

# What Is Biocomplexity?

Biocomplexity is an emerging umbrella science that helps us understand how humans are an integral part of nature. Every human action carries consequences for the places we live – we both shape and are shaped by a variety of ecological processes. The science of Biocomplexity integrates core concepts of ecology, biogeography, social sciences, ecosystem services, and landscape ecology. It uses a range of science tools and ideas to understand the consequences of the choices that humans make about the land, water, and biological communities that we inhabit.

Over the past two centuries, scientific advances in chemistry, biology and ecology have led to new understanding and technological innovation. However, the role of *humans* in biological systems was often ignored. More recently, it has become clear that to really understand the world we inhabit, we need to consider *Homo sapiens* as an essential player in ecological systems, shaping and shaped by our environment. This new way of thinking about our role in the world has led to some very exciting and surprising science. Using a “Biocomplex” point of view, scientists have gained important insights from careful study of the places where humans are deciding to live, build, harvest resources, and go about their lives.

This course will help students acquire a biocomplex way of thinking. It looks at several real situations in which humans play an essential role in their environment. Completing one or more of the units in this curriculum will help you see how biocomplexity may be the most important field of science for the next century. And with an increased knowledge of how Earth systems work, students can use Biocomplexity science to make a positive difference in their environments.

This brief 3-minute video, [What is Biocomplexity?](#), provides more detail.