

## 201709\_Hurricane\_Irma

### Geospatial Information and Remotely Sensed Imagery

#### Hazards Data Distribution System (HDDS)

<http://hddsexplorer.usgs.gov/>

Select Event: "201709\_Hurricane\_Irma" → click on "+" and then "Search"

Download Shapefiles for image footprints

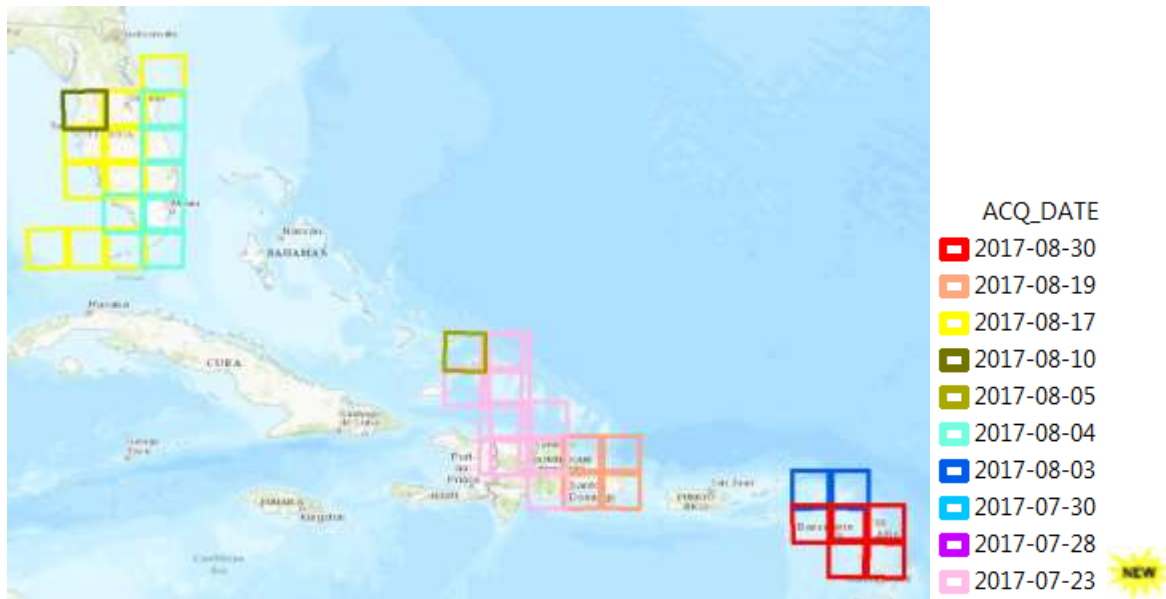
[https://hddsexplorer.usgs.gov/data/list/disaster/201709\\_Hurricane\\_Irma/shapefiles/index](https://hddsexplorer.usgs.gov/data/list/disaster/201709_Hurricane_Irma/shapefiles/index)

Note: For the HDDS links, copy the links and paste them into your browser.

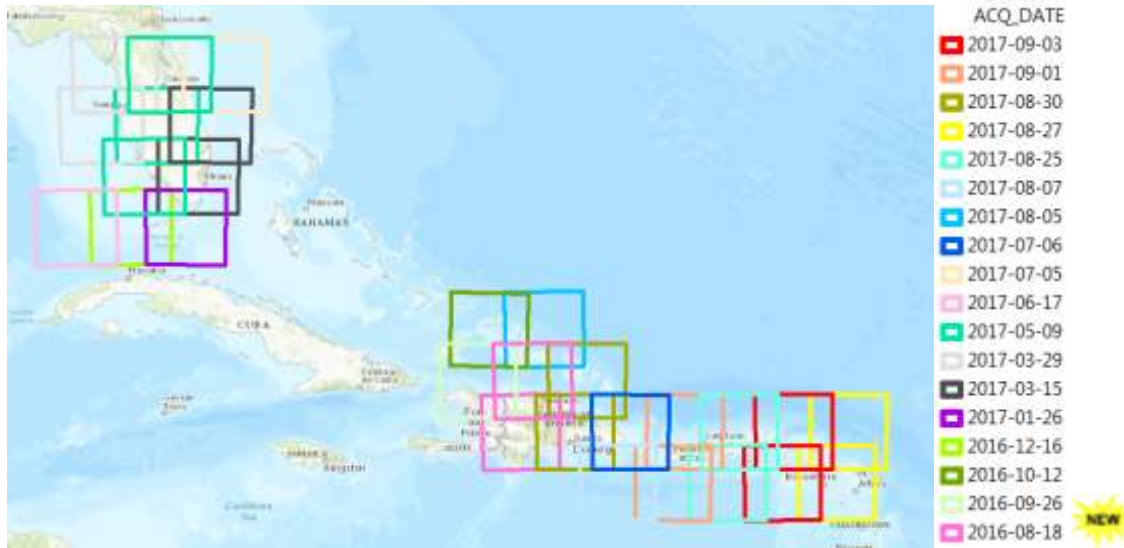
More information about HDDS: <http://hdds.usgs.gov/hazards-data-distribution-system-hdds>

RSS Feed: [https://dds.cr.usgs.gov/ee-data/rss/events/201709\\_Hurricane\\_Irma.rss](https://dds.cr.usgs.gov/ee-data/rss/events/201709_Hurricane_Irma.rss)

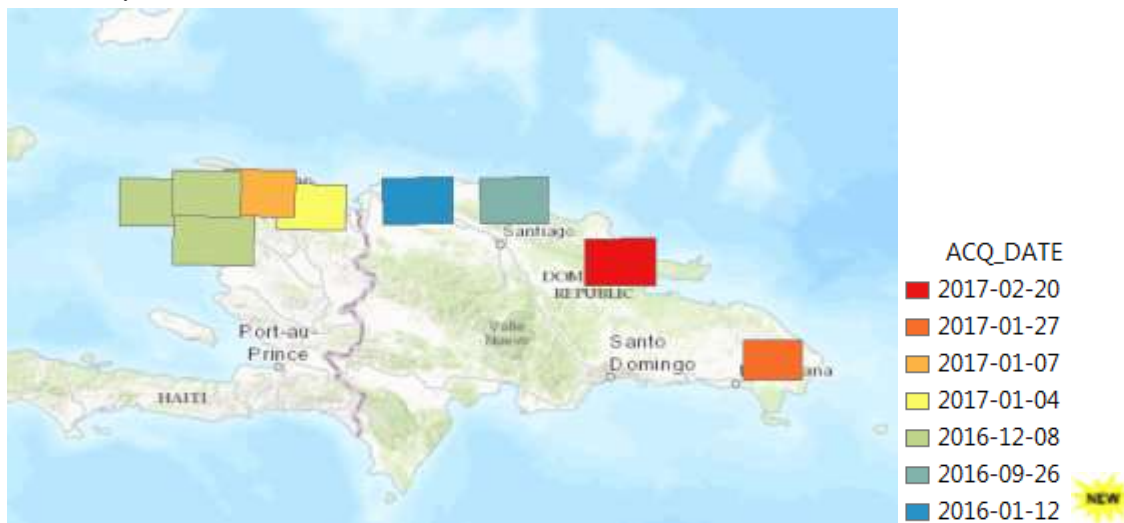
#### Sentinel-1 (Pre-Event)



#### Landsat 8 (Pre-Event)



### ESA Map Products (Pre-Event)



### HDDS Restricted

Self-Register for HDDS Restricted. <http://hddsexplorer.usgs.gov/>

If you have not registered on either EarthExplorer or HDDS, click the register button in the top right corner of the screen and go thru the registration process. Once registered, you will have access to EarthExplorer and HDDS download capabilities. The first time you attempt to download restricted imagery, you will need to fill out an access request form for that event. Click on "Access" (upper right of HDDS screen), then select "To request access to restricted data click [here](#)". Select event from menu. Once granted access, you can download restricted imagery. (note: in most cases the restricted area contains licensed imagery, not all requests can be granted.)

Questions on HDDS Contact: Brenda Jones [bkjones@usgs.gov](mailto:bkjones@usgs.gov)

### WorldView (Pre-Event)



ACQ\_DATE  
■ 2017-09-02

**SPOT (Pre-Event)**



ACQ\_DATE  
■ 2017-09-06

**GEOEYE( Pre-Event)**



ACQ\_DATE  
■ 2017-08-10

**RadarSat (Pre-Event)** ★



**HDDS Emergency Operations – Collection Management Tool** (area of interest for disaster imagery collections) **Request new disaster related imagery here.**

<http://cmt.usgs.gov/>

**End HDDS**

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**Eagle Vision (SPOT imagery)**

<https://evr2est.us/>

<https://evr2est.us/mission/fl>

**Digital Globe Imagery**

Digital Globe imagery is available orthorectified in the NGA funded EnhancedView Web Service. Users with .gov or .mil emails can self-register. <https://evwhs.digitalglobe.com/myDigitalGlobe/>



Pre-event imagery from the last 6 months.

FloridaDisaster.org Florida Division of Emergency Management  
<http://www.floridadisaster.org/index.asp>

## FEMA Section

### FEMA information Sharing

**This is the site that FEMA is actively updating with assessments and data.**

<https://data.femadata.com/NationalDisasters/HurricaneIrma/> ← Place Holder

### FEMA 1km US National Grid/MGRS map generator

<http://fema.maps.arcgis.com/apps/webappviewer/index.html?id=b09fe0102a244e9b8ac663a6886151fc>

### Hifld community / Geoplatform supporting FEMA

<https://respond-irma-geoplatform.opendata.arcgis.com/>

### FEMA Hurricane Incident Journal

<https://fema.maps.arcgis.com/apps/MapJournal/index.html?appid=97f53eb1c8724609ac6a0b1ae861f9b5>

End FEMA Section

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## NOAA Section

### NOAA

#### NOAA Emergency Response imagery

<https://storms.ngs.noaa.gov/> ←Place Holder

### GOES-16

<http://rammb-slider.cira.colostate.edu/>

### National Hurricane Center Data in GIS Formats

<http://www.nhc.noaa.gov/gis/>

National Hurricane Center ← See Irma

<http://www.nhc.noaa.gov/>

[http://www.nhc.noaa.gov/refresh/graphics\\_at1+shtml/154730.shtml?wsurge#contents](http://www.nhc.noaa.gov/refresh/graphics_at1+shtml/154730.shtml?wsurge#contents)

**NOAA ERMA All-Hazards Viewer**

<https://erma.noaa.gov/gulfofmexico>

**National Weather Service River Forecast Center**

Observations and Forecasts - Web Service

<http://water.weather.gov/ahps/>

**NOAA nowCOAST**

<https://nowcoast.noaa.gov/>

**NOAA Now Coast:** MapServer: official NWS Potential Storm Surge Flooding Map

[http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/wwa\\_meteocean\\_tropicalcyclones\\_inundation/MapServer](http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/wwa_meteocean_tropicalcyclones_inundation/MapServer)

**NOAA National Weather Service**

NWS AHPS

<http://www.weather.gov/hgx/>

**Weather.gov**

<https://water.weather.gov/ahps/inundation.php>

**NOAA Coastal Imagery Viewer**

Baseline imagery (pre event)

[https://geodesy.noaa.gov/storm\\_archive/coastal/viewer/index.html](https://geodesy.noaa.gov/storm_archive/coastal/viewer/index.html)

**NOAA Satellite Services Division**

<http://www.ssd.noaa.gov/PS/TROP/storms/IRMA.html>

**NOAA National Weather Service:** Download Precipitation Shapefile

[http://www.srh.noaa.gov/ridge2/RFC\\_Precip/](http://www.srh.noaa.gov/ridge2/RFC_Precip/)

End NOAA Section

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**Copernicus Emergency Management Service (Activated by multiple agencies)**

**[EMSR233: Hurricane Irma in Haiti and Dominican Republic](#)**

<http://emergency.copernicus.eu/mapping/list-of-components/EMSR233>

Some flood maps available for Dominican Republic. 

**[EMSR233] Monte Plata: Delineation Map**



*Published: 2017-09-07 22:13:57 (UTC)*  
Product version: v1  
Map scale: 1:51000  
Status:  
Production finished

**Downloadable items**  
PDF: 100 DPI 200 DPI 300 DPI  
JPEG: 100 DPI 200 DPI 300 DPI  
TIFF: 100 DPI 200 DPI 300 DPI  
Vector package: ZIP


**[EMSR233] Nagua: Delineation Map**



*Published: 2017-09-07 21:11:18 (UTC)*  
Product version: v1  
Map scale: 1:65000  
Status:  
Production finished

**Downloadable items**  
PDF: 100 DPI 200 DPI 300 DPI  
JPEG: 100 DPI 200 DPI 300 DPI  
TIFF: 100 DPI 200 DPI 300 DPI  
Vector package: ZIP

**[EMSR233] San Francisco de Macoris: Delineation Map**



*Published: 2017-09-07 20:31:56 (UTC)*  
Product version: v1  
Map scale: 1:51000  
Status:  
Production finished

**Downloadable items**  
PDF: 100 DPI 200 DPI 300 DPI  
JPEG: 100 DPI 200 DPI 300 DPI  
TIFF: 100 DPI 200 DPI 300 DPI  
Vector package: ZIP

**[EMSR233] Higüey: Delineation Map**



*Published: 2017-09-07 17:03:44 (UTC)*  
Product version: v0  
Map scale: 1:55000  
Status:  
Production finished

**Downloadable items**  
JPEG: 200 DPI

Copernicus **EMSR232: Hurricane Irma in Antilles Islands**   
<http://emergency.copernicus.eu/mapping/list-of-components/EMSR232>

**[EMSR232] Guadeloupe: Delineation Map, Monitoring 2**



*Published: 2017-09-07 15:30:12 (UTC)*  
Product version: v0  
Map scale: 1:45000  
Status:  
Production finished

**Downloadable items**  
JPEG: 200 DPI

- STAGING PRODUCT -

**[EMSR232] Saint Barthelemy: Delineation Map**



*Published: 2017-09-07 05:53:06 (UTC)*  
Product version: v1  
Map scale: 1:15000  
Status:  
In production

**Downloadable items**  
PDF: 100 DPI 200 DPI 300 DPI  
JPEG: 100 DPI 200 DPI 300 DPI  
TIFF: 100 DPI 200 DPI 300 DPI  
Vector package: ZIP

**EMSR234: Hurricane Irma in Sint Maarten** Netherlands Antilles 

International Charter Space and Major Disasters (3 activations) 

<https://www.disasterscharter.org/>

United States

<https://www.disasterscharter.org/web/guest/activations/-/article/flood-in-united-states-call-629->

Dominican Republic

<https://www.disasterscharter.org/web/guest/activations/-/article/ocean-wave-in-dominican-republic-call-628->

Caribbean

<https://www.disasterscharter.org/web/guest/activations/-/article/cyclone-in-anquilla-call-627->

## WEB MAP SERVICES

Sea Surface Temperatures (NOAA)

[http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/analysis\\_ocean\\_sfc\\_sst\\_time/MapServer](http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/analysis_ocean_sfc_sst_time/MapServer)

Inundation Data (NOAA NowCoast)

[http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/www\\_meteocean\\_tropicalcyclones\\_inundation/MapServer](http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/www_meteocean_tropicalcyclones_inundation/MapServer)

NWS Nexrad Radar (NOAA)

[http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/radar\\_meteo\\_imagery\\_nexrad\\_time/MapServer](http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/radar_meteo_imagery_nexrad_time/MapServer)

Satellite GOES Imagery (NOAA)

[http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/sat\\_meteo\\_imagery\\_goes\\_time/MapServer](http://nowcoast.noaa.gov/arcgis/rest/services/nowcoast/sat_meteo_imagery_goes_time/MapServer)

FEMA National Shelters

[https://gis.fema.gov/REST/services/NSS/FEMA\\_NSS/MapServer](https://gis.fema.gov/REST/services/NSS/FEMA_NSS/MapServer)

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## ESRI public information products

- **Hurricane and Cyclone Public Information Map**

<https://disasterresponse.maps.arcgis.com/apps/PublicInformation/index.html?appid=a2b187e887924f4488d273b5972ea062>

- **Story Map - Hurricanes and Tropical Cyclones Overview**

<http://disasterresponse.maps.arcgis.com/apps/MapSeries/index.html?appid=db6238df958148108cceb3b05619a7f6>

**ESRI Data sources** that you can add to your maps and apps for situational awareness

**These require ArcGIS credentials:**

- Active Hurricanes / Tropical Cyclones Global

<http://www.arcgis.com/home/item.html?id=5b84e159dace4bf8ad9e9154085ba45d>

- Surface Meteorological and Hydrologic Analyses - Quantitative Precipitation Estimate

<https://www.arcgis.com/home/item.html?id=2b65b91dcfce4dddb235c61f62dc890d>

- Live Stream Gauges (Flooding)

<https://www.arcgis.com/home/item.html?id=61003c853d2c4c338841429610b5747f>

**ESRI Data sources** that you can add to your maps and apps for situational awareness

**These do not require ArcGIS credentials:**

- Precipitation Forecast (US)



- <http://www.arcgis.com/home/item.html?id=71afd16b8845426e9435c5dbb9ca8ea6>
- National Water Model (10 Day Anomaly Forecast)  
<http://www.arcgis.com/home/item.html?id=51b2bc5d620543b2825c60cc75e9a441>
- National Water Model (Hourly Anomaly Forecast)  
<http://www.arcgis.com/home/item.html?id=b9ec31770ee643509b942dfdec393b7f>
- National Water Model (10 Day Forecast)  
<http://www.arcgis.com/home/item.html?id=f43c154ef3b9421bbda14bc17f9e98d2>
- National Water Model (Hourly Forecast)  
<http://www.arcgis.com/home/item.html?id=0a42a065b8094842a0218c540e27761a>

### **HHS Active Hurricane Viewer**

<https://geohealth.hhs.gov/arcgis/home/>

### **USGS**

#### **Irma Viewer**

<http://doildt.maps.arcgis.com/apps/webappviewer/index.html?id=fc49a08d147f44f2acbde91764fbad0b>

#### **Coastal Change Hazard Viewer**

<https://marine.usgs.gov/coastalchangehazardsportal/>

#### **Flood Event Viewer**

<http://stn.wim.usgs.gov/FEV/>

#### **Maps and GIS Data**

<http://water.usgs.gov/maps.html>

#### **Water Data for the Nation**

<http://waterdata.usgs.gov/nwis/rt>

### **GDACS**

<http://www.gdacs.org/report.aspx?eventid=1000393&episodeid=30&eventtype=TC>

### **Pacific Disaster Center (PDC) (Daily updates)**

[http://www.pdc.org/event-dashboard/2017\\_Hurricane\\_Irma/](http://www.pdc.org/event-dashboard/2017_Hurricane_Irma/)



DisasterAWARE <https://emops.pdc.org/emops/> ← requires account  
 Register here for a DisasterAWARE Account:  
<https://emops.pdc.org/emops/public/registeruser.jsp>

### Red Cross

[http://maps.redcross.org/website/Tropical/ARC\\_Tropical\\_Links.html](http://maps.redcross.org/website/Tropical/ARC_Tropical_Links.html)

### Google Crisis Map



<https://google.org/crisismap/2017-irma?hl=en&llbox=43.31%2C1.56%2C-38.75%2C-102.04&t=TERRAIN&layers=3%2C1340721332252%2C30%2C1%2C31%2C32%2C5%2C49%2C15%2C11%2C20%2C12%2C19%2C18>

### NAPSG Foundation Hurricane Irma GIS Resources

<https://www.napsqfoundation.org/irma-resources-available/>

### NAPSG Hurricane Irma Crowdsourced Photo App ← Event Photo available

<https://www.arcgis.com/apps/StoryMapCrowdsource/index.html?appid=65f0dde429504c3cb07f0cae0f2c4be6>

### NEMA IAEM

<http://ppp.trustedops.com/>

### UNOSAT



<http://www.unitar.org/unosat/maps>

### UNOSAT Population Exposure



[http://www.unitar.org/unosat/node/44/2656?utm\\_source=unosat-unitar&utm\\_medium=rss&utm\\_campaign=maps](http://www.unitar.org/unosat/node/44/2656?utm_source=unosat-unitar&utm_medium=rss&utm_campaign=maps)

Fleet Response Working Group GeoCollaborate® Daily Dashboard  
<https://frwg.geocollaborate.com/dashboard/>

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### Reference Maps, Lidar, Imagery (pre-event)

#### National Grid Atlases (Use search and rescue)

US National Grid Atlases for Florida, Puerto Rico and US Virgin Islands

<https://yazoo.deltastate.edu/files/irma/>

US National Grid Atlases for Florida

<http://www.floridadisaster.org/gis/usng/mapbooks/>

FEMA 1km USNG/MGRS map generator

<http://fema.maps.arcgis.com/apps/webappviewer/index.html?id=b09fe0102a244e9b8ac663a6886151fc>

US National Grid Irma Map books

<http://usngcenter.org/hurricane-irma-mapbooks/>

#### Pre-Event on Digital Coast

<https://coast.noaa.gov/digitalcoast/data/> Enter "Puerto Rico" or "US Virgin Islands"

Puerto Rico: Imagery, Lidar, and Bathymetric Lidar

US Virgin Islands: Lidar

#### USDA Data Gateway

USDA, USGS, USACOE have not receive any Imagery updates since 2010-2012 for PR&USVI.

USDA Data Gateway has multiple data sets available for Puerto Rico and US Virgin Islands.

<https://gdg.sc.egov.usda.gov/> Click on Get Data. Under Where click "here" and change to Puerto Rico or US Virgin Islands

#### LIDAR

Pre-event lidar the U.S. Interagency Elevation Inventory (USIEI)

<https://coast.noaa.gov/inventory/>

Pre-Event NAIP Imagery Download NAIP by FL County 2015:

<https://nrccs.app.box.com/v/naip/folder/18185432308>

Send comments, additions, and corrections to:

Glenn Bethel, USDA Remote Sensing Advisor

[glenn.bethel@fas.usda.gov](mailto:glenn.bethel@fas.usda.gov) (202)720-1280

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