

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Applications, Societal Challenges and Economic Benefits (5)

Author: Mr. Lawrence Friedl
National Aeronautics and Space Administration (NASA), United States, lfriedl@nasa.gov

Dr. Emily Sylak-Glassman
NASA Headquarters, United States, eglassman@nasa.gov

Dr. David Saah
University of San Francisco (USFCA), United States, dssaah@usfca.edu

EARTH OBSERVATIONS FOR GOOD: CONSORTIA AS MODELS FOR ACHIEVING BENEFICIAL
APPLICATIONS

Abstract

Applications of space-based Earth observations have demonstrated long-standing benefits of space to society, such as agriculture monitoring, wildfire detection, and forest management. They have also led to innovative and sometimes surprising uses, such as with human health and groundwater, that have expanded peoples' interest and ideas for using Earth observations. However, the ability to apply scientific data and technical information products into human-oriented decision-making tools and processes involve competencies across a range of technical, organizational, sociological, and other topics. The specific skills and mix of competencies required to develop, test, validate, transition, and adopt into an organizational setting changes at different stages of the development process. The advance of co-production approaches to use-oriented research reflects the need for, and benefits from, a mix of skills, perspectives, and expertise.

In recent years, the use of organizational consortia to support technical innovation, development of services, and achieve successful adoption by organizations have grown in recognition of both the breadth and depth of expertise needed. Consortia span many forms and structures, yet they share a common function to provide a range of experience and the flexibility and agility to respond to needs as the work unfolds.

This paper will examine seven consortia involved with developing applications of Earth observations. The paper will compare and contrast the forms and structures, discuss significant challenges faced and changes made, and analyze the efficiency and effectiveness of the seven models. Overall, the paper will develop general factors to consider whether a consortium is appropriate as well as heuristics to consider when forming a consortium so it best fits the intended purpose and objectives. The paper will include multiple examples of Earth science applications.