National Aeronautics and
Space Administration

ARSET

Applied Remote Sensing Training

http://arset.gsfc.nasa.gov

@NASAARSET

NASA-UNESCO Watershed Management Training

Nov 29th – Dec. 6th, Iguazu Falls, Brazil

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NASA’s Applied Remote Sensing Training Program (ARSET)

http://arset.gsfc.nasa.gov/

- Team of 15 NASA scientists, students and other support staff at 3 NASA centers (since 2008)
- Part of NASA’s Applied Sciences/Capacity Building Program
- Mission: To empower the global community through remote sensing training
- Target audience: policy makers and other environmental professionals in the public and private sector
- Trainings areas:

Disasters

Land

Health & Air Quality

Water Resources

2017 Year in Review

14 Trainings

3 SDG-Focused Trainings

1,242 New Organizations Reached
(out of 2,030 total)

165 Hours of Training

10 hrs of training

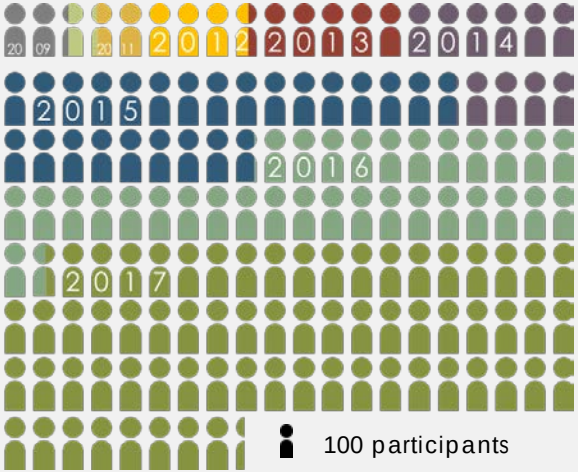
149 presentations,
91 documents,
5,841 slides & pages

1,000 slides/pages

9,400 Recorded Views

500 views

4,864 Live Participants (2017)

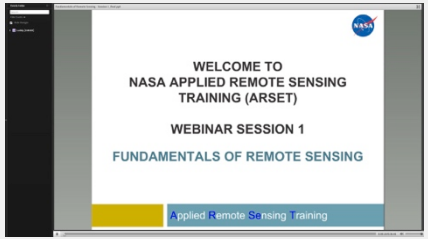


100 participants

NASA Applied Remote SEnsing Training Program (ARSET)

http://arset.gsfc.nasa.gov

Training for environmental professionals (government, private sector) to increase use of NASA observational and model data for decision-making support.



Online Webinars

- 1 hr a week, 4-6 weeks
- Live & recorded
- Include demos on data access
- *New: advanced webinars*

In-person Workshops

- Held in a computer lab for 2 - 4 days
- Focus on data access
- Locally relevant case studies

Train the Trainers

- Courses & training manuals for those interested in doing their own remote sensing trainings

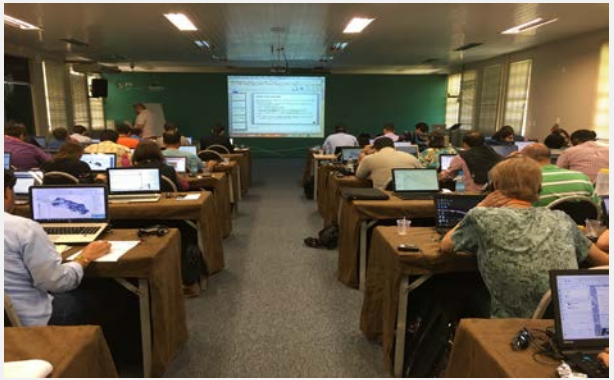
Application of Remote Sensing to Support the Management of Hydrographic Watersheds in Latin America and the Caribbean

Centro International de Hidroinformatica (UNESCO Category 2), Iguazu Falls, Brazil

- 45 participants; 33 organizations and countries
- Held at Itaipu Technological Park

NASA ARSET Course Content

- SAR (radar)
- Land management products: Landsat, Normalized Vegetation Index, Evapotranspriration
- Precipitation
- NASA Land Model Data products



Sponsorship

BID Banco Interamericano de Desarrollo | CNRD Centers for Natural Resources and Development | ICIWaRM | International Water Security Network | Flanders State of the Art

Organization

NASA | United Nations Educational, Scientific and Cultural Organization | International Hydrological Programme | CIH Centro Internacional de Hidroinformática | PTI Parque Tecnológico Itaipu | ITAIPU BINACIONAL

Countries and Affiliation of Participants

44 Participants, 13 Countries

Argentina (3)
Brazil (13)
Chile (5)
Costa Rica (2)
Colombia (2)
Cuba (1)
Ecuador (1)
Guatemala (1)
Honduras (1)
México (2)
Panama (1)
Paraguay (6)
Peru (3)
Uruguay (1)
Venezuela (2)

Itaipu Binacional

National Forestry Agencies

National Water and Meteorological Agencies

Universities

Space Agencies

Regional and Local Water Basin managers

How do you intend to use the skills gained from this ARSET training in your work?

- In an environmental committee for a protected area in Chile, and specifically the monitoring of hydrometeorological variables [Chile Federal/Central Government

- To help manage a dry watershed and make decisions about the focus of future research areas in collaboration with the academic sector [Chile/NGO]

- To register soil moisture in watersheds, not used before in flood applications [Argentina/Federal Government]

- To detect inundated areas with Sentinel (Radar) and determine impacted areas [Argentina/Faculty]

Elements of Success…

- Year two collaboration (Koen Verbist)
- Excellent facilities (Parque Tecnolgico Itaupu)
- Cost-sharing
- Significant travel funds
- Diversity of participants
- Dual language trainings resources (English/Spanish)
- Rigorous application process
- Length of the training (4+ days yields better learning outcomes)
- Prior experience with remote sensing
- Participants were very committed to learning and engaged

Upcoming NASA ARSET Trainings (14 Trainings in FY18)

http://arset.gsfc.nasa.gov

14 Trainings Planned for FY18

- Feb 13-20: Advanced Webinar: Accuracy Assessment of a Land Cover Classification
- Feb 15-Mar 1: Introduction to Using the VIC Hydrological Model with NASA Earth Observations
- April: Monitoring Tropical Storms for Emergency Preparedness
- June: NASA Remote Sensing for Urban Flooding
- August: NASA Remote Sensing for Change Detection Mapping (SAR/flood applications; English/Spanish)
- September: Water Quality Monitoring Using Remote Sensing (English/Spanish)