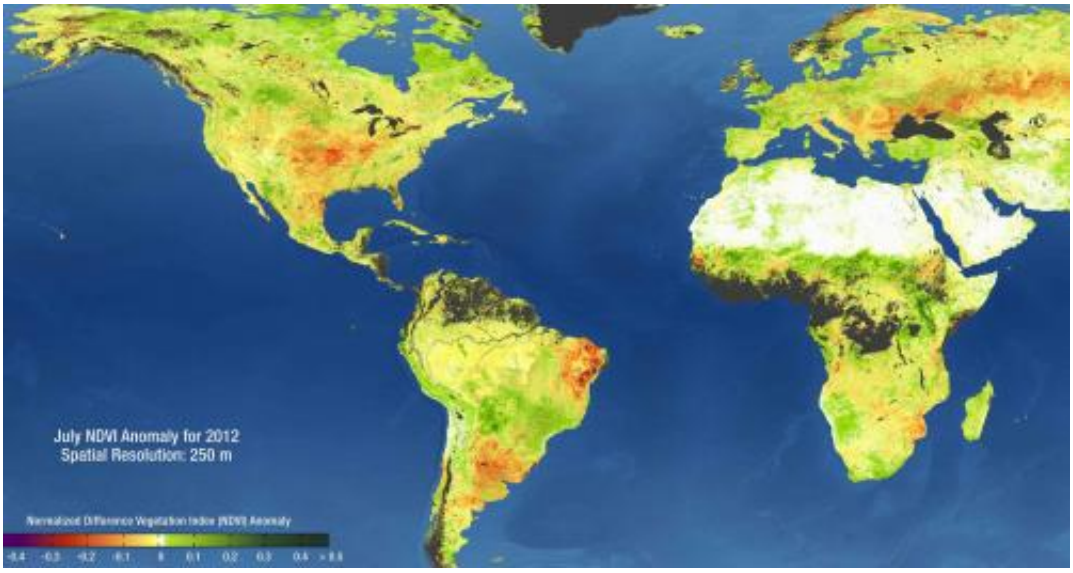
NASA launches Earth science challenges with openNEX cloud data

June 25 2014



NASA satellite data incorporated into OpenNEX include global views of drought conditions. Green regions in this map of July 2012 are areas with more vegetation than an average July (2000-2013); red regions have less vegetation than average. Regions in black have no data due to clouds and snow.
Credit: NASA Earth Exchange (NEX)

NASA is launching two challenges to give the public an opportunity to create innovative ways to use data from the agency's Earth science satellites.

The challenges will use the Open NASA Earth Exchange. OpenNEX is a

data, supercomputing and knowledge platform where users can share modeling and analysis codes, scientific results, knowledge and expertise to solve big data challenges in the Earth sciences. A component of the NASA Earth Exchange, OpenNEX provides users a large collection of climate and Earth science satellite data sets, including global land surface images, vegetation conditions, climate observations and climate projections.

"OpenNEX provides the general public with easy access to an integrated Earth science computational and data platform," said Rama Nemani, principal scientist for the NEX project at NASA's Ames Research Center in Moffett Field, California. "These challenges allow citizen scientists to realize the value of NASA data assets and offers NASA new ideas on how to share and use that data."

The first "ideation" stage of the challenge, which runs July 1 through Aug. 1, offers as much as $10,000 in awards for ideas on novel uses of the datasets. The second "builder" stage, beginning in August, will offer between $30,000 and $50,000 in awards for the development of an application or algorithm that promotes climate resilience using the OpenNEX data, based on ideas from the first stage of the challenge. NASA will announce the overall challenge winners in December.

NASA's OpenNEX challenge addresses a number of White House initiatives, including Open Data, Big Data and Climate Data. These initiatives advance national goals to address climate change impacts on economic growth, health and livelihood, and include the use of competitions and challenges to foster regional innovation.

"NASA is an innovation leader in developing high-quality data covering all parts of our planet that can be used to make a difference in people's lives," said Tsengdar Lee, program manager in the Earth Science Division of the Science Mission Directorate at NASA Headquarters in

Washington. "NASA is committed to sharing that knowledge freely with the global community."

More information: To educate citizen scientists on how the data on OpenNEX can be used, NASA is releasing a series of online video lectures and hands-on lab modules. To view this material, and for information on registering for the challenges, visit: nex.nasa.gov/OpenNEX

Provided by NASA