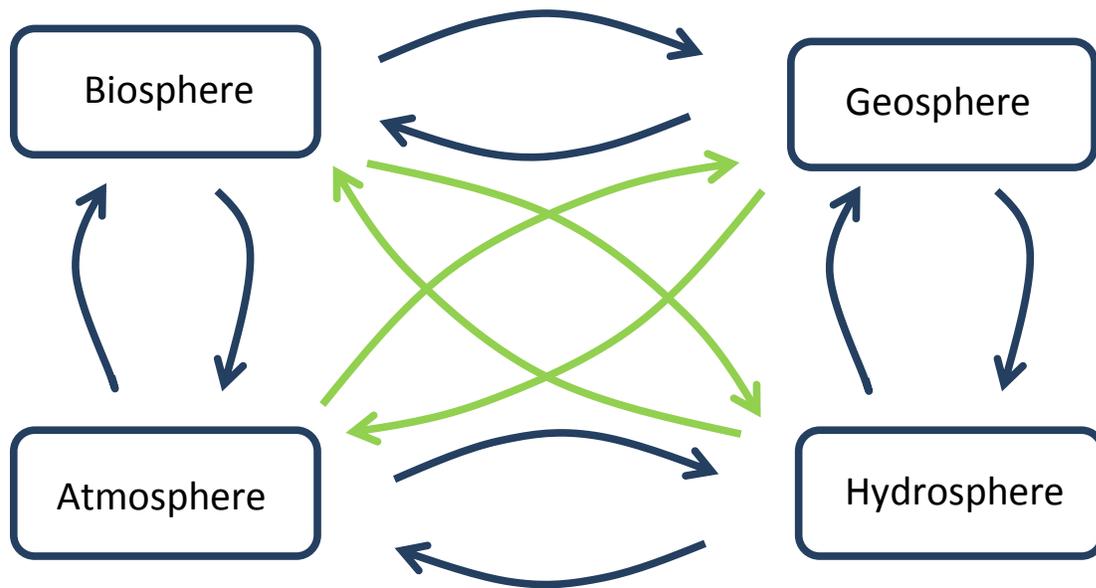


Unit 1 Homework

You have spent time in this unit making observations of both non-agricultural and agricultural landscapes, exploring their similarities and differences, and how the obvious physiographic impacts of agricultural land use compare to un-impacted non-agricultural land. Take some time now to look at the bigger picture – In making observations of the impacts humans have interacting with the landscapes you observed you are observing the interaction of the biosphere (where all life exists) with the geosphere (the physical earth). If you observed that rainfall or the weather and climate may have impacted the landscapes then you were observing the interaction of the hydrosphere (where water exists) and the atmosphere with the geosphere. These spheres are all parts of the Earth System and as you observed, they all interact with one another. See if you can make some more connections.

Using the flow chart below, identify one or more materials that move or processes that occur between different components of the Earth System in agricultural or non-agricultural systems by labeling the arrows with the corresponding letter.



- A. Rain provides water for the growth of living things
- B. Soil is formed from both rock and decayed organic material
- C. Farmers plant crops or graze their herds on plants (as well as providing them with feed) to provide us with food
- D. Soil provides the nutrients, air, and water that plants use to grow
- E. Plants release oxygen
- F. Warmer temperatures cause an increase in water evaporation from the earth's surface
- G. Water infiltrates into soil
- H. Heavy rainfall causes soil erosion
- I. Drought conditions dry soils
- J. Poor agricultural practices contribute to soil erosion
- K. Warmer temperatures force farmers to adapt by growing different crops or prevent them from growing anything
- L. Increased occurrence and intensity of tornadoes, hurricanes, and extreme weather events affects agriculture

Wrap up by picking the pathway that connects up two of Earth Systems (as shown on the diagram) that you think is the most important to sustain life on earth. Briefly reflect on and discuss why you think it is the most important pathway and what you think humans can do to keep these two systems interacting in a sustainable manner.