

NASA's Earth Science Enterprise

needs to leverage existing investments in Earth observing from space to realize a world-view of Earth system and global change science within society and make available its science, applications, and technology to the classroom

Colleges and universities

need to motivate students' understanding of the Earth system with content that is engaging and relevant to all career paths while preparing future citizens, scientists and decision makers

Global Society

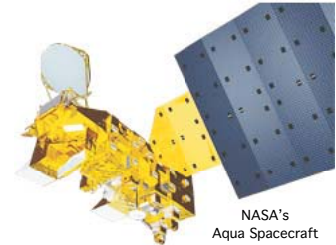
needs a broad awareness, appreciation and understanding of Earth system and global change science to address sustainability and other complex science/society issues

ESSE 21, a new NASA/USRA Program, seeks to:

- Engage scientists and educators in the collaborative development and offering of courses and curricula in Earth system and global change science
- Motivate and effect systemic change in the classroom through the adoption of shared learning resources
- Provide infrastructure to support collaboration of faculty and scientists within and among educational institutions and with NASA programs and scientists
- Strengthen and expand interdisciplinary Earth system and global change science education within the overall formal education structure of this Nation.



To fulfill its mission, ESSE 21 will release a Call for Participation inviting college and university faculty and staff representing two or more disciplines to join together to submit proposals that address one or more of the following:



- Develop and offer undergraduate Earth system and global change science courses with an integrated and interdisciplinary holistic perspective of Earth
- Develop and implement courses leading to a certificate program in Earth system-related studies or an interdisciplinary Earth system science degree program
- Develop networks of institutions to develop and share common Earth system science expertise and resources
- Create comprehensive yet modular Earth system science content for the classroom addressing air, water, land and life processes
- etc.

ESSE 21 anticipates an annual Call for Participation soliciting 2-year proposals. Non-U.S. and government organizations are invited to join the ESSE 21 community as *Associates* on a no-exchange-of-funds basis.

ESSE 21 benefits team members by creating new partnerships and communities of researchers and educators sharing common interests toward offering inter/multidisciplinary courses in Earth system and global change science while leveraging existing resources and capabilities.

The Program motivates systemic change in the classrooms of colleges and universities and contributes to the mutual development of science and education courses for the study of the Earth system.

Needs defining a **Program** offering **Opportunity** leading to **Benefit**