

A blue planet:but



visual EDIT

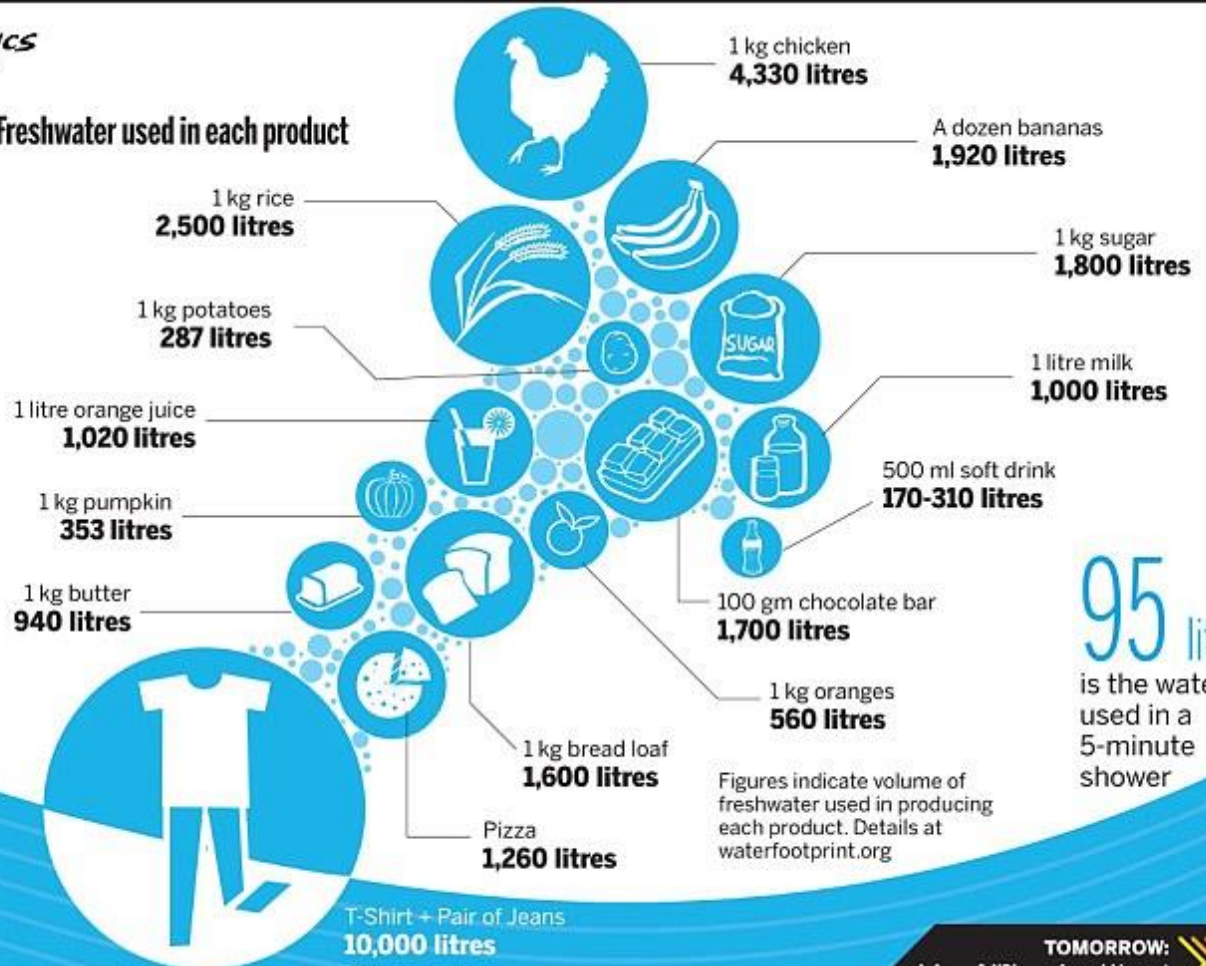
BY funALYTICS

YOUR WATER FOOTPRINT...

...is much larger than you think. The amount of water you consume depends not just on the duration of your daily shower or the number of clothes you wash but also on what you eat, the clothes you wear & the fuel you use. Take a look, calculate your water footprint & reduce it to earn a few extra minutes in the shower

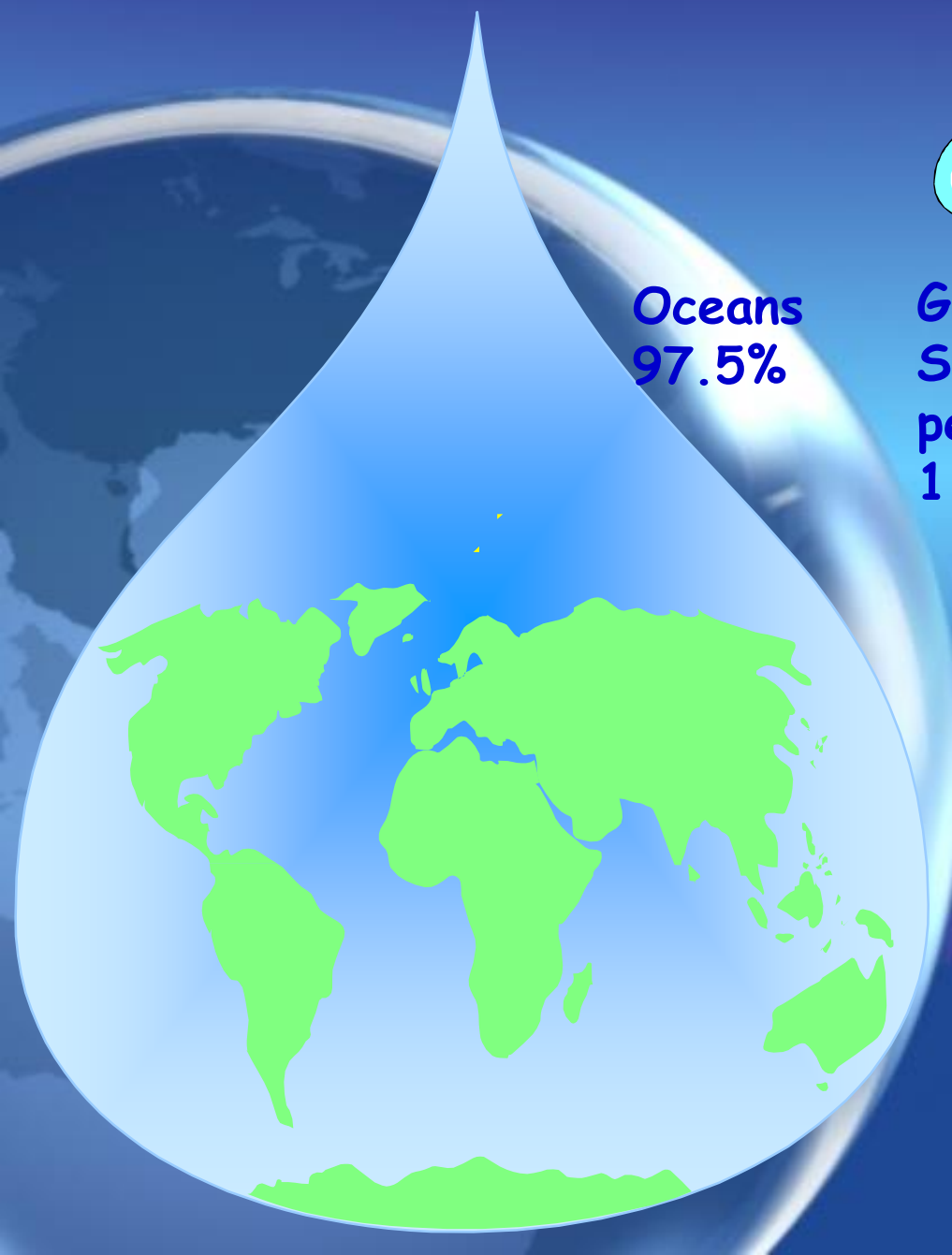
1,400 litres
of water is what goes into a typical morning breakfast

Freshwater used in each product



95 litres
is the water used in a 5-minute shower

Figures indicate volume of freshwater used in producing each product. Details at waterfootprint.org



Oceans
97.5%



Glaciers,
Snow &
permafrost
1.725%



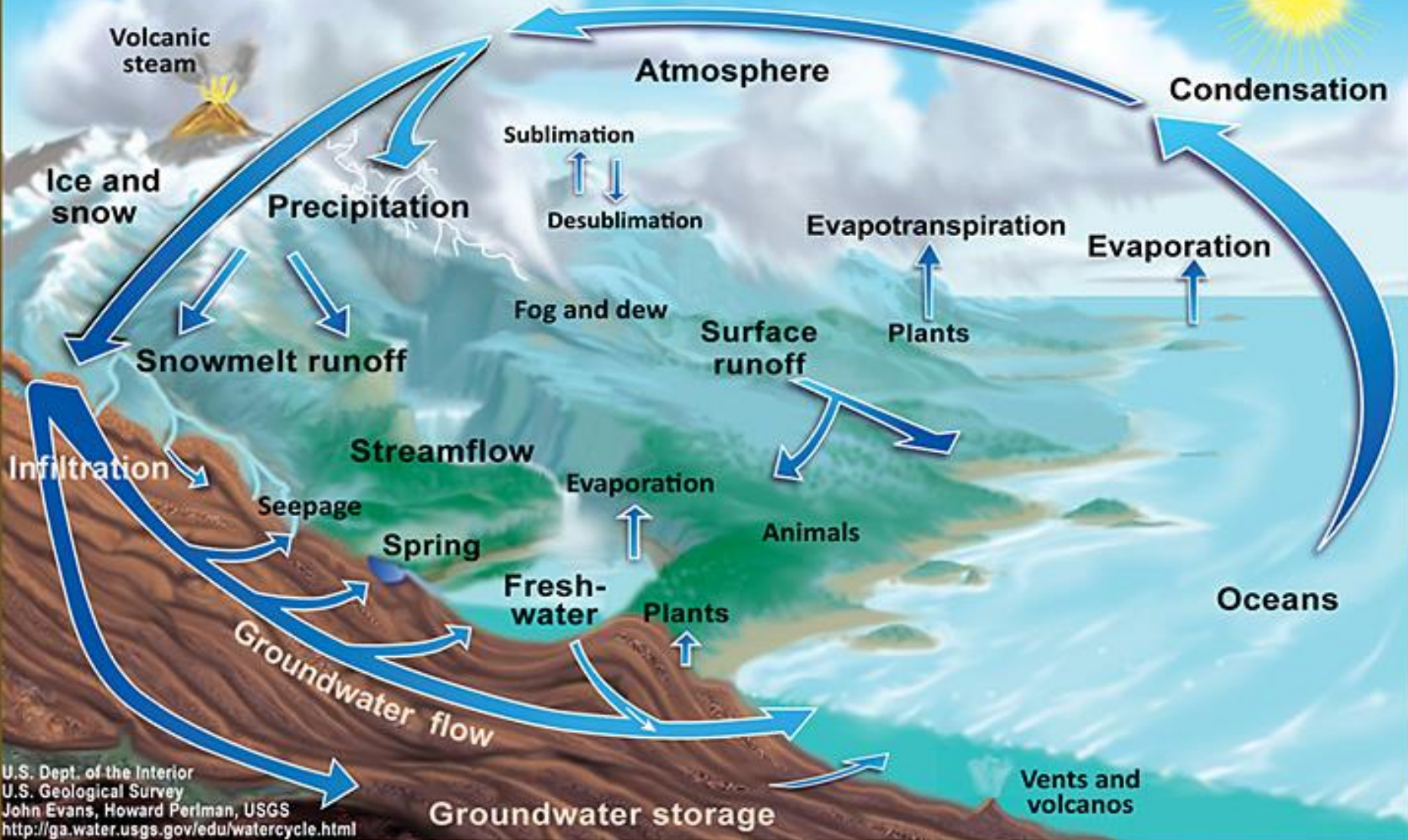
Ground
water
0.075%



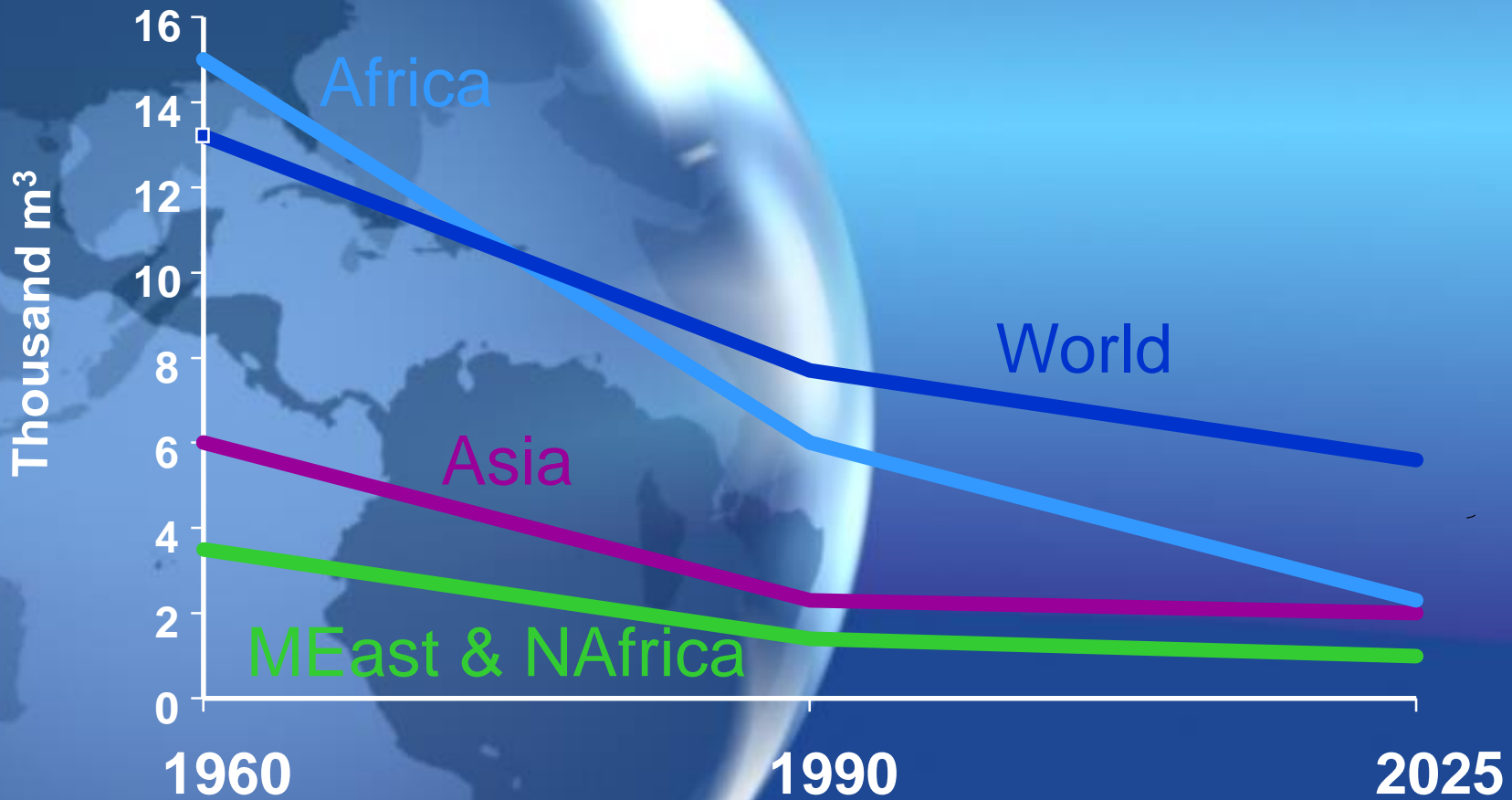
Lakes,
swamps &
rivers
0.025%

The world's water resources

The Water Cycle



Per capita water availability: Relation to demographics



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Bestselling author of *The Wal-Mart Effect*

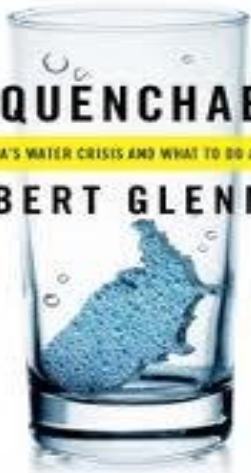
THE BIG THIRST

The Secret Life and Turbulent Future of Water

UNQUENCHABLE

AMERICA'S WATER CRISIS AND WHAT TO DO ABOUT IT

ROBERT GLENNON



Mark Achbar, Executive Producer of *THE CORPORATION*, and Si Linnell
PRESENT

BLUE GOLD WORLD WATER WARS

Thirst is not a product.



Narrated by
MALCOLM MCDOWELL

Based on the book by
MAUDE BARLOW and TONY CLARKE

COMING SOON!

www.bluegold-worldwaterwars.com

MARK ACHBAR AND SI LINNELL PRESENT A PURPLE THURTELL FILMS PRODUCTION A BLUE GOLD FILM NARRATED BY MALCOLM MCDOWELL BASED ON THE BOOK BY MAUDE BARLOW AND TONY CLARKE ORIGINAL MUSIC BY MAUDE BARLOW TONY CLARKE ANDREW MCINTYRE JOHN HARRISON ANDREW HARRISON AND ALVIN HARRISON EDITOR ANDREW HARRISON DIRECTOR OF PHOTOGRAPHY ANDREW HARRISON EXECUTIVE PRODUCERS ANDREW HARRISON AND TONY CLARKE PRODUCED BY ANDREW HARRISON AND TONY CLARKE



THE RIPPLE EFFECT

THE FATE OF FRESHWATER
IN THE TWENTY-FIRST CENTURY

ALEX PRUD'HOMME

Coauthor with Julia Collé of the New York Times Bestseller *My City in France*



Food and its impact on water quality





Water, Health, and Social Justice



Three Issues:

1. Environmental and structural scarcity (scarcity)
2. Biological and Chemical contamination (abuse)
3. Human Right or Commodity (mining)

Vocabulary

- **Hydrologic cycle**- evaporation, condensation, precipitation and absorption
- **Potable**- drinkable freshwater
- **Runoff**- precipitation not absorbed
- **Watershed** – area around surface water that drains into it
- **Aquifer**- deep underground storage of water
- **Surface water** – rivers, lakes, ponds, swamps

Three sectors: Agriculture, Industry, Domestic

- 10 liters of water is required to manufacture 1 liter of gasoline.
- 300 liters of water is required to produce 1 kilogram of paper
- 1000 liters of water is required to grow 1 kilogram of potatoes.
- 7500 liters of water to produce a kilogram of beef
- 215,000 liters of water to produce one metric ton of steel.

- ◆ minimum amount of water needed for drinking, cooking, bathing, and sanitation is 13 gallons (50 liters) (WHO figure)
- ◆ average person in the United States uses 65 to 78 gallons of water (250 to 300 liters) per day
- ◆ average in Netherlands; 27 gallons (104 liters) per day.
- ◆ average in Gambia; 1.17 gallons (4.5 liters)
- ◆ 12 percent of the world uses 85 percent of its water
- ◆ Global consumption of water is doubling every 20 years, more than twice the rate of human population growth.
 - ◆ 1.2 billion people lack access to improved water supply and 2.4 billion to improved sanitation -- i.e. one in six people still have no regular access to safe drinking water
 - ◆ Lack of clean drinking water leads to nearly 250 million cases of water-related disease, and 5 to 10 million deaths.

Water scarcity: Environmental and Structural

Problem: Decreasing drinkable water (the amount of water on earth is finite; only 2 1/2 percent of it is drinkable, and most of that is bound up in ice)

(See also Mark Twain: “Whiskey’s for drinkin’ and water’s for fightin’ over...”)

Use:

10% personal

20% industrial

70% agricultural

facts about structural water scarcity

Up to 50 per cent of urban water and 60 per cent of water used in agriculture is wasted through leaks and evaporation.

60 to 75 percent of irrigation water never reaches the crop.

In the Philippines' Manila, 57 percent of municipal water is lost through leaks and theft.

Some facts about environmental water scarcity

- G The High Plains Ogallala aquifer, stretching 1,300 kilometers from the Texas panhandle to South Dakota, is being depleted eight times faster than nature can replenish it
- G The water table under California's San Joaquin Valley has dropped nearly ten meters in some spots within the last 50 years.
- G In the Arabian peninsula, groundwater use is nearly three times greater than recharge and, at the current rate of extraction, Saudi Arabia is running toward total depletion in the next 50 years.
- G Northern China has eight regions of aquifer overdraft while the water table beneath Beijing has dropped 37 meters over the last four decades.



Solution(s):

- Conservation and more careful use of water resources for personal needs, agriculture, and industry
- Recycling water (grey water)
- Conservation-oriented irrigation systems (drip irrigation instead of traditional flood irrigation) and “no plow” farming
- Rainwater catchment
- Watershed management
- Non-water based sanitation
- Human right to water

Two types of water contamination

Water Abuse

- **Biological**- Animals (including humans)
- **Chemical**- Industry, Domestic
 - Point (specific) and non-point (many sources)

Over 5 million people, mostly children, die annually due to preventable water-borne diseases.

WHY?

- Each person produces 500 grams of waste a day.
- 90% ends up in water untreated
- Animal waste runoff is another biological contaminate



CAFO- concentrated animal feeding operation



Factory farming isn't just killing: It is negation, a complete denial of the animal as a living being with his or her own needs and nature. It is not the worst evil we can do, but it is the worst evil we can do to them.

It confronts us with the animal equivalent of Abraham Lincoln's condemnation of slavery: 'If slavery is not wrong, nothing is wrong.'

— Matthew Scully





Water abuse: Chemical

Toxic contamination of ground and surface water sources by industry, agriculture and domestic Household chemical, pesticides and fertilizers now make up a majority of contamination

Pharmaceutical contamination growing concern



Some examples of water abuse

- ◆ There are 35,000 pesticides containing 600 chemical compounds.
 - ◆ municipal water systems are only required to test for six.
 - ◆ these chemicals are known to cause birth defects, nerve damage, sterility and cancer.
- ◆ The Great Lakes are the largest system of fresh, surface water on earth, containing roughly 18% of the world supply.
 - ◆ The Great Lakes have suffered from pollution, lost two-thirds of their extensive wetlands and experienced a catastrophic loss of biological diversity. Only 3% of the shorelines are suitable for swimming.
- ◆ Three-fourths of Poland's rivers are so contaminated by chemicals, sewage and agricultural run-off that their water is unfit even for industrial use.



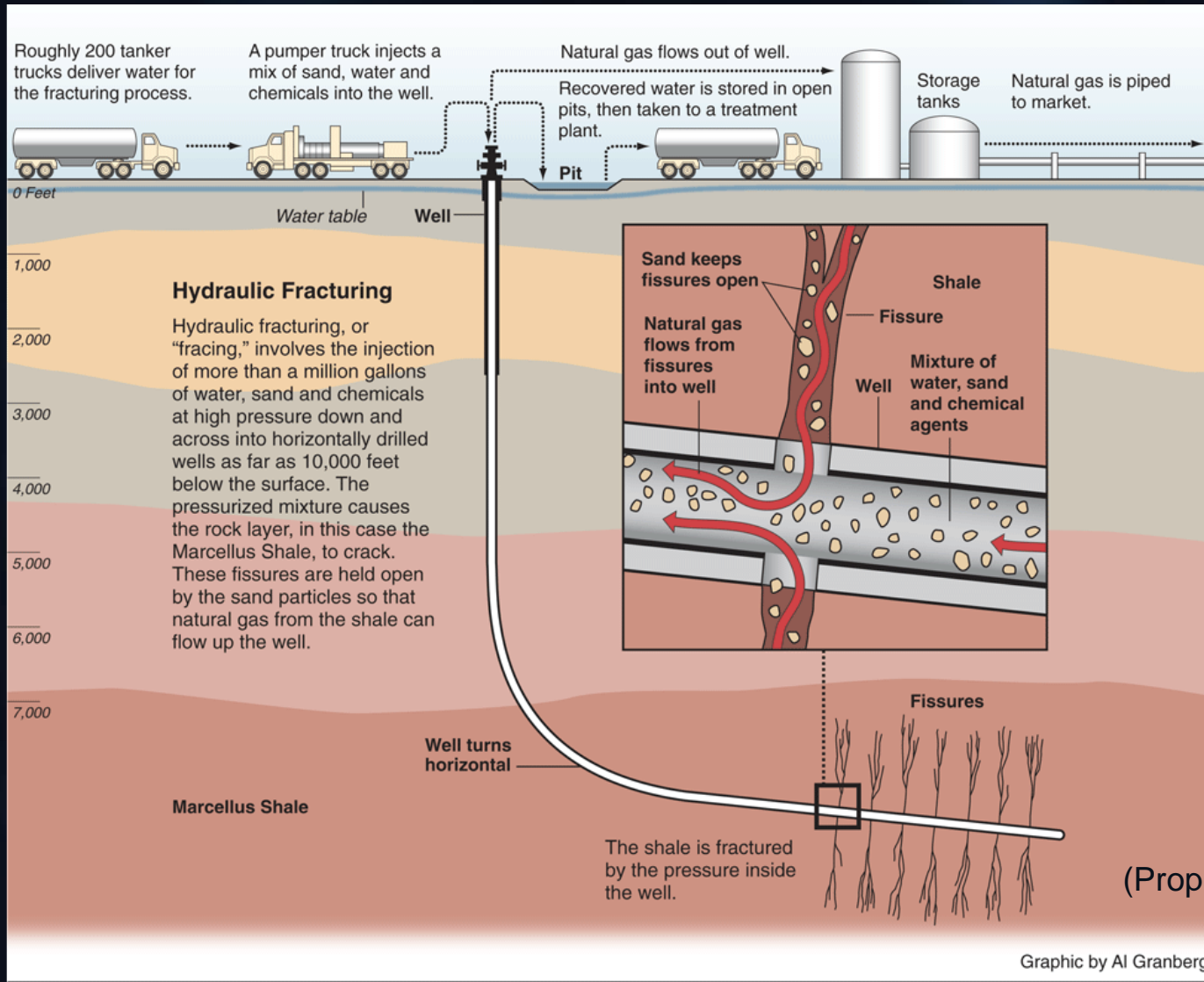
Solution:

- Restrictions on dumping
- Better “recycling” of wastewater

Water mining


Industry drawing up groundwater for use in profit-making enterprises; irrigation, coal slurry transport, hydraulic mining (fracking), soft drink production, manufacturing, and bottled water.

What is Hydraulic Fracturing?



Some examples and impacts of water mining

- G** Global Water Corporation, signed an agreement with Sitka, Alaska, to export 18 billion gallons per year of glacier water to China where to be bottled to save on labor costs.
- G** The Nile in Egypt, the Ganges in South Asia, the Yellow River in China, and the Colorado River in America are among the major rivers that are so dammed, diverted, or over tapped that little or no fresh water reaches its final destination for significant stretches of time



✿ Solution:

- ✿ Restrictions on water use, water for people before profit – Human right to water

Water pricing

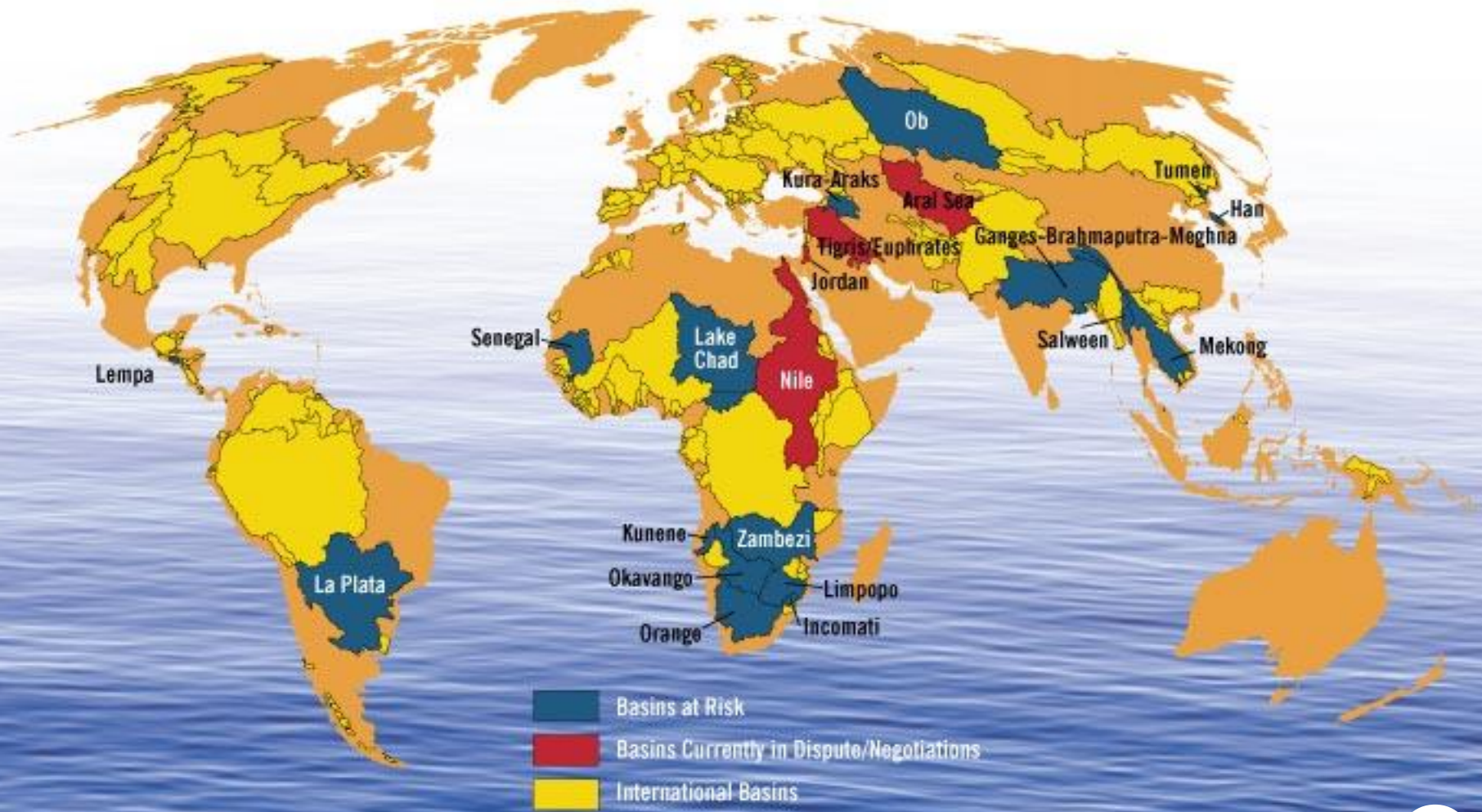
Problem: people cannot afford the prices being imposed by corporations that increasingly control water and water distribution systems.

(I.e. the inversion of gravity as economic law: Water flows uphill towards money)...

Some facts about water pricing:

- ◆ People in the “developing” world pay 12 times more per liter of water than fellow citizens connected to municipal systems
- ◆ Ten major corporations delivering fresh water services for profit. The three biggest -- Suez and Vivendi of France and RWE-AG of Germany -- deliver water and wastewater services to almost 300 million customers in over 100 countries.
- ◆ The World Bank financier of privatization, lending about \$20 billion to water supply projects over the last decade; World Bank loans for water required conversion of public systems to private corporations
 - ◆ When Bolivia privatized their water systems, the price of water tripled.
 - ◆ The government of South Africa has cut off water supplies to over 10 million people because they could not afford to pay -- despite a constitutional guarantee of access to water for all.
 - ◆ Public Services International (PSI) reports in England, between 1989 (the year water was privatized) and 1995, there was a 106 percent increase in the rate charged to customers, while the profits of the companies increased by 692 percent.
 - ◆ the number of customers who have had their water disconnected has risen by 50 percent since privatization.

**"Fierce competition for fresh water may well become a source of conflict & wars in the future."
Kofi Annan, March 2001**





Solution:

- Democratic control over our water resources
- Human right to water

✿ P.S: Water is not a problem...it's always a *solution* (unless it's a gas or a solid)...Get it?