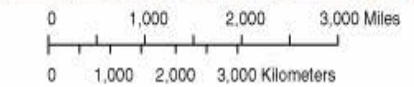
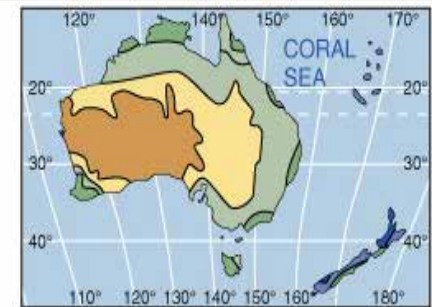
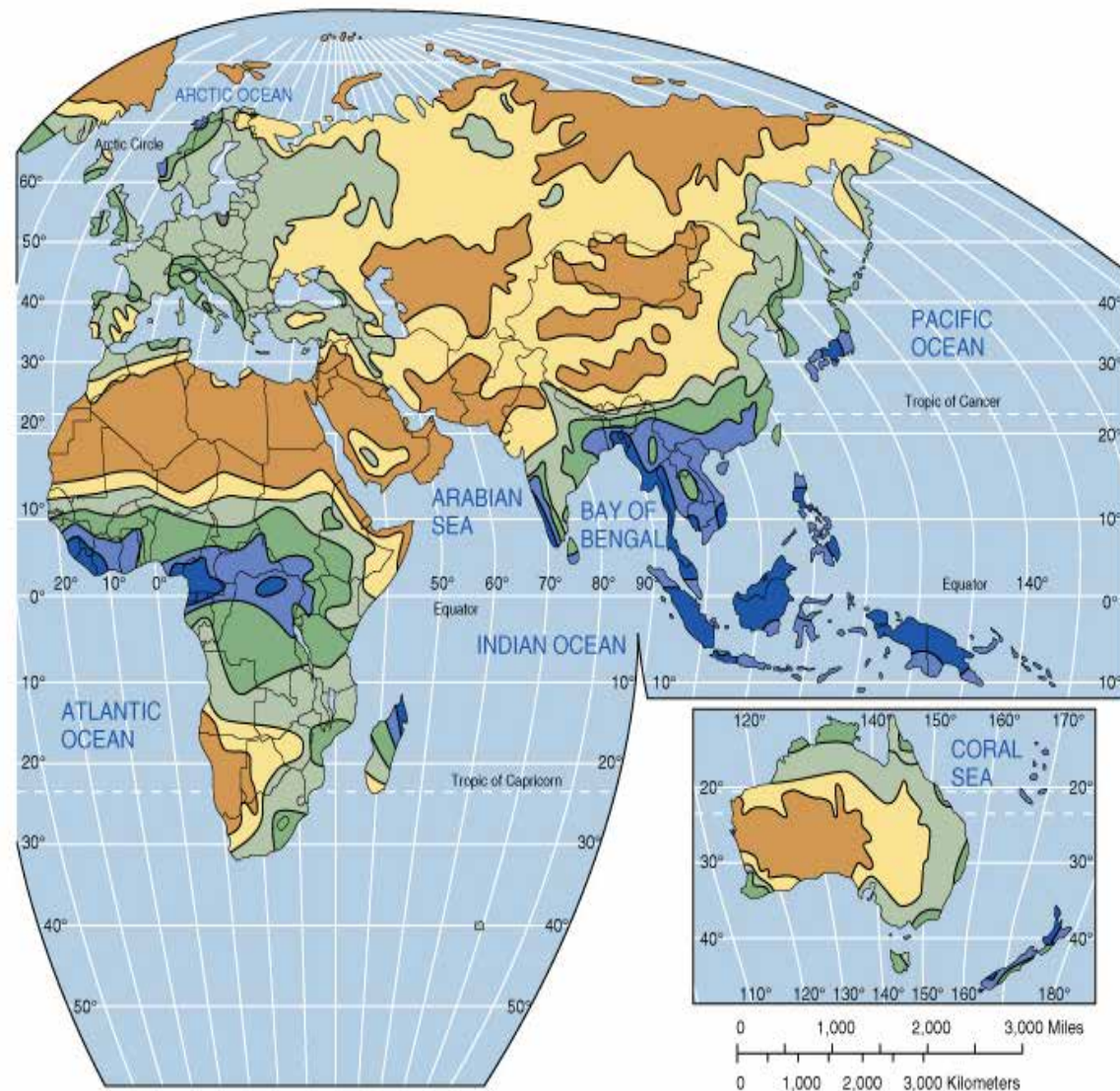
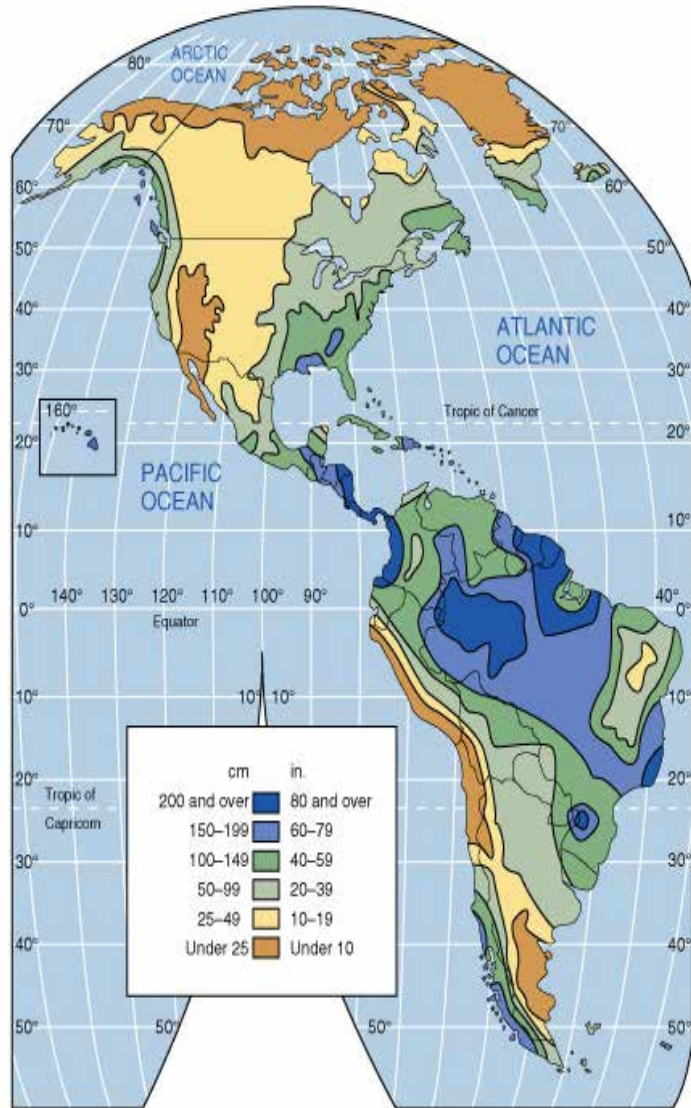
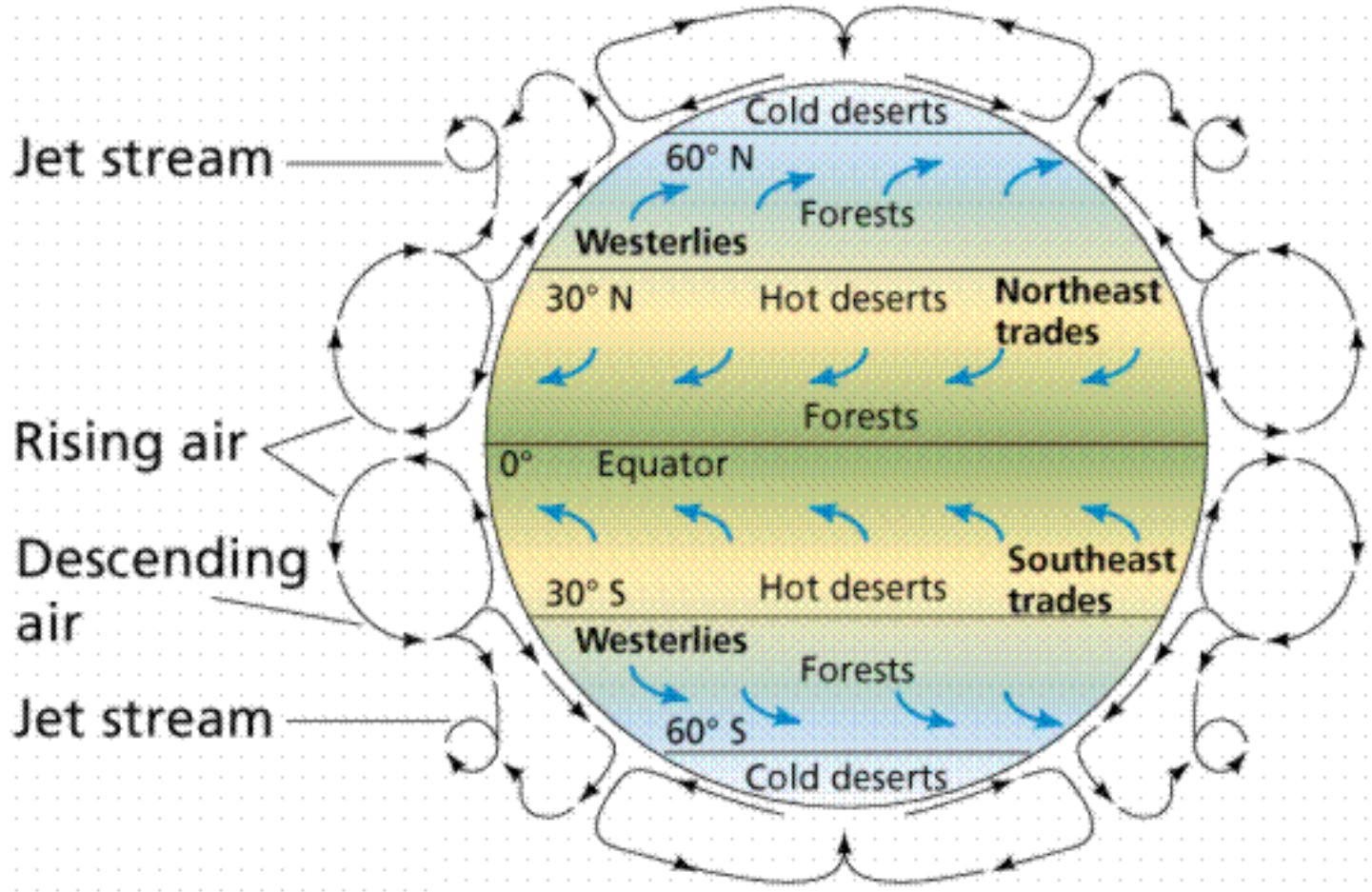


Water: global precipitation



Modified Goode's homolosine equal area projection

Water: air circulation patterns



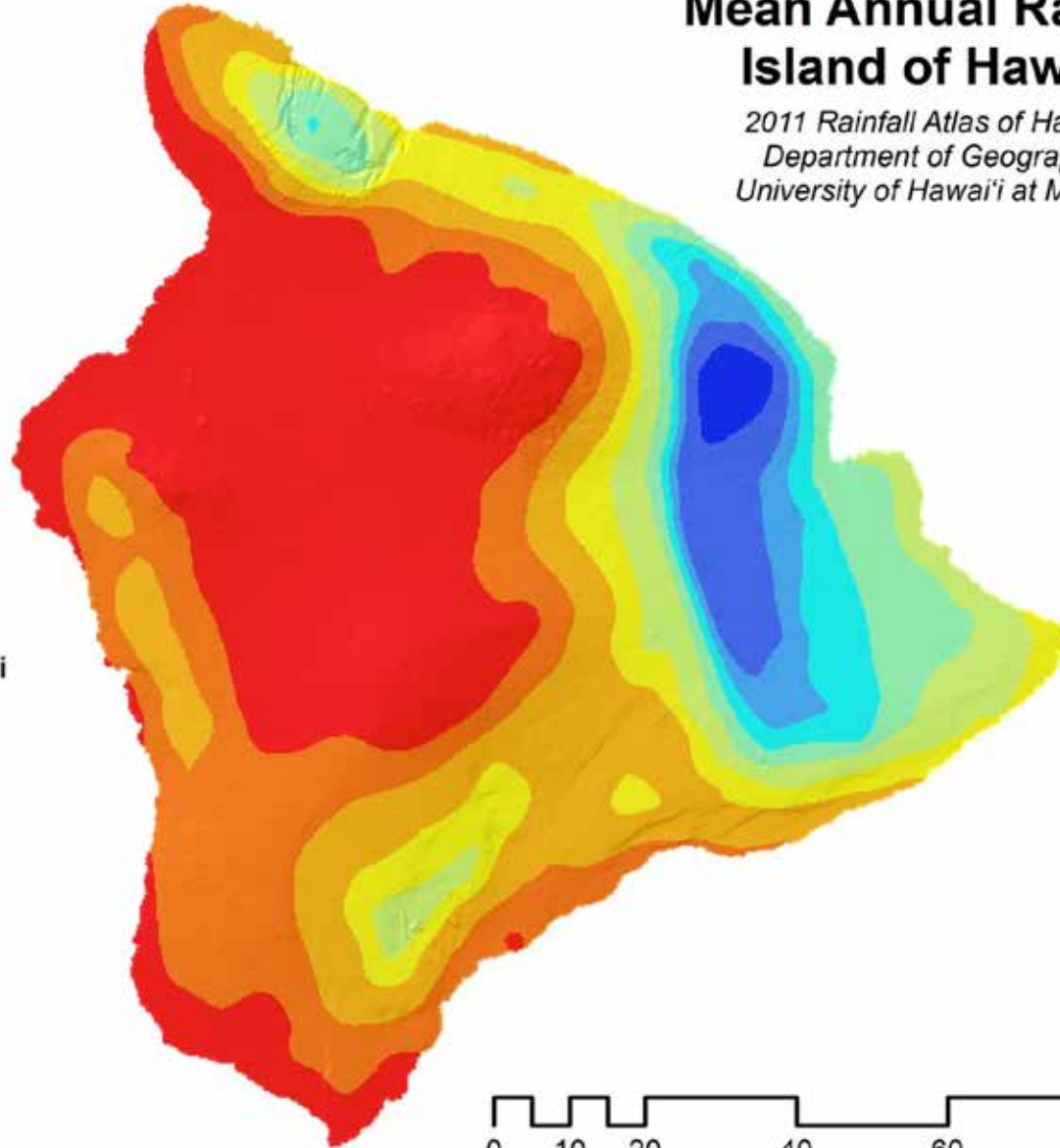
(Purves et al.)

Water: Hawaii precipitation

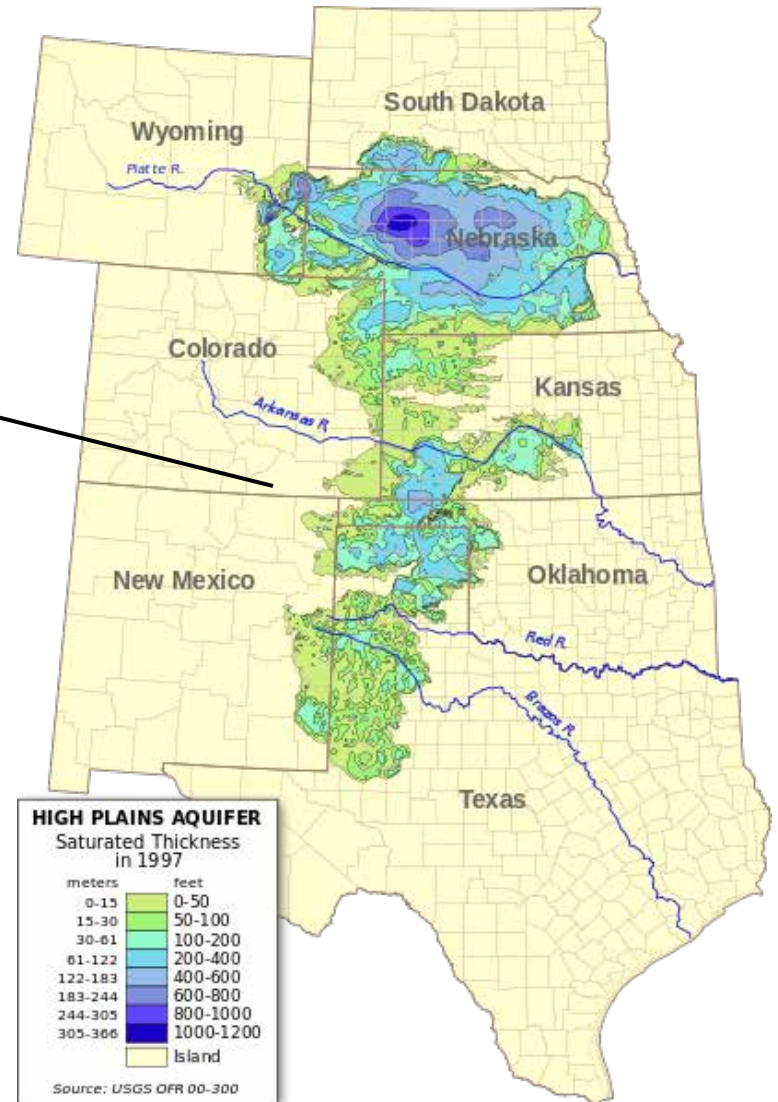
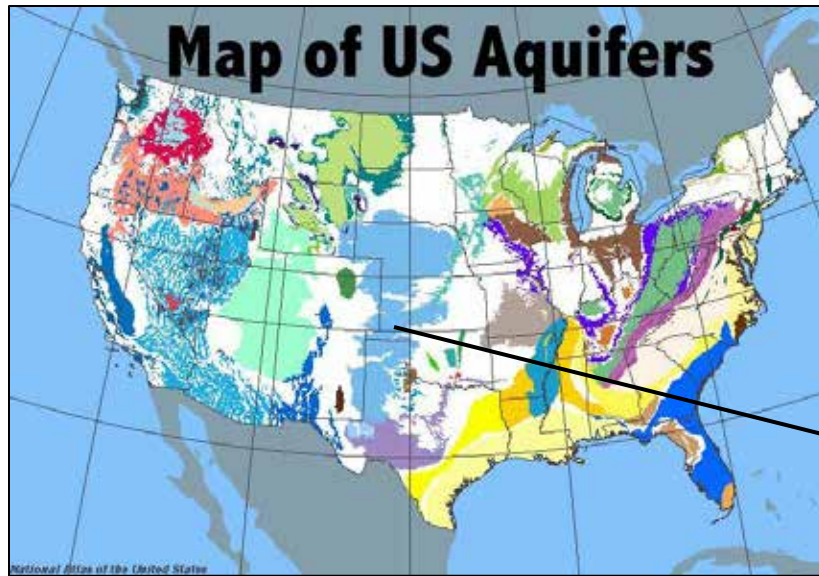
Mean Annual Rainfall Island of Hawai'i

*2011 Rainfall Atlas of Hawai'i
Department of Geography
University of Hawai'i at Mānoa*

Annual Rainfall Hawai'i (inches)

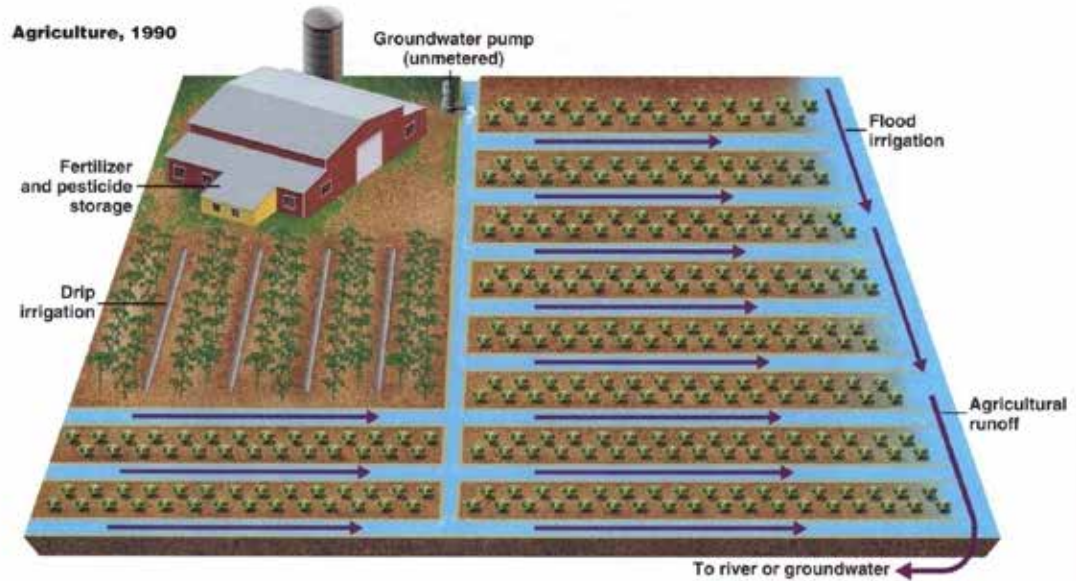


Water: aquifers

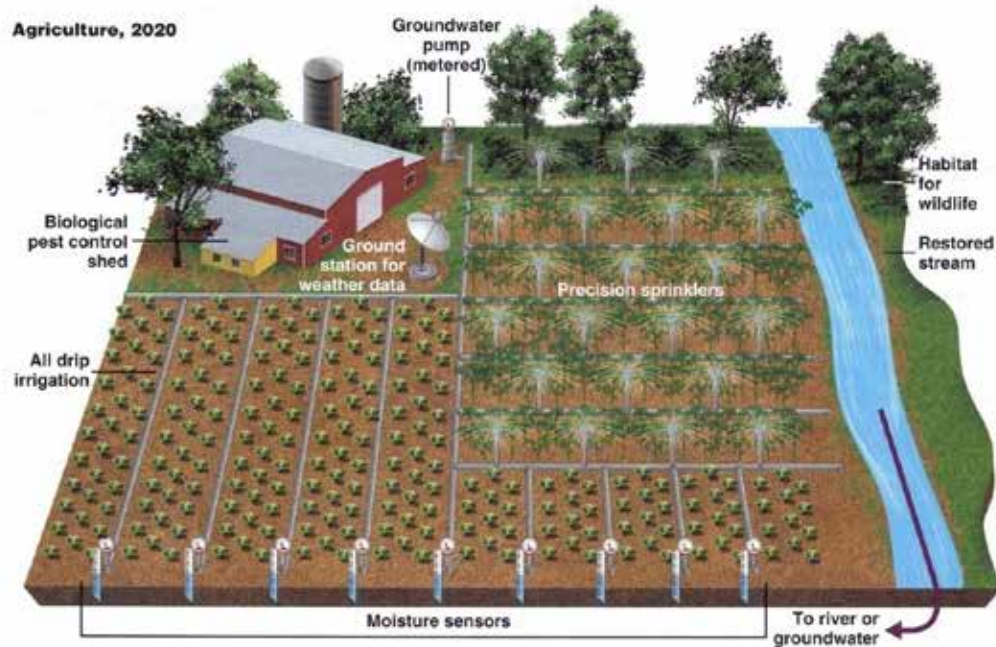


Water: agricultural conservation

Conventional Irrigation System



Future Irrigation System



Water: desalination

15,000 plants currently in operation globally



Ashkelon Desal. Plant, Israel,
Contributes 5-6% of national demand



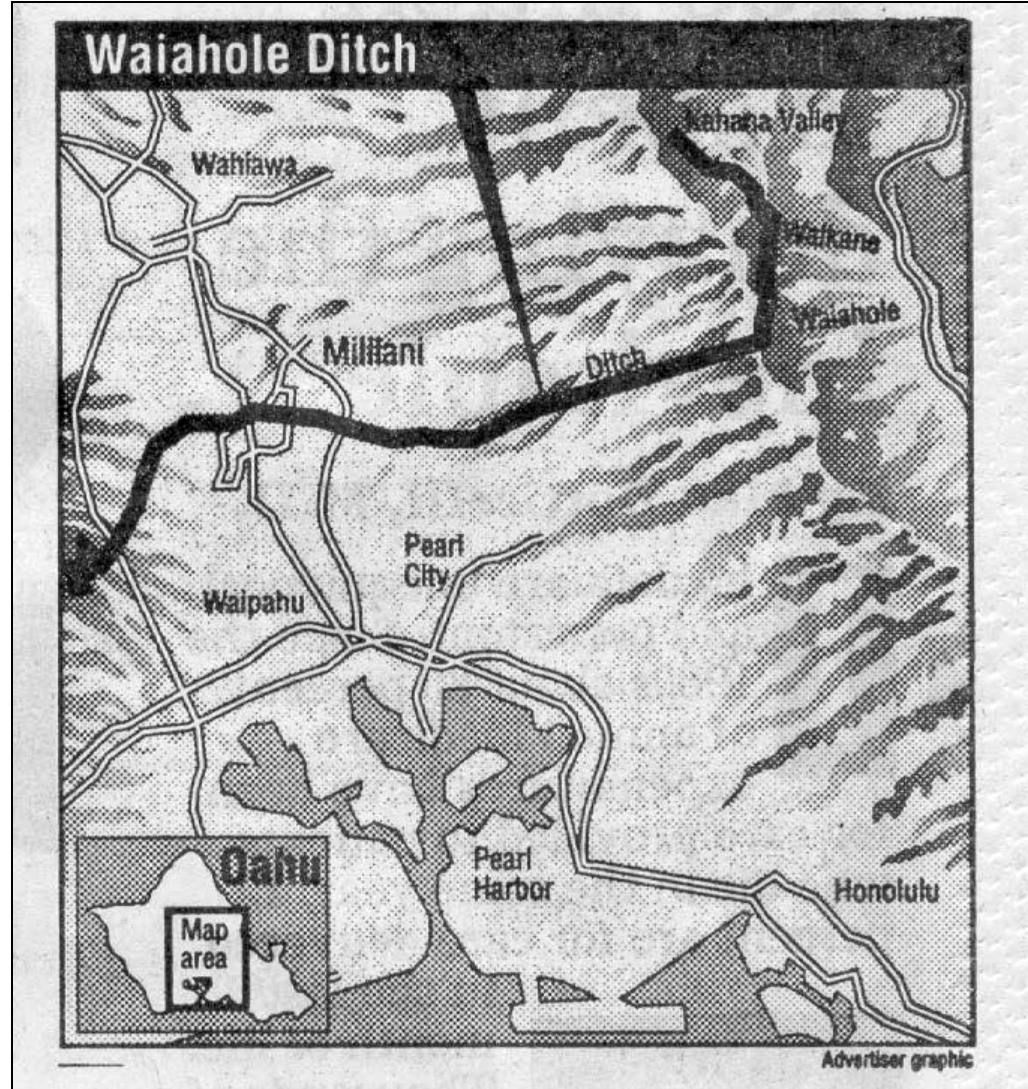
Perth Desal. Plant will be largest in
S. Hemisphere



The future?



Water: diversion



Water: Waiahole Ditch

Control gate at north portal of tunnel
(*Star-Bulletin* 4/5/1997)



Flume in Uwao tunnel



Typical section of ditch



Gauge near Mililani

Water: civil uprising



http://farm5.staticflickr.com/4116/4769434897_ce2ed5acd8_z.jpg



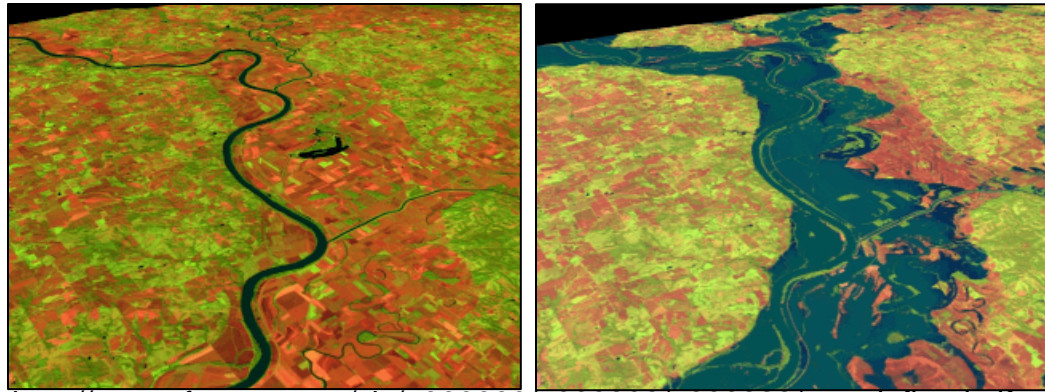
<http://www.hawaiianvoice.com/>



Water: floods

- Mississippi River Flood 1993

<http://svs.gsfc.nasa.gov/vis/a000000/a000900/a000929/index.html>



http://svs.gsfc.nasa.gov/vis/a000000/a000900/a000929/grand_flood.gif

- Katrina 2005

<http://www.nola.com/katrina/graphics/flashflood.swf>



Water: dams

Hoover Dam, NE/AZ Border



3 Gorges Dam, China



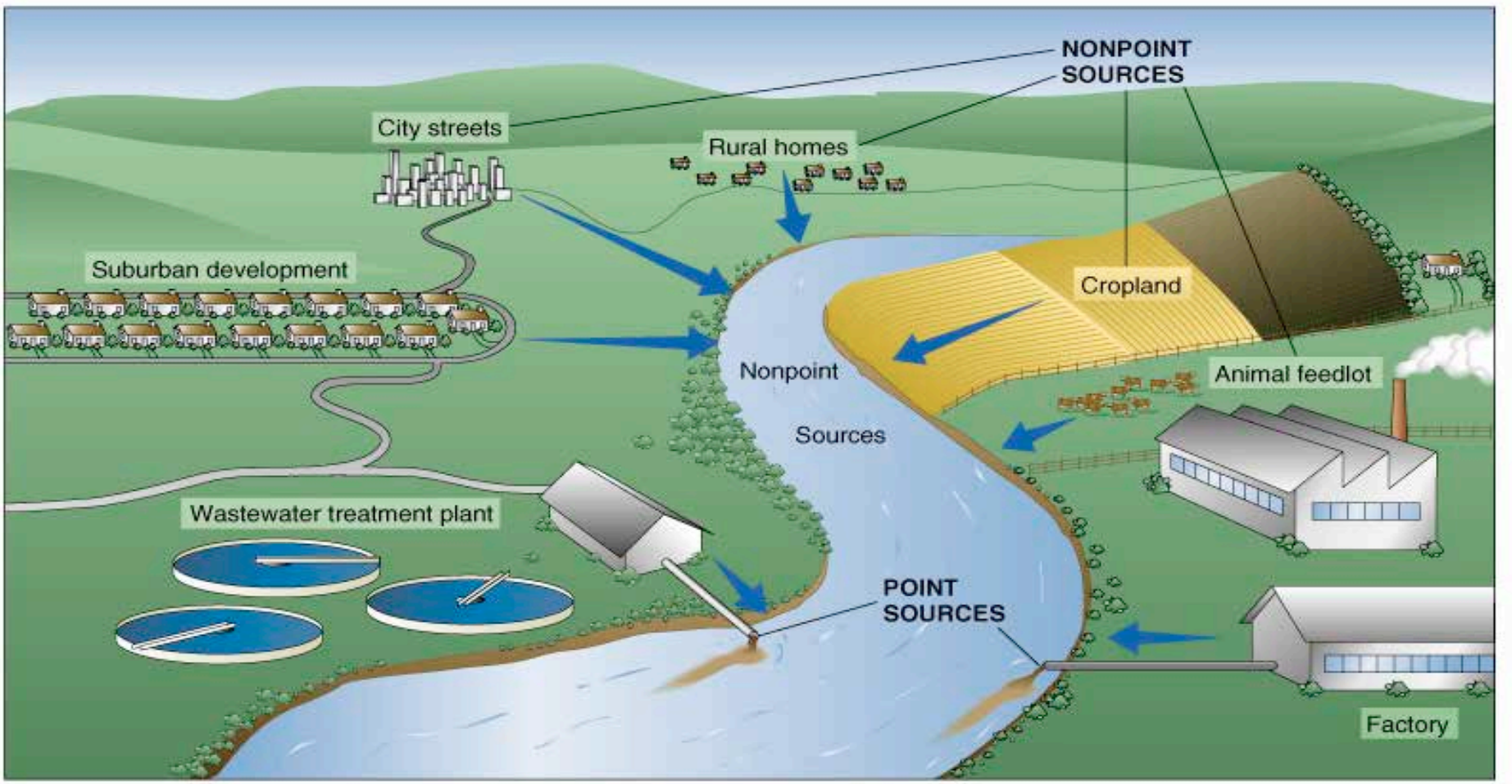
Water: natural



Water: channelized



Water pollution: types

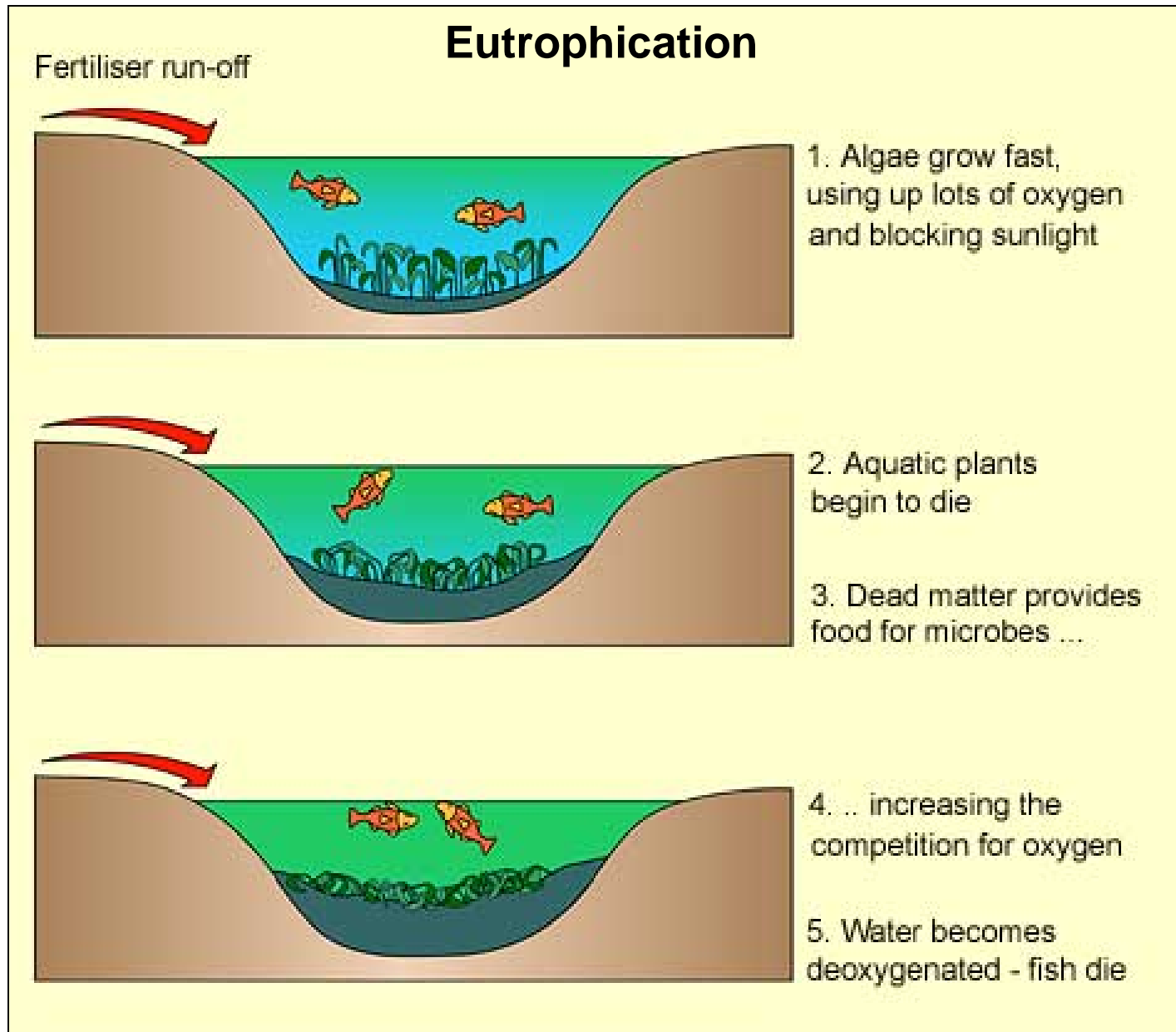


Water pollution: sediments



Plume of fine silts & clays discharging into the sea in Indonesia.

Water pollution: inorganic N and P runoff



Water pollution: organics - petroleum



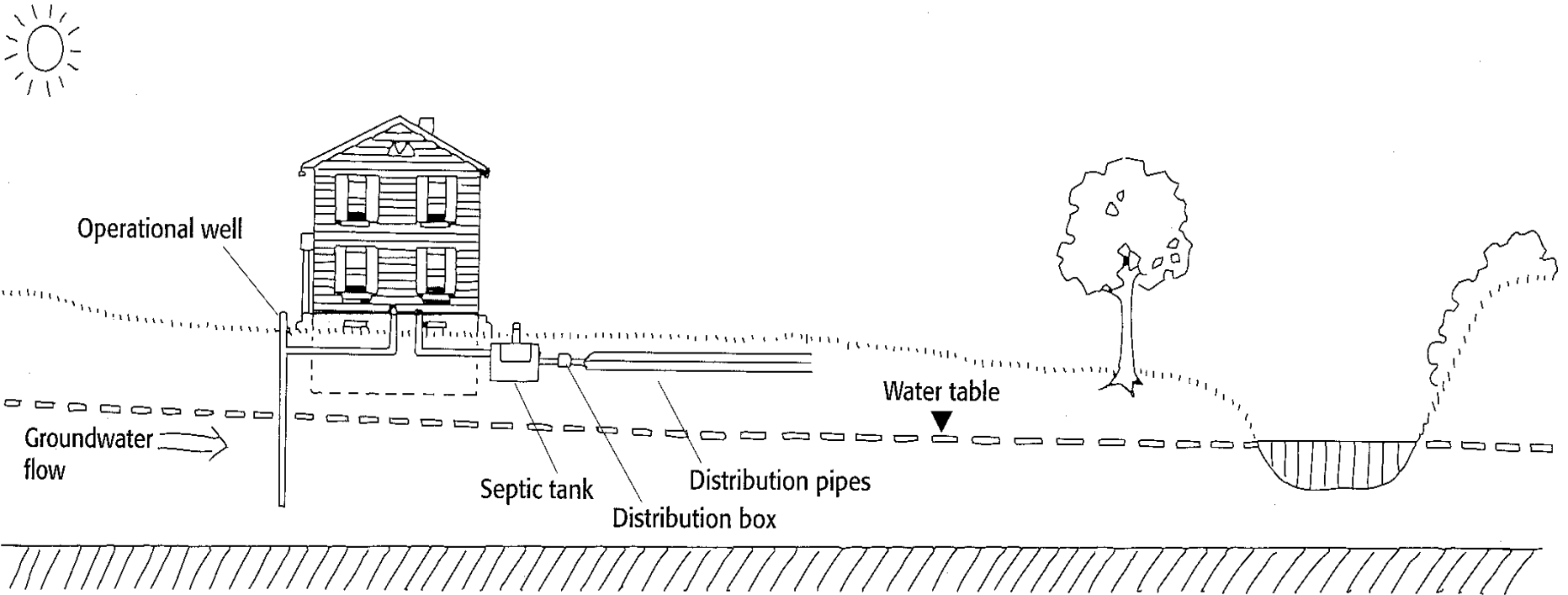
<http://www.faecd.com/d/bex/i/bp-oil-spill-2010.jpg>



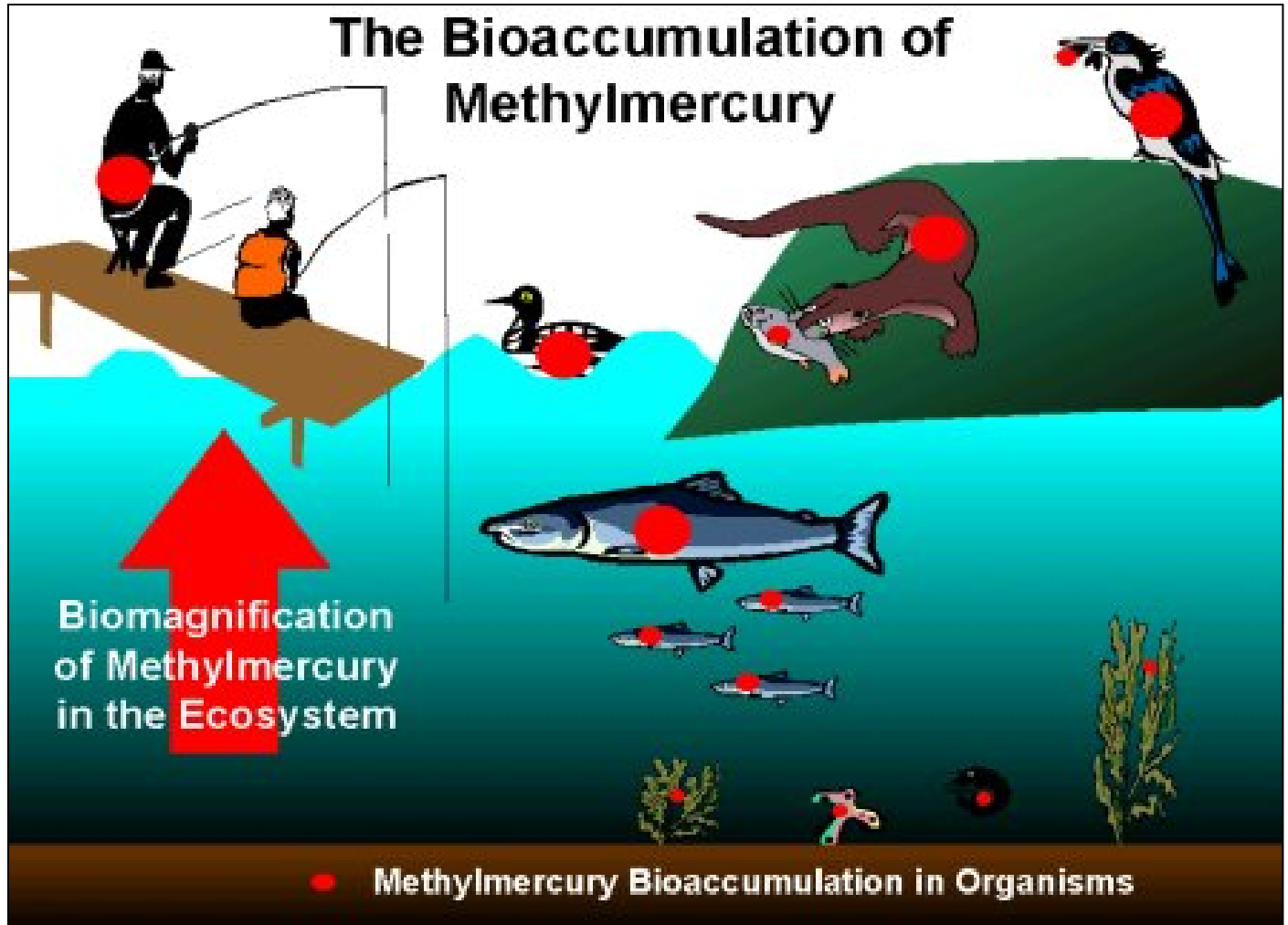
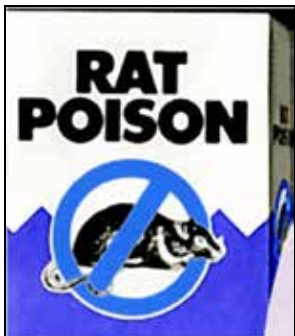
<http://www.oilspillnews.net/wp-content/uploads/2010/10/1286751617-35.jpg>



Water pollution: organics – manure, sewage



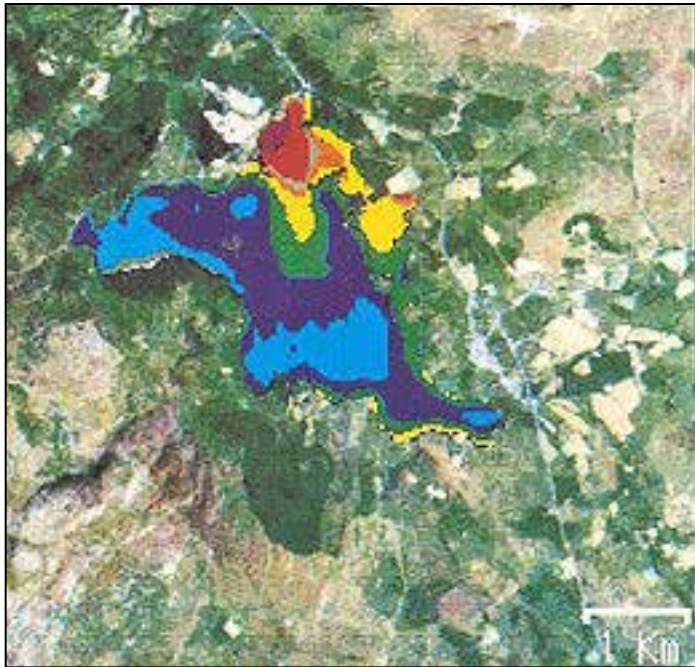
Water pollution: organics – heavy metals



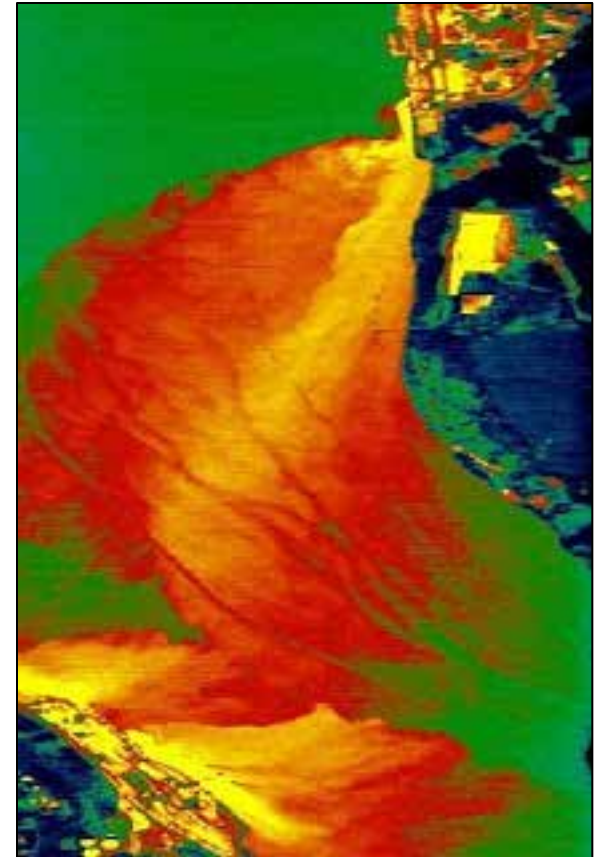
Water pollution: organics – thermal



http://www.eoearth.org/article/Thermal_pollution?topic=49471



Landsat image of Lake Trawsfynydd, Wales illustrating color differentiation of temperature differences induced by power plant thermal pollution. Source: NASA



<http://blog.dirtyclassroom.com/2012/03/pollution-water-part-2-shannon-diaz.html>

Wastewater Treatment (Wright)

