

IAF EARTH OBSERVATION SYMPOSIUM (B1)

50 years of Earth observation: The contribution to sustainable development goals and plans for the future
(6)

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15 YEARS OF SERVIR: APPLICATIONS OF EARTH OBSERVATIONS TOWARD ACHIEVING GLOBAL ENVIRONMENTAL SUSTAINABILITY

Abstract

Over the past several decades an increasing amount of satellite data has been made freely available to the global public. This data democratization, coupled with other technological advances such as cloud computing, has opened up opportunities to transform these assets into powerful and reliable sources of information capable of driving better informed decision making. Since its inception in 2005, SERVIR, a joint program between the National Aeronautics and Space Agency (NASA) and the United States Agency for International Development (USAID), has supported global capacity building in using Earth observations (EO) and geospatial technologies to address pressing environmental issues on topics of water and disasters, food security, land cover/land use, and weather and climate. SERVIR has expanded from a single geographic focus in Mesoamerica to include a network of five active hubs hosted at regional centers of excellence in the Lower Mekong, Hindu Kush-Himalaya, Eastern Southern Africa, West Africa, and most recently Amazonia. Through SERVIR, these institutions and their partners on the ground bring space to village.

Here we present how technological advances in satellite capabilities, increasing data availability, and the emergence of cloud computing platforms have expanded the scope, scale, and depth of the contributions SERVIR is able to make towards global sustainable development. Additionally, we explore five exemplary SERVIR services that have successfully integrated EO to improve decision making in the context of solving

environmental challenges in developing countries and introduce lessons learned that can be applied towards achieving the global 2030 Agenda for Sustainable Development. The services highlighted include the Food Security Vulnerability Information System of Nepal (SDG targets 2.1 and 2.3), the Eastern and Southern Africa Land Use Land Cover and Change Mapping Service (SDG targets 15.2 and 15.5), Monitoring Ephemeral Water Bodies in Ferlo, Senegal (SDG targets 6.1 and 6.4), Improving the Enhancing Drought Information Service of the Mekong River Commission (SDG target 13.1), and a past service looking at monitoring harmful algal blooms off Mesoamerica's coasts (SDG target 14.1). In this context, we discuss current challenges and explore strategies on how international development demands can help to inform the capabilities of future satellite missions.