

Remote Sensing Theme for World Space Week 2016

From the early age of space activities, satellites have always been considered a perfect tool for observing the Earth, either for scientific purposes or to monitor activities on ground.

The UN Conference of Parties on Climate Change, held in Paris in December 2015, emphasized the key role space systems play monitoring Essential Climate Variables, either for scientific modeling or for the assessment of Greenhouse Gas emissions by countries.

Besides monitoring the effects of climate change, the role of Earth observation satellites is recognized for other benefits such as:

- environmental observation leading to land use optimization, sustainable agriculture, detection of pollutants;
- disaster prevention and management providing vulnerability assessment, early warning alerts, impact assessments, management of first-aid and first responder resources;
- peace keeping such as the prevention of conflicts and for illegal traffic mitigation; and
- Commercial uses such as mapping, analytics, data and other uses translate into economic benefit

For all these reasons, many emerging space faring nations chose to invest early on into Earth observation satellites.

The emergence of optimally performing small satellites, combined with the use of constellations, is also changing the paradigm of the Earth observation, bringing business into the picture with new private start-ups attempting to meet the insatiable demand for fresh and reliable information.

It is time to celebrate the increasing importance of Earth observation from space, a topic which has never been addressed as such since the creation of World Space Week.

Theme Selection Considerations

Is it timely?

Does it encourage events?

Is it teachable?

Is it sponsorable?

Past World Space Week Themes

2000 Launching the Space Millennium

2001 Inspiration from Space

2002 Space and Daily Life

2003 Space: Horizon Beyond Earth

2004 Space for Sustainable Development

2005 Discovery and Imagination

2006 Space for Saving Lives

2007 50 Years in Space

2008 Exploring the Universe

2009 Space for Education

2010 Mysteries of the Cosmos

2011 50 Years of Human Spaceflight

2012 Space for Human Safety and Security

2013 Exploring Mars, Discovering Earth

2014 Space guiding your way

2015 Discovery

Educational Applications of a Remote Sensing Theme

Who Uses Remote Sensing and Why

- the geographer, who looks for changes on the Earth's surface that need to be mapped;
- the forester, who needs information about what type of trees are growing and if they have been affected by disease, fire or pollution;
- the environmentalist, who wants to detect, identify and follow the movement of pollutants such as oil slicks on the ocean;
- the geologist, who is interested in finding valuable minerals;
- the farmer, who wants to keep an eye on how his crops are growing and if they've been affected by drought, floods, disease or pests;
- the ship captain, who needs to find the best route through the northern ice packs;
- the firefighter, who sends out his crews based on information about the size and movement of a forest fire.

<http://www.nrcan.gc.ca/earth-sciences/geomatics/satellite-imagery-air-photos/satellite-imagery-products/educational-resources/9487>

100 Earth Shattering Remote Sensing Applications & Uses

<http://gisgeography.com/100-earth-remote-sensing-applications-uses/>

Participant Marketing Opportunities – Remote Sensing

Remote sensing agencies	Meteorologists	Natural resource departments
Military	Climatologist	Mineral deposits (mining)
Geosciences	Environmentalist	Oceanographers
Satellite operators	Chemists	Earth Sciences
Data resellers, e.g. Urthecast	Biologists	Energy (oil, natural gas, etc.)
	Forestry	