surface is used for the purposes of keeping all 7 billion of us fed – of that, 30% is used to support the chickens, pigs and cattle that we eventually eat. As the population increases, we will not have adequate land to continue our current farming methods and ensure everyone is fed.

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What about fishing?

- **\$4.5 billion in externalities**

- \$2.4 billion from bycatch
- \$1.4 billion from overfishing
- \$0.7 billion from fish farming



Additionally: oceans provide \$33 TRILLION worth of ecosystem services

How much does aggressive fishing and its destruction affect these services?

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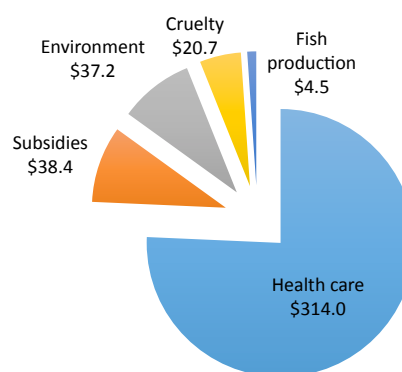
Total Additional Costs of U.S. Animal Food Production

(\$billions)

\$414.8 billion each year
Low estimate

\$1,300 per person, per year in U.S.

Source: Meatonomics (2013)
David Robinson Simon



Did you know?

A **\$5 big mac** would cost **\$12** if its price included the externalized costs of its consumption.

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How do we lower the COST?

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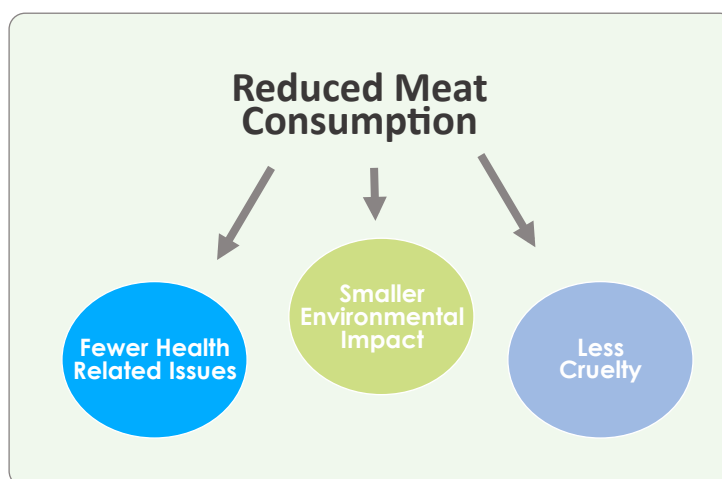
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Lower the cost, Raise the price !



**SUBSIDISING
MEAT
PRODUCTION**

Eliminating
subsidies reduces
other external costs



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Lower the cost, Raise the price !

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TAX CONSUMPTION OF MEAT



Sin Tax?

(as with alcohol, tobacco,
candy, soft drinks...)

Taxes reduce meat consumption:

- Implied reductions in all external costs
- Reduced Medicare and Medicaid spending because of reduced healthcare issues

Taxes raise revenue for:

- Massive public education campaign
- FFAC on steroids!

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Policy Proposal (Meatonomics)

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- ◆ Cut subsidies directly related to the production of meat and animal products (\$18.2 billion)
- ◆ Tax meat consumption 50% at the point of sale

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Effects on Externalized Costs (Billions)

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	Before	After	Change
Health care	\$314.0	\$175.5	-\$138.5
Subsidies	\$38.4	\$20.2	-\$18.2
Environment	\$37.2	\$20.8	-\$16.4
Cruelty	\$20.7	\$11.6	-\$9.1
Fishing	\$4.5	\$2.6	-\$1.9
Total	\$414.8	\$230.7	-\$184.1

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Conclusion

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Meat consumption comes with a variety of costs in addition to the price paid

A diet w/o meat/animal products has a much smaller footprint



How are your diet choices impacting the world?

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Marin Economic Consulting



Local Economic Development
Entrepreneurship
Regional Analysis
Business & Market Analysis

Ports & Infrastructure Analysis
Economic Impact Analysis
Public Policy Analysis



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