

# Bridging sustainability science, earth science, and data science through interdisciplinary education

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## Abstract

Given the rapid emergence of data science techniques in the sustainability sciences and the societal importance of many of these applications, there is an urgent need to prepare future scientists to be knowledgeable in both their chosen science domain and in data science. This article provides an overview of required competencies, educational programs and courses that are beginning to emerge, the challenges these pioneering programs face, and lessons learned by participating instructors, in the broader context of sustainability science competencies. In addition to data science competencies, competencies collaborating across disciplines are essential to enable sustainability scientists to work with data scientists. Programs and courses that target both sets of competencies—data science and interdisciplinary collaboration—will improve our workforce capacity to apply innovative new approaches to yield solutions to complex sustainability problems. Yet developing these competencies is difficult and most instructors are choosing instructional approaches through intuition or trial and error. Research is needed to develop effective pedagogies for these specific competencies.

Read the article in [Sustainability Science](#) [1].

## Associated Project:

[Understanding, Teaching, & Employing Model-Based Reasoning in Socio-Environmental Synthesis \(EMBeRS\)](#) [2]

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