

The Role of Ecosystem Science in Food Security

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NASA provides daily satellite remote sensing observations on a wide variety of environmental parameters at the global scale, including rainfall, temperature, vegetation health, ocean productivity and soil moisture conditions. Many organizations and individuals use this data to better understand the earth system using ecosystem science. The methodologies and organizations that work to transform the data into information that can be used to inform decisions regarding food aid and other humanitarian responses is the focus of this talk. A description of the various products that have been developed by the US Agency for International Development's scientists to monitor food production in Africa will be presented, along with graphics and explanations as to how the products are used. How rainfall information, agricultural production, food prices and food access parameters can be derived from satellite data and used to assess food security will be the focus of the talk, using examples from Africa.

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Dr. Brown has worked at the Biospheric Sciences Branch at NASA Goddard Space Flight Center since 1998. She obtained her MA in 1999 and her PhD in 2002, both in Geography from the University of Maryland at College Park. She has been involved with the US Agency for International Development's Famine Early Warning Systems Network since 2000, providing information and expertise on satellite-derived global vegetation data, as well as studying the organization and its use of earth science data for early identification of food security crises. Her current research interests are the impact of climate change on urban areas, understanding the effect of environmental variability on food prices and market functioning in Africa and the use of satellite remote sensing to better estimate mitigation and adaptation measures.