I. Environmental Problems (1)

A. Land

1. loss of arable land

a. top soil: 24-26 billion tons

b. turned into desert

c. development

2. Social problem

a. less food production

b. migration of large populations

3. Social cause:

a. agribusiness

b. monocrop farming

c. overgrazing

B. Salt and fresh water ecosystems

1. pollution

a. dead zones(Gulf of Mexico, coastal ecosystems)

b. fresh water (streams, lakes, rivers, aquifers)

2. bleaching: corral reefs

3. Social problems:

a. food production

b. clean water1 billion (est 2 billion)

c. coastal communities

4. Social cause:

a. chemical pollution: pesticides, herbicides

b. factory farming

c. ocean warming

C. Forests and species

1. environmental problems

a. worlds forests lost

i. 1/2 lost since 1960

ii. TW rain forests 2020

b. species extinction rate: 1000x

i. birds 1000

ii. plants 33,000

iii. mammals 1 in 4

iv. fish 70%

v. insects

vi. food

2. Social problems:

a. loss of forests

i. natural disasters, increases

ii. global warming

b. species extinction

3. Social cause:

a. habitat destruction:

i. logging

ii. grazing cattle

b. globalization (structural adjustment)

II. Environmental problems (2)

A. Chemical Pollution

1. Chemicals

a. . 80,000

b. 20%

c. 500 million tons per year (2.5 billion lbs toxic and hazardous),

d. 1500 (12,000) Superfund sites:

e. US Military

i. 64 million tons mustard and nerve gas

ii. 400,00o chemical bombs

iii. millions of acres: heavy metals, jet fuel

2. Social problems:

a. health: communities, workers, consumers

b. pollution: land (Anniston, AL), air, water (Hudson, cancer corridor)

c. environmental racism (Mt. Dioxin)

d. targets for terrorists

e. 2 million tons to TW

3. Social Cause: lack of regulation and enforcement

B. Nuclear Pollution

1. 80,000 tons of high level nuclear waste

2. 100 million gallons of high level liquid waste

3. low level waste: train around the world

4. US military

a.500 tons

b. sacrifice zones”

5. Social problem:

a. health

b. terrorist targets

C. Solid Waste

1. E-waste

a. computers 70 million in landfills

b. heavy metals: lead (350 million lbs), chromium, cadmium

c. 500 million obsolete monitors: phosphorous and lead

2. Animal Waste

a. two feedlots in CO 100,000

i. each cow : 50lbs of urine an feces per day

ii. more waste than Denver, Boston, Atlanta, and

St. Louis together.

b. Not treated but dumped into lagoons

3. Solid Waste

a. America is #1: 232 million tons

b. trend: comparison

4. social problems

a. human health

b. clean water

c. TW workers

5. Social causes

a. consumerism

b. lack of regulation

III. Environmental Problems (3)Toxic Sludge (aka --it): What happens to it?

A. 28 million lbs per year

B. It is mixed with: 60,000 toxic substances (97%-99% contaminated)

1. Pesticides

2. industrial chemicals

3. heavy metals

4. bacteria, viruses, worms fungi

5. radioactive contamination

C. Disposal

1. can’t burn it

2. can’t dump it in landfills

3. can’t ocean dump it

D. NYC:

1. give it to poor town Sierra Blanco

2. Texas EPA: its fine!

3. TV Nation: sued

E. EPA

1. rename it: biosolids

2. fertilizer

IV. Environmental Problem(4)

A. Human induced global warming

1. melting mountain glaciers, polar ice cap

2. rising air temperature

3. rising ocean temperature (corral reefs)

4. rising ocean

5. catastrophic climate events

6. more and more intense storms

7. loss of species

B. Social Problems

a. hunger

b. displacement of populations

c. cost $ storm damage

C. Social causes: greenhouse gases

1. auto industry: car and truck fuel economy lowest since 1980

(Ford Excursion: 7,600 lbs, 12.5 miles to gallon, seats 9 and 134 tons of CO2)

2. fossil fuel industry: coal, gas, oil

3. factory farming

4. US: 5% of world population 25%-33% of greenhouse gases