

Tuning the Lens of the Macroscope

Since ARIES searches through GIS data of many different resolutions for the pattern signatures of ecosystem services, the problem naturally arises as to which resolution best elucidates a given pattern. To address this problem, ARIES tries its searching phase at several different resolutions which it estimates from certain structural characteristics of the service under study. The patterns that are found are analyzed for their marginal and overall information content using techniques from information theory. The resolution which provides the most model-usable information about the service is then selected as the study scale for future use by the system. This process may be periodically repeated and refined as more data becomes available or the ecosystem service models are updated.