

EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Applications and Economic Benefits (5)

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PARTNERSHIPS TO ENABLE EARTH SCIENCE APPLICATIONS: CASE STUDIES FROM THE
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Abstract

The NASA Applied Sciences Program promotes efforts to discover and demonstrate innovative and practical uses of Earth science data and knowledge. The program supports applied research and applications projects to enable organizations to harness data from Earth-observing environmental satellites to inform their decisions and actions. The Applied Sciences Program is part of the Earth Science Division of the NASA Science Mission Directorate. NASA's Goddard Space Flight Center is one of the NASA research institutions that houses a large community of earth scientists studying all aspects of the earth system, including climate, ocean ecology, hydrology, geophysics, the biosphere, the cryosphere, atmospheric chemistry and techniques for modeling, data assimilation and data processing. The mission of the Earth Sciences Division at Goddard is to observe and study the earth system, to further our scientific understanding of earth as a life-bearing planet and to improve our ability to predict the future state of earth due to man-made and natural changes.

NASA's Goddard Space Flight Center has recently pursued new approaches to enable the transfer of earth science research results into practice by external partners from government, academia, non-profits and commercial companies. This presentation gives several examples of the efforts of the Applied Sciences team within the Earth Sciences Division of NASA Goddard. The examples show creative approaches to leverage the skills of different types of institutions to increase the benefits of satellite-based data for societal needs. The examples include work related to real-time flood monitoring, solar activity forecasts, power outage detection, volcanic and ash forecasts, landslide hazard response, fire monitoring and air quality. The examples show how strong scientific contributions coupled with creative partnership mechanisms improve the impact of earth observation data.