Introduction to Remote Sensing for Conservation Management
NASA ARSET Webinar Series
May 5 – June 2

Course objectives: Provide overview of NASA Earth observation resources available for conservation and biodiversity issues including:
- A basic understanding of remote sensing
- How to access and visualize relevant NASA Earth science data
- How to use NASA Earth science data for conservation issues

Intended audience: NGOs (national and international) focused on conservation/biodiversity issues

Background expected: No experience in remote sensing required; knowledge of local/regional/global biodiversity issues

Duration: Webinars are offered for 1 hour, 1 day a week

Times: May 5 – June 2, every Tuesday at 12:00-1:0pm and 10:00-11:00pm (GMT -04:00) Eastern Time (EDT US and Canada). Please note that you can only register for one time period.

Week 1 – Introduction to remote sensing and conservation applications
- Applied science program and ARSET
- Course structure/objectives/outline
- Week 1 Agenda
- Overview of global conservation issues
- How remote sensing is used for conservation/biodiversity (short examples)
- Advantages and limitations of remote sensing
- Fundamentals of remote sensing (spatial, temporal, spectral resolution)

Week 2 – Satellite and aircraft platforms and sensors and access tools
- Satellite data processing level
- Satellites and sensors for conservation/biodiversity applications (Landsat, ASTER, MODIS, VIIRS, etc.)
- Satellite data access tools (Worldview, LandsatLook Viewer,TerraLook)
- Live Demos: MODIS MRTWeb and WELD

Week 3 – Habitat monitoring
- Overview of techniques for land cover mapping
- Mapping land cover change
- Global landcover products (MODIS landcover, vegetation indices, Global Forest Watch)
- Live Demo: Map of Life
    - *Guest Speakers: Walter Jetz, Yale University*

Week 4 –Animal movement
- Overview of how RS is used for mapping animal movement
- NDVI, phenology and animal movement
- Examples of using RS for animal movement (Movebank, etc.)
- Live Demo: Lifemapper
    - *Guest Speakers: Jeff Cavner, University of Kansas*

Week 5 – Near-real time monitoring
- Overview of near-real time monitoring using remote sensing
- Examples of real-time monitoring systems
    - *Guest Speaker: Karyn Tabor, Conservation International*
- Live Demo: Firecast