



Interactions between Natural and Human Systems

Using System Thinking

The Systems Approach

- o Used by geographers to study both **natural** and **human** systems
- o Used to help us make better decisions as we work to create safer and healthier environments.
- o Can help us to protect natural systems and to use resources so they last into the future.

Sustainable:

- To conserve natural resources so that they survive for the future generations.

Complex Web of Systems

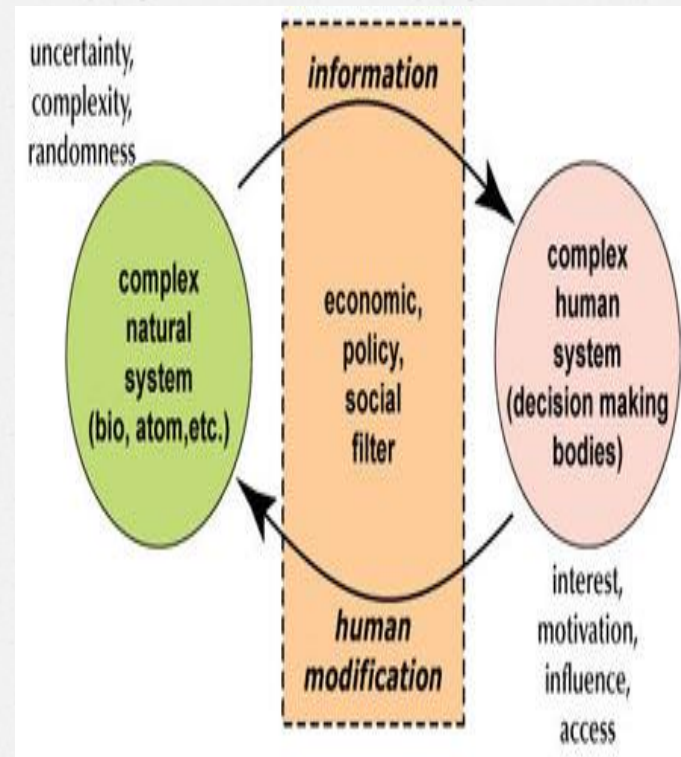
- o A complex set of Dynamic systems make up our world.
 - o Dynamic---continually changing.
 - o May take millions of years for the change(oil formation)
 - o May only take a few minutes for the change (car burning gas)
- o In what ways can a change in one natural system influence that system? Influence another natural system?

Greater than the Sum of its Parts

- o Synergy:

- o The whole system is greater than the sum of its parts
- o WATER (2 parts hydrogen/1 part oxygen)
- o CAR (engine, tires, brakes)

- People depend on natural systems for survival.
- Human activities have an impact on natural systems.
- Natural systems influence people's activities.



Natural & Human Systems Interact

- o Humans depend on nature for needs (survival).
- o Natural systems influence people's activities.
- o Human activities have an impact on natural systems.
- o Humans cannot help but change the natural environment as they use resources

Natural & Human Systems Interact

- o **Negative** and **positive** consequences of human actions:
 - o Changing the landscape (Clear cutting Forest)
 - o Health and sustainability of the environment (pollution)
 - o Climate change
 - o Global warming

Question????

- Given a natural disaster such as an earthquake, hurricane, flood or drought.
- Explain the immediate and long term consequences it would have on two nature systems in your area.