



## **BCube Ocean Scenario**

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To address complex Earth system issues such as climate change and water resources, geoscientists must work across disciplinary boundaries; this requires them to access data outside of their fields. Scientists are being called upon to find, access, and use diverse and voluminous data types that are described with semantics.

Within the framework of the NSF EarthCube programme, the BCube project (A Broker Framework for Next Generation Geoscience) is addressing the need for effective and efficient multi-disciplinary collaboration and interoperability through the advancement of brokering technologies.

BCube develops science scenarios as key elements in providing an environment for demonstrating capabilities, benefits, and challenges of the developed e-infrastructure. The initial focus is on hydrology, oceans, polar and weather, with the intent to make the technology applicable and available to all the geosciences.

This presentation focuses on the BCube ocean scenario. The purpose of this scenario is to increase the understanding of the ocean dynamics through incorporation of a wide range of in-situ and satellite data into ocean models using net primary productivity as the initial variable. The science scenario aims to identify spatial and temporal domains in ocean models, and key ecological variables. Field data sets and remote observations data sets from distributed and heterogeneous systems are accessed through the broker and will be incorporated into the models. In this work we will present the achievements in the development of the BCube ocean scenario.