

Env Sci 5.2

Goals

- * Describe resilience as a theoretical concept
- * Use the example of the bronze age collapse as an example of lack of resilience

Plan

What is resilience?

Video: Bronze age collapse (I through IV)

Worksheet to be collected tomorrow

EnvSci 5.3

Goals

- * Describe major natural disasters
- * Apply concept of resilience to describe rebound from disasters or other shocks
- * Describe global water resources
- * Characterize the meridional overturning circulation and surface circulation gyres
- * Apply knowledge of water cycle to fresh water conservation

Plan

What kind of disasters are there? (10 min)

Hurricanes

Tsunamis

Volcanoes

Earthquakes

Fires

Problem of maximizing returns vs minimizing variance: stock market to ecosystems (10 min)

Video: Resilience (5 min)

What does resilience mean and how to measure it (10 min)

Global water resources (10 min)

Video: How Cape Town's residents are surviving a water crisis (5 min)

Uses of water, conservation of water, resilience and sustainability (5 min)

Where do we get our water from?

Surface water collection

Ground water pumping

Desalinization

Video: Ogallala aquifer (5 min)

Where does the water go?

Ocean currents, surface and MOC (5 min)

Enso and the gulf stream

London is at 51 degrees north—the same as southern alaska. Why the different climates?

Video: The gulf stream explained (5 min)

Questions activity (remainder)