

Earth Observations and Diplomacy



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U.S. Department of State



Bureau of Oceans & Int'l Environmental & Scientific Affairs

*-Mission Statement:
Promoting a healthier
planet through science
and partnership*



*-3 Directorates:
Oceans (2 offices)
Environment (3 offices)
Science (3 offices)*



*-There are 265 US Embassies +
Consulates in 180 countries*

OES Strategic Goals

(from the Functional Bureau Strategy (FBS))

1. Concerted Action to Achieve Deep Cuts in Greenhouse Gas Emissions
2. Strengthened Science, Space, Technology and Innovation Partnerships
3. Strengthened Environmental, Conservation and Natural Resource Policies that Advance U.S. Interests
4. Clean, Safe, Secure, and Sustainably Managed Oceans and Polar Regions
5. Improved Water Quality and Access
6. Increased Pandemic Preparedness and Improved Global Health



Goals of 2010 U.S. Space Policy

- Energize competitive domestic industries
- **Expand international cooperation**
- Strengthen stability in space
- Increase assurance and resilience of mission-essential functions
- Pursue human and robotic initiatives
- **Improve space-based Earth and solar observation**

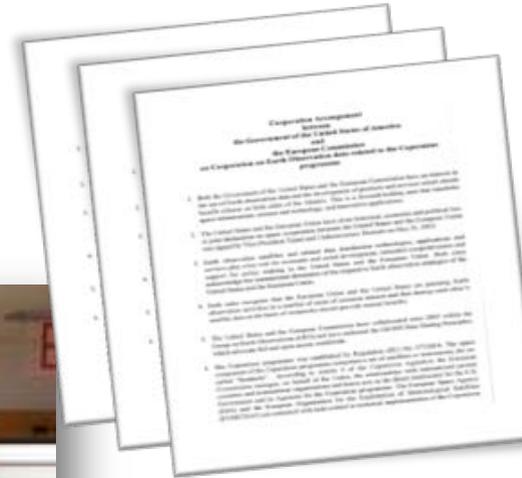


Venues for Space Cooperation

- UN Committee on the Peaceful Uses of Outer Space (COPUOS)*
- Multilateral Coordination Board for ISS
- US-India Civil Space Working Group *
- International Committee on GNSS (ICG)*
- Interagency Space Debris Coordination Committee (IADC)
- International Telecommunications Union*
- Committee on Earth Observation Satellites (CEOS)
- COSPAS-SARSAT (Satellite-aided Search and Rescue Program)
- Group for Earth Observations (GEO)
- US-EU Space Policy Dialogue *
- World Meteorological Organization (WMO) Satellite Executive Committee
- Coordination on Geostationary Meteorological Satellites (CGMS)

Those with State lead/chair/co-chair have asterisk ()*

U.S. – EU Cooperation Arrangement on Copernicus Earth Observation Data



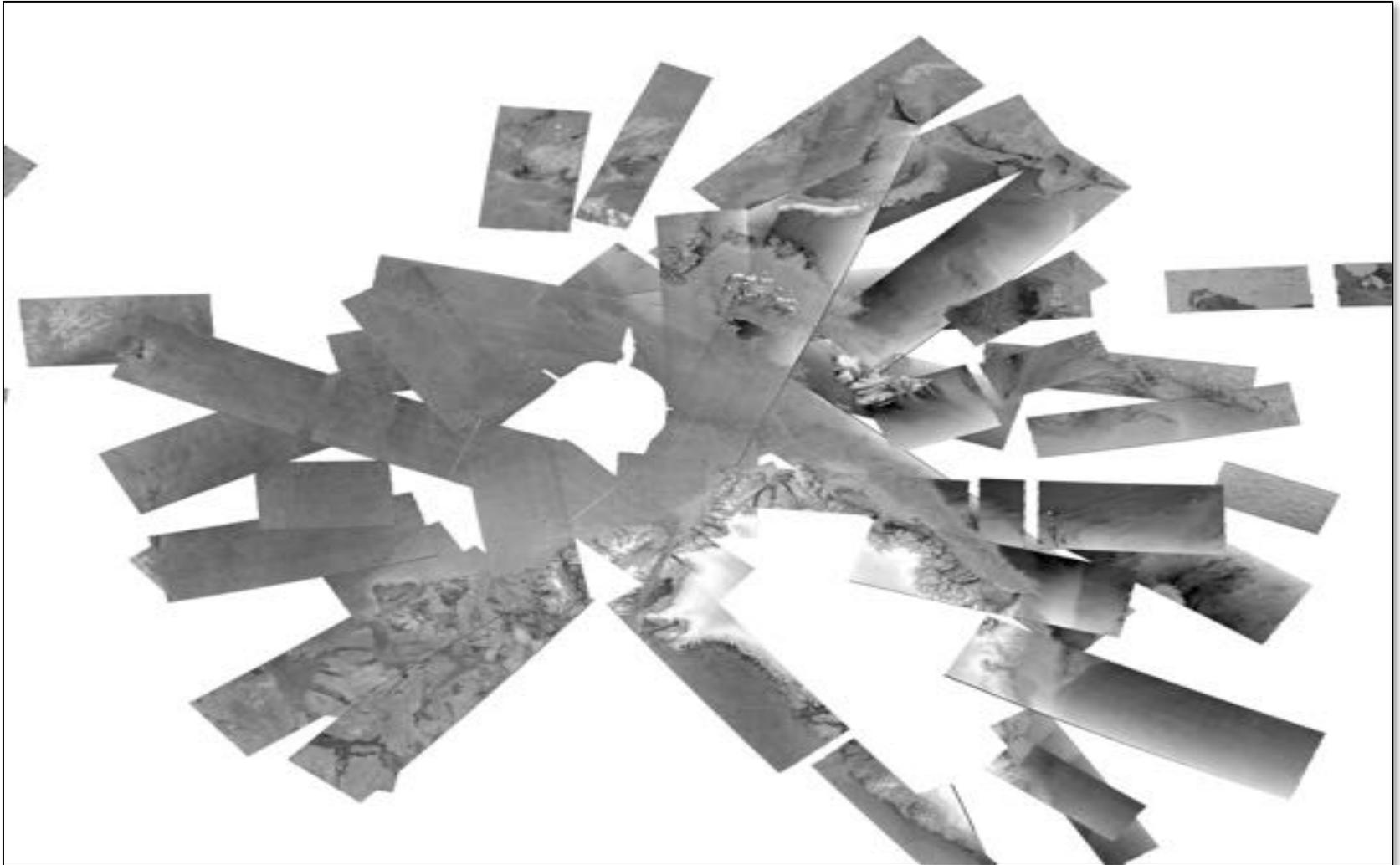
The U.S. – EU Cooperation Arrangement formalizes collaboration between experts from NASA, NOAA, USGS, the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), and the European Space Agency (ESA) to realize the full value of these Earth observation satellites for research and operational purposes.

The Arrangement serves as an **umbrella** under which technical implementing procedures can be finalized.

U.S. Deputy Assistant Secretary of State for Science, Space and Health, Acting, Jonathan Margolis and European Commission Director for Space Policy, Copernicus and Defense Philippe Brunet signed the arrangement in Washington, D.C. on October 16, 2015.



Sample daily NOAA composite image from Sentinel 1A/B, 14 Jan 2017



U.S. National Ice Center (NOAA, US Coast Guard, US Navy) uses Sentinel-1 and other satellite data to produce estimates of current sea-ice to aid navigation in polar regions.

Copernicus EMS Maria activation

LATEST NEWS · 2017-09-12 | [EMSR241] Hurricane Irma in Florida

EMS - MAPPING

- Service Overview
- Who can use the service
- How to use the service
- Products: Rapid Mapping
- Products: Risk and Recovery
- Quality control / Feedback
- User Guide

RAPID MAPPING

- List of Activations
- Map of Activations
- GeoRSS Feed

RISK AND RECOVERY

- List of Activations
- Map of Activations
- GeoRSS Feed

OTHER

- Map of Activations of Other Organizations
- Map Coverage Planner

EMSR243: Hurricane Maria in Puerto Rico and US Virgin Islands

Event Type: Storm (Tropical cyclone, hurricane, typhoon)

Activation Time (UTC): 2017-09-19 18:07

Reference maps produced: 0

Delineation maps produced: 5

Grading maps produced: 0

Activation Status: Open

Affected Countries/Territories:

-  Puerto Rico
-  Virgin Islands, United States

Authorized User:

EU Services|EEAS

Activation Reason:

Maria is the sixth hurricane to have formed in the Atlantic Basin this season. Rainfall on many of the islands on Maria's path could cause life-threatening flash floods and mudslides. In the Dominican Republic, the National Emergency Operations Centre (NEOC) has convened in advance of Hurricane Maria and has already placed 20 provinces on alert for hurricane conditions. Authorities are evaluating priority evacuation zones.



[Twitter](#) Coverage map:  GeoRSS: 



EMSR243 - Activation Extent Map

Release: r01 - Version: v1 - Delivered: 2017-09-20 19:39

View: [EMSR243_AEM_IPC](#) · [EMSR243_AEM_EWT](#) · [EMSR243_AEM](#)

DOS Media Note 6 Sept. 2017



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U.S.-EU Satellite Data Arrangement Aids in Hurricane Harvey and Hurricane Irma Efforts



Media Note

Office of the Spokesperson

Washington, DC

September 6, 2017

U.S. cooperation with the European Commission, facilitated by the Department of State, allowed for rapid activation of the Copernicus Emergency Management Service (EMS) over the Texas and Louisiana coasts affected by Category-4 Hurricane Harvey, the largest recorded rainstorm ever to hit the contiguous United States. This service has provided local, state, and federal disaster managers with free, real-time, all-weather radar satellite images of the affected areas; we are grateful to our European partners, including the European Space Agency and the European Organisation for the Exploitation of Meteorological Satellites, for their assistance during this challenging time.

Since August 25, Europe's Copernicus EMS, at no cost to the United States, has generated up-to-date, satellite-based maps of the flood extent. In combination with U.S. satellite data, these maps are critical tools for relief operations by U.S. federal, state, and local disaster responders. With Hurricane Irma projected to reach the Caribbean islands and the East Coast of the United States, the delivery of EMS products will shift to addressing the response to that major storm.

State Dept. Dipnote Blog, 8 Sept 2017



Water from Addicks Reservoir flows into neighborhoods as floodwaters from Tropical Storm Harvey rise Tuesday, Aug. 29, 2017, in Houston. (AP Photo/David J. Phillip)

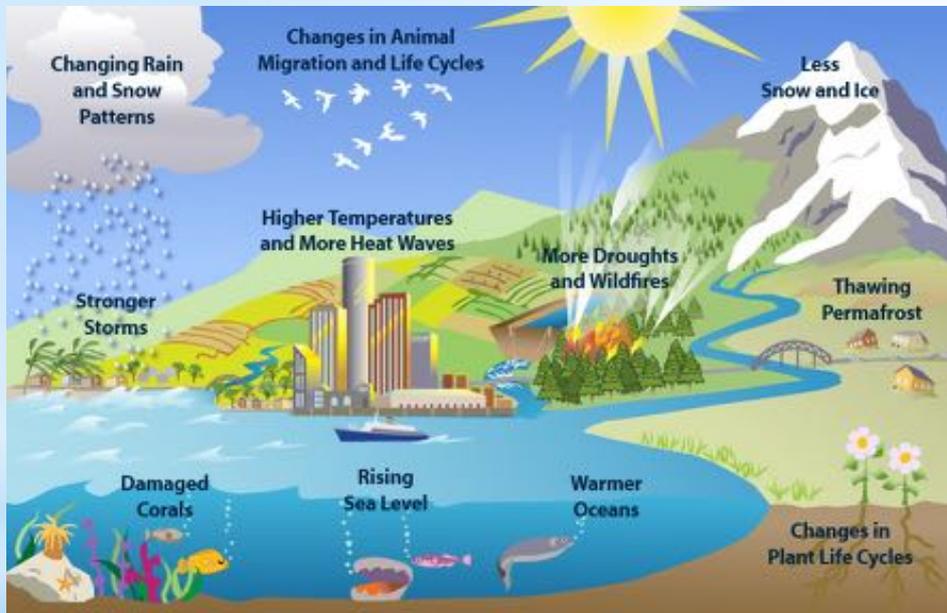
Eyes in the Sky and Diplomacy on the Ground: U.S.-EU Share Satellite Data in Response to Dangerous Hurricanes

By [Judith G. Garber](#) on September 8, 2017

On August 25, as Hurricane Harvey was bearing down on Texas, an urgent

E: Environment

Example: Climate Change and Wildlife Trafficking



Signs of Climate Change
2014 - Climate Action Plan

Photo Credit: Environmental Protection Agency



Wildlife Trafficking
February 2014 - National Strategy to
Combat Wildlife

Photo Credit: U.S. Department of State

Example: Regional Environmental Hubs

Regional environmental diplomacy from bases in Ghana, Ethiopia, Botswana, Denmark, Thailand, Fiji, Nepal, Jordan, Peru, Kazakhstan, Costa Rica, Hungary

Regional glacier mass balance training participants in Yala Glacier Base Camp, Langtang, Nepal





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Website: www.state.gov/e/oes/index.htm