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### **Integrating sustainability into GEOG 615: Land Cover – Land Use Change (LCLUC)**

The key concepts of Geography are scale and space-and-place. Geographers seek to understand the interplay of the physical environment and humans and with that in mind I will explore the relationship between the iconic Chesapeake Bay and humans in this semester's GEOG 615.

Sustainability is a major undercurrent of the discourse surrounding land use and land cover change. What are lands being altered to and why? The socio-economic drivers, policy, and scales of interactions, from individual to national, are inextricably linked with the sustainability and the emerging science of LCLUC.

Along this line we will investigate how our consumption of goods and services (e.g. diet, energy, materials, recreation, and waste) directly and indirectly affects the Bay. For example, we will examine how water usage at various scales interacts:

- What is an individual's role in the discourse of sustainability?
- What components of an individual's behavior, choices, and consumption have on climate, land use change, and sustainability?
- What is the scalability of these topics – how does water usage scale from the household, to the sewer system, to the watershed, and ultimately the Bay?
  - What impact does this have on others livelihoods (fishing, crabbing, and tourism)?
  - What is the effect elsewhere (demand for crabs from Asian markets, fisheries exploited elsewhere)?
- What differences and similarities of water consumption can be found at 100 km, 1000km, and across the globe?
- What other purchasing choices effect water?
  - Diet (irrigation, beef>feedstock)
  - Biofuel
  - Produce (PA agriculture)
- Travel (car, train, airplane)
  - Carpooling; distance traveled for work/school

Sustainability will be an important component by which to examine LCLUC and the associated drivers.