Consumer Effects on the Environment

What can YOU do?

1. Toxic Chemicals
   a. What are their effects?
   b. What can you do?

2. Disasters from Fishing
   a. What are the effects?
   b. What can you do?

3. CO₂ emissions
   a. Why reduce emissions?
   b. How?

4. Further Suggestions
1. Toxic Chemicals

Many chemicals used to produce a variety of products are contaminating the environment and could have dangerous effects

- Hormone disrupting Chemicals

- Persistant Organic Pollutants (POPs)
  - found almost everywhere (air, soil, water)
Stockholm POPs Convention

U.S. has not ratified the Stockholm Convention

Why such a threat?

• toxic

• accumulate in the body fat of people/animals

• can travel far on wind/water Currents

• persistent – resist processes that break down contaminants
Stockholm recommendations:

From www.greenpeace.org

1. Adopt/improve a phase-out legislative regime for all hazardous substances
2. Define hazardous substances as those that are toxic, or persistent and bioaccumulative…
3. Give special attention and consideration to the following….
   > no new POPS
   > Elimination
   > Stockpiles and wastes   ….

Chlordane
DDT *still used in China and India
Dieldrin/Aldrin
Dioxins/Furans:
Endrin
HCB
Heptachlor
Mirex
PCBs – found in virtually everyone
Toxaphene

**You can get a lot of these in what you eat. You can get a lot by eating seafood.**
Federal Tests Confirm Nationwide Rocket Fuel Contamination of Milk, Lettuce

- **Perchlorate**: explosive component of solid rocket fuel

- Perchlorate can affect the thyroid gland's ability to make essential hormones.

  **For fetuses, infants and children, disruptions in thyroid hormone levels can cause lowered IQ, mental retardation, loss of hearing and speech, and motor skill deficits.**

FDA tested 104 samples of low-fat and whole milk “mostly bought in retail supermarkets in Arizona, California, Georgia, Kansas, Louisiana, Maryland, Missouri, North Carolina, Pennsylvania, South Carolina, Texas, Virginia and Washington state”

- exposure to the chemical should not exceed 1 part per billion (ppb)

  - Average concentration of rocket fuel in milk was **5.76 ppb**
  - >38% of the samples exceeded **6.0 ppb**
  - IN LETTUCE: average concentration was **10.49 ppb**

**Brominated Fire Retardants:** impair attention/learning/memory/behavior in lab animals at surprisingly low levels

- Study on breast milk of 20 American Mothers
- Brominated Fire Retardants found in the breast milk of every mother
- Milk from 2 subjects had highest concentrations of BFR’s ever reported in the United States

Most brominated fire retardants made by:
Great Lakes Chemical Corp. of West Lafayette, IN and
Albemarle Corp. of Richmond, VA

Surveillance for Waterborne-Disease Outbreaks --- United States, 1999-2000

- Drinking water - caused illness in approx. 2,068 people
- Recreational water - caused illness in approx 2,093 people

http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5108a1.htm

- chemicals that may be present in your drinking water:
  Arsenic, Benzene, Chromium, Lead, Mercury, Pesticides, Radon, Volatile Organic Compounds

Good site with lots of info:

What can you do?

- Go to http://www.worldwildlife.org/toxics/index.cfm
  Click on Reduce Your Use of Toxic Chemicals as a Consumer under Get Involved in the right column

  look at list of things to do (for example, “Wash and peel fruits and vegetables whenever possible)

  Search for Online Action Kit link, they will mail you this for free

  - list of unsafe seafood/safe seafood to eat
  - nontoxic cleanser recipes, etc.
What can you do?

- Go to http://www.greenpeace.org/international_en/
  - Click Toxins in your TV, Poisons in your PC?

- drink filtered water

- Go to http://www.greenpeace.org/international_en/campaigns/intro?campaign_id=3987
  - Click What you can do
  - Take chemical house and body tour

To Reduce your consumption/use of toxic chemicals:

- Buy organic cotton clothing, fruits and vegetables, and other goods
✓ Wash and peel fruits and vegetables whenever possible

✓ Stop using pesticides. Green up your yard using natural methods
   *see WWF site for specifics

✓ Use environmentally friendly cleaning products in your home
   *see WWF site for specifics (NO CHLORINE BLEACH)

✓ Urge your schools and communities to use non-toxic cleaning
   products and to stop using pesticides
Why should you do it?
Greenpeace has link to [http://scorecard.org](http://scorecard.org)
Type in your zipcode

I typed in 85716 – they came up with results for Pima County:

- **Toxic Chemicals Released by Factories, Power Plants and Other Industrial Companies**
  In 2002, this county ranked among the dirtiest/worst 10% of all counties in the U.S. in terms of total environmental releases

- **Air Pollutants That Pose Cancer and Other Health Risks**
  Based on EPA's most current data, this county ranked among the dirtier 30% of all counties in the US in terms of noncancer hazards from hazardous air pollutants.

2. Disasters from Fishing
From *Rapid worldwide depletion of predatory fish communities* in *Nature* 423

- Industrialized fisheries typically reduce community biomass by 80% within 15 years of exploitation

- Large predatory fish biomass estimated to be approximately 10% of pre-industrial levels

![Graph showing biomass decline over time](image-url)
Figure 2: Spatial patterns of relative predator biomass in 1952 (a), 1956 (b), 1960 (c), and 1980 (d). Colour codes depict the number of fish caught per 100 hooks on pelagic longlines set by the Japanese fleet. Data are binned in a global 5° × 5° grid. For complete year-by-year maps, refer to the Supplementary Information.
• 60% of world's fish resources are mature (fully exploited) or senescent (showing declining yields)
• much of what is caught is bycatch

• study conducted by the Gulf and South Atlantic Fisheries Development Foundation on bycatch from shrimp trawling

Gulf of Mexico
74% bycatch
26% shrimp

South Atlantic
82% bycatch
18% shrimp
Reasons to not eat Tuna:

⇒ dolphin “safe” tuna is not actually safe for animals

⇒ dolphin safe tuna not human safe tuna
Reasons to not eat Salmon:

⇒ farm-raised have up to 40 x more PCB’s than other foods


⇒ farm-raised are lice infested / dyed pink

⇒ wild caught are endangered
What can you do?

- Go to http://www.mercuryaction.org/fish/learn_more.html

  - Click on link under **Take Action Online** to submit letter to Congress about the lack of sufficient reductions in mercury admissions
  - Download **pocket guide** for what fish are safe

- **eat less seafood**

Do your own research:

- **Sea Around Us Project**
  Huge resource on fisheries trends/marine exploitation

  http://www.seaaroundus.org/

- Go to
  http://www.organicconsumers.org/
  Toxic/fish-guide.cfm
3. HOW TO REDUCE CO2 EMISSIONS

WHY TO REDUCE CO2 EMISSIONS

» Projection: Arctic without ice in 70 years
  » 23 foot rise in sea level

» Loss of Los Angeles, London, Amsterdam, etc
» Loss of Florida coastline
» Loss of Nile River delta

Polar bears in Canada being tranquilized, airlifted north

http://www.greenpeace.org
HOW

- use high mileage vehicles
- if buying a new car, buy a hybrid or a Flexible Fuel Vehicle
- carpool
  - http://www.carsharing.net
- take the bus to phoenix
  - www.greyhound.com
- BIKE TO SCHOOL
- use solar energy
  - go to
  - http://www.campaignearth.org/mainpage.asp
- less catalogs
  - http://www.ases.org/
- get off junk mail lists
- buy recycled paper
  - http://www.greenfieldpaper.com/
- limit purchase of new wood products
- replace 3 lamp bulbs in your house with fluorescent bulbs
- buy durable possessions for long use
- don’t idle in your car
- recycle your cell phone – go to
  - http://www.earthshare.org/get_involved/involved.html
- stop using aerosol hair spray
- go to Google.com and search for ‘global warming solutions’
Stay away from ExxonMobil/Esso!

ExxonMobil/Esso is the most active company in trying to kill any action on climate change.

Go to:
http://www.greenpeace.org/international_en/features/details?item_id=583710

send a message now promising Exxon you’ll stay away
Calculate your global warming emissions

4. Further Suggestions
Investigate tie between McDonald’s and large rainforest destruction for cattle

Read Fast Food Nation

Calculate your own “ecological footprint” look on Google

Change something about the way you live Steps, pick 1 or 2 things to change each week

Easy place to start this week:

Stop idling your car

If you’re going to buy clothes, buy hemp or used

Get yourself a water filter

Sub chicken for seafood
Other Important Links

- Help remedy the Bhopal Disaster
  http://www.greenpeace.org/international_en/campaigns/intro?campaign_id=3991
- Links on info/solutions to Global Warming
  http://www.worldviewofglobalwarming.org/pages/references.html

Government policy links

- April 20, 2004: Bush Administration Again Seeks Exemptions for Cleanup of Toxic Rocket Fuel
  http://environment.about.com/b/a/083912.htm
- June 18, 2004: “Bush Administration has proposed to delay significant mercury reductions from power plants until 2018 and beyond”
  http://ems.org/nws/2004/06/24/physician_groups
- Bush salmon plan criticized

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