



Image Credit: ISERV/NASA

# UNITED STATES GROUP ON EARTH OBSERVATIONS

GEO-XII PLENARY EXHIBIT, MEXICO CITY

NOVEMBER 11-12, 2015

Timothy Stryker

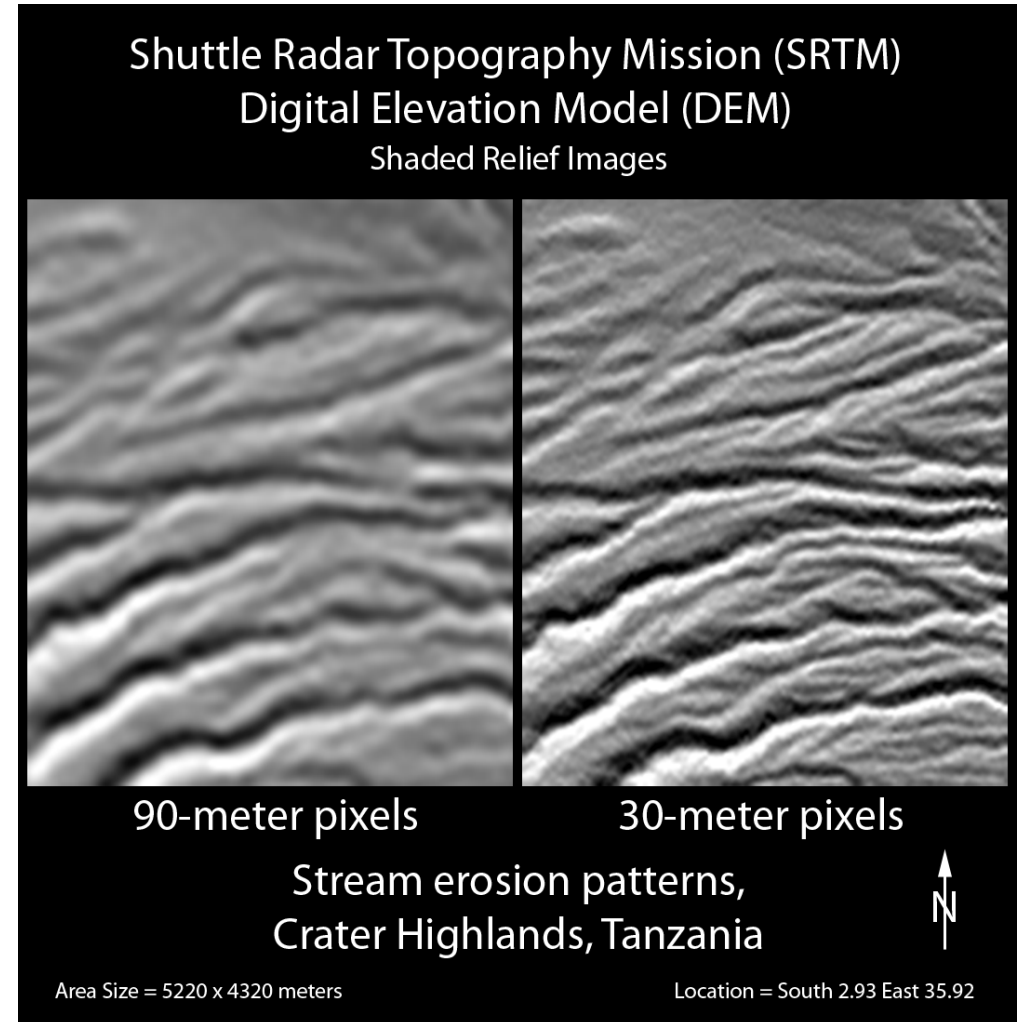
Director, U.S. Group on Earth  
Observations Program

White House Office of Science &  
Technology Policy

# NATIONAL PRIORITIES RELATED TO EARTH OBSERVATIONS

## Open Access to Data

- Release of SRTM high-resolution elevation data
- Common Framework for Earth Observation Data



SRTM imagery showing the improvement in resolution of newly released 30-meter SRTM topographic data (<http://www2.jpl.nasa.gov/srtm/index.html>)



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## Climate Change

- Climate Data Initiative/ Climate Resilience Toolkit
- Arctic activities: GLACIER Conference, Alaska and Arctic DEM Initiative, etc.



President Obama collecting runoff from a glacier during a recent trip to Alaska  
(<http://medium.com/@WhiteHouse>)



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## Enhanced Decision-Making

- Use of Earth observations to inform decision-makers on global and regional challenges
- e.g. enhanced food and water security, climate change resiliency



Example applications of the U.S. Climate Resilience Toolkit  
(<http://toolkit.climate.gov/taking-action>)



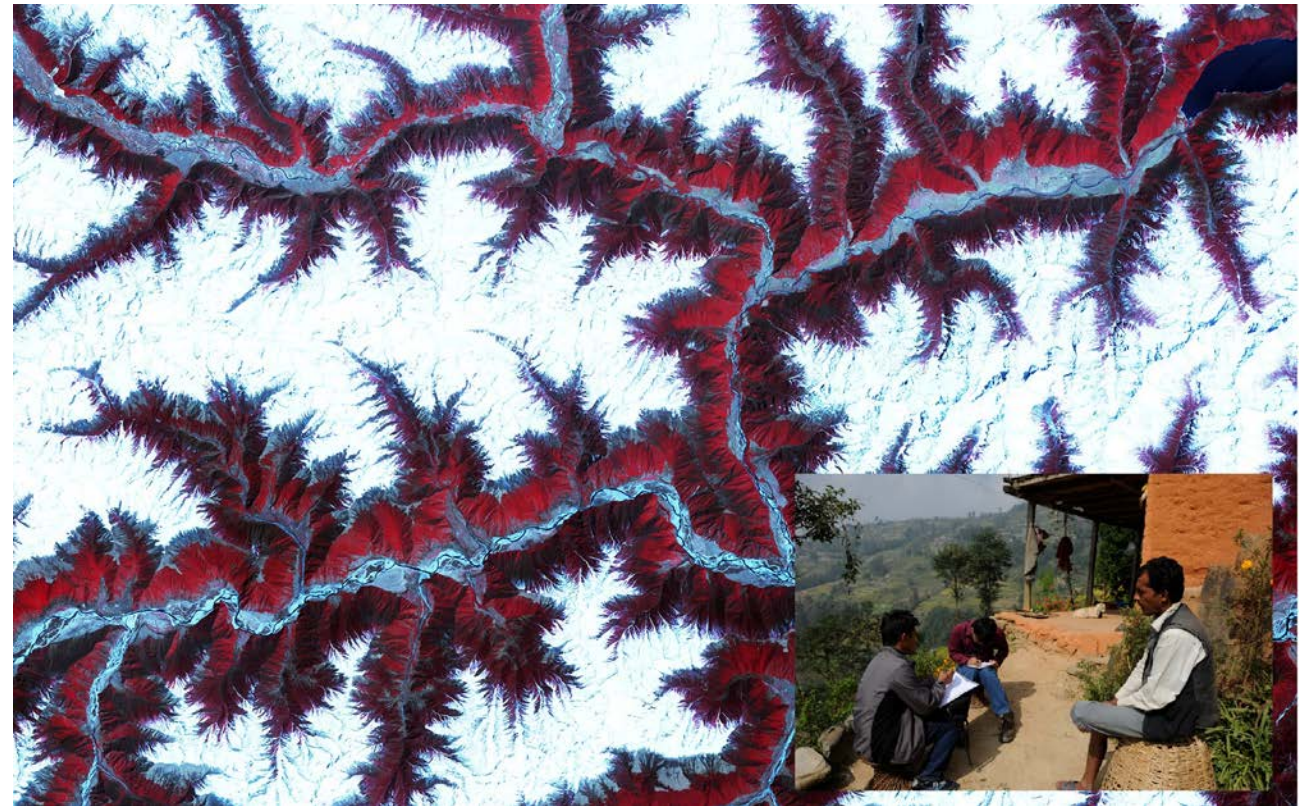
# IMPORTANCE OF INTERNATIONAL COOPERATION IN EARTH OBSERVATIONS

## Global Challenges

- Disaster risk reduction, Arctic coastal erosion, sustainable development of natural resources, climate change resiliency, etc.

## Shared Costs

- Capacity building, investment leverage in Earth observation systems



A false color image of the Himalayas, taken by ASTER;  
(Inset) NASA DEVELOP interns interview a Nepalese farmer  
([http://climate.nasa.gov/climate\\_resources/](http://climate.nasa.gov/climate_resources/), <http://servirglobal.net/Global/Articles/>)

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## Global Challenges

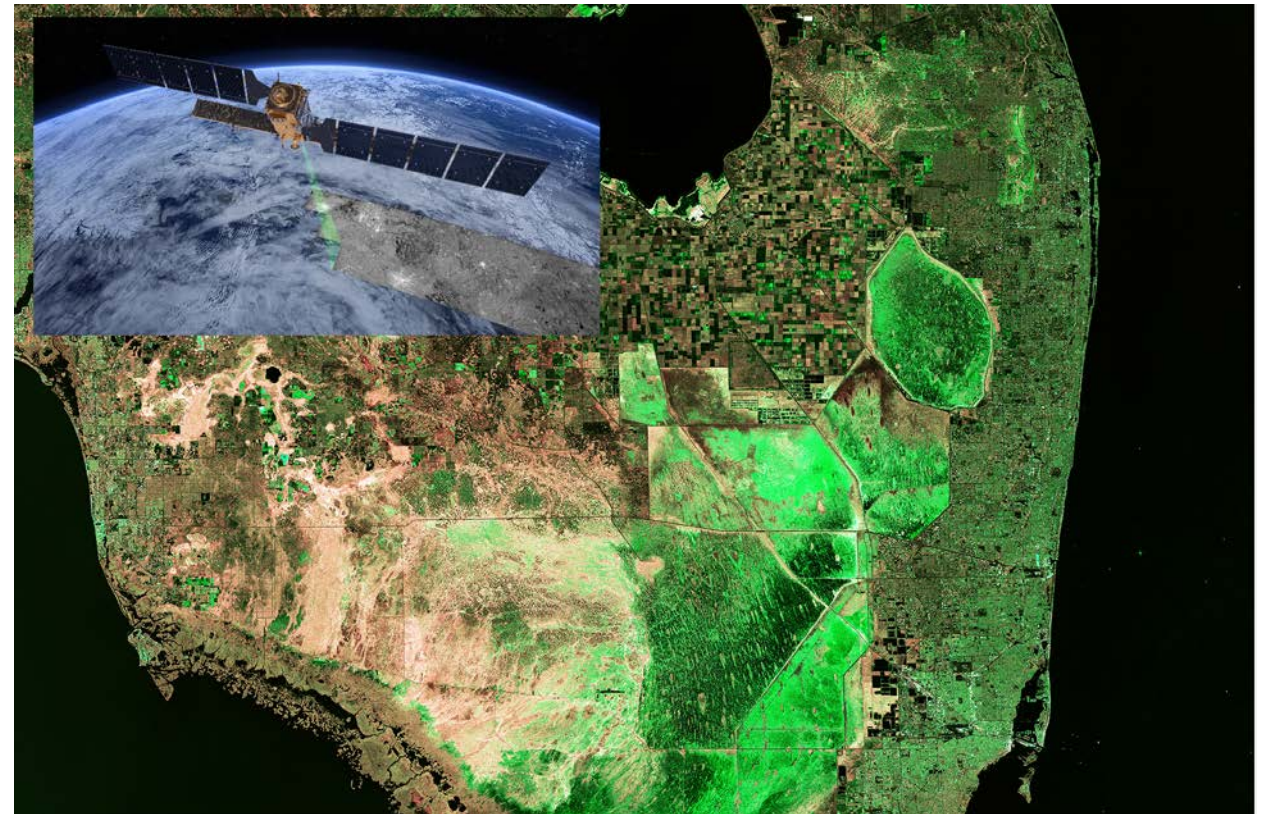
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## Shared Data & Tools

- Use in combination of other countries' data (e.g. US-EC Copernicus Cooperation Agreement)



Sentinel-1A satellite Interferometric Wide swath mode image of southern Florida;  
(Inset) Sentinel-1 Radar Vision  
(<http://www.esa.int/spaceinimages/Images/>)





# ONGOING U.S. CONTRIBUTIONS TO GEO

## Group on Earth Observations Global Agricultural Monitoring Initiative (GEOGLAM)

- Mission: strengthen global agricultural monitoring by improving the use of remote sensing tools for crop production projections and weather forecasting

## Group on Earth Observations Biodiversity Observation Network (GEO BON)

- Mission: improve the acquisition, coordination and delivery of biodiversity information and services to users, particularly decision-makers



Buoy in the Northern Gulf of Alaska, part of the Alaska Ocean Acidification Monitoring Network.

Credit: Natalie Moacci

(<http://www.esa.int/spaceinimages/Images/>)



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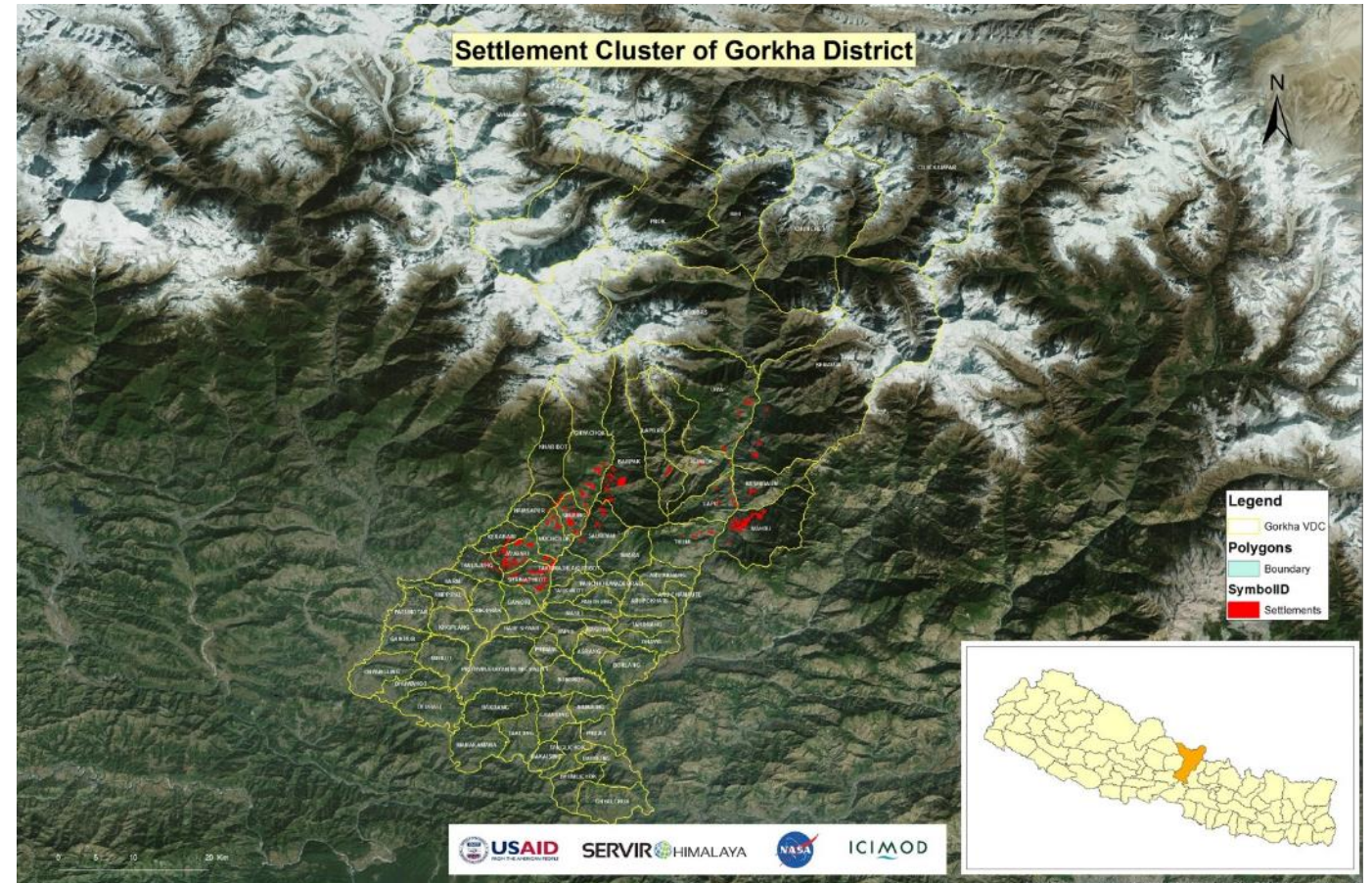
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- Mission: provide satellite-based Earth monitoring, imaging and mapping data, geospatial info, and predictive models to help improve environmental decision-making among developing nations



Satellite imagery of Gorkha, Nepal as part of earthquake relief effort  
(<http://icimod.org>)

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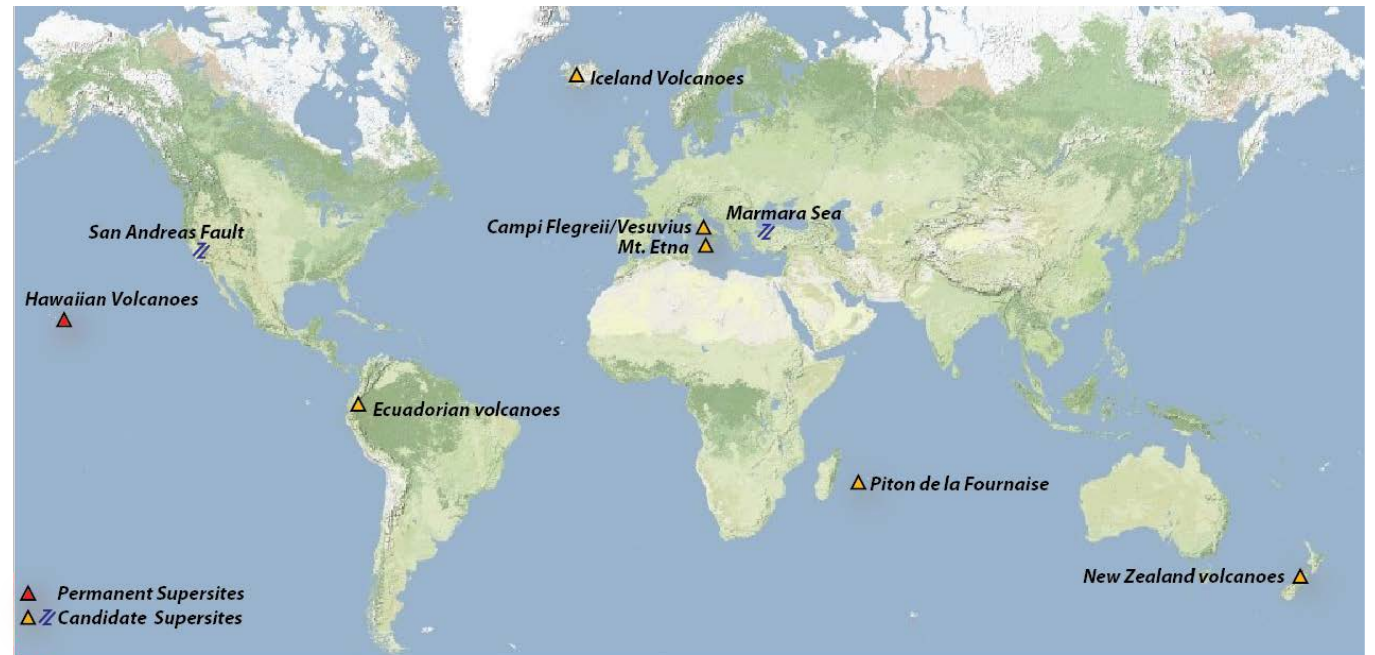
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## Geohazard Supersites and Natural Laboratories (GSNL)

- Mission: provide access to spaceborne and in-situ geophysical data of selected sites prone to earthquake, volcano or other hazards



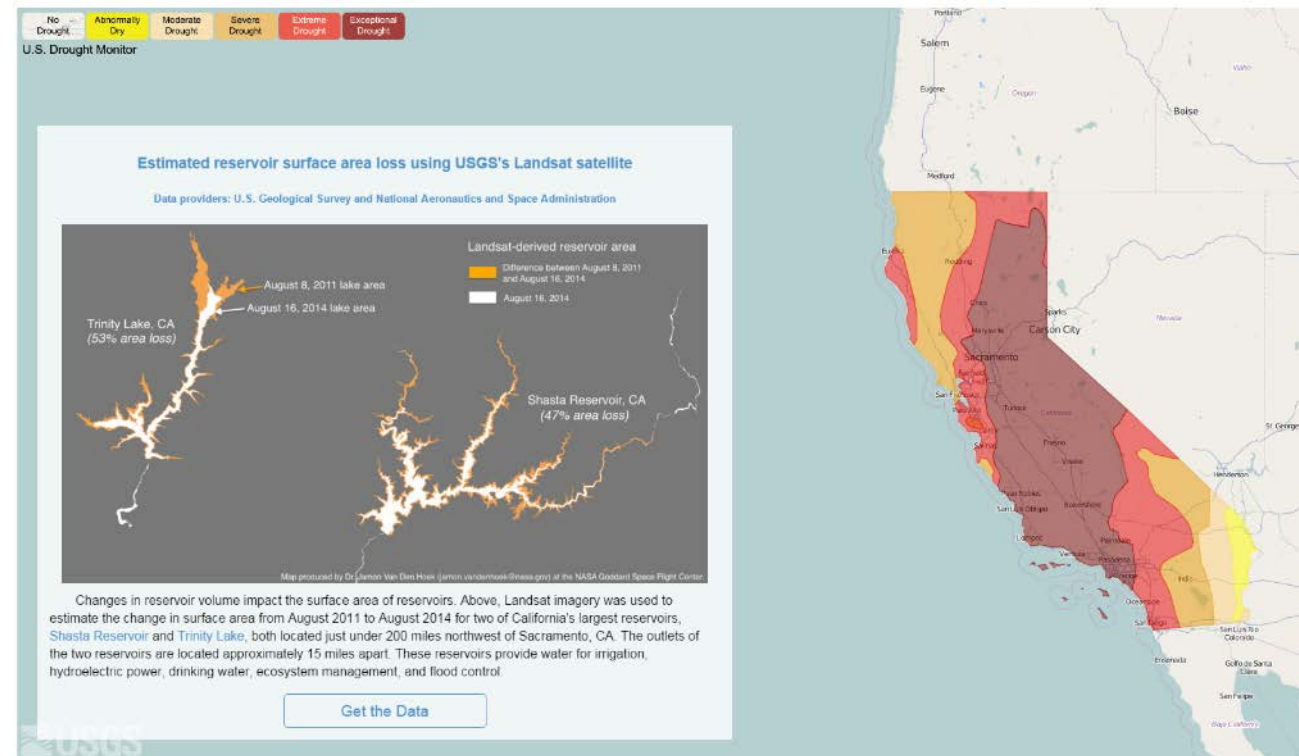
A map of permanent and candidate supersites  
(<http://supersites.earthobservations.org>)



# FUTURE U.S. CONTRIBUTIONS TO GEO

## U.S. Activities in 2016 Work Programme

- Health & Disease: integration of methods for air quality and health data, remote sensed and in-situ with disease estimate techniques; integrated health information systems
- Natural Disaster: global flood risk monitoring; global drought information systems



U.S. Drought Monitor showing reservoir surface area loss over time in California

([https://cida.usgs.gov/ca\\_drought/](https://cida.usgs.gov/ca_drought/))

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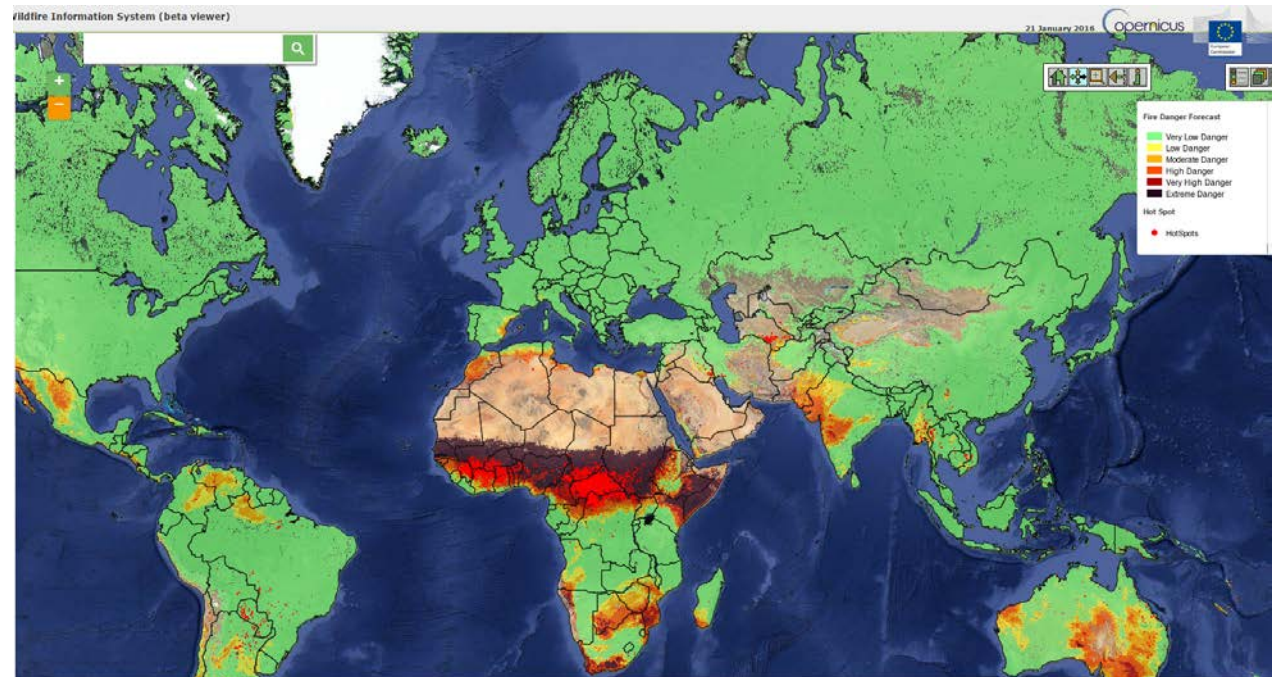
Fish school at Pearl and Hermes Atoll.  
(<http://www.noaanews.noaa.gov/>)



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- Wildfire: Global Wildfire Information System (GWIS)



Global Wildfire Information System (beta viewer)  
(<http://forest.jrc.ec.europa.eu/effis/applications/global-viewer/>)

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## Regional Initiatives

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## Contributions to International Efforts

- Sendai
- UNFCCC
- UN SDGs



UN World Conference on  
Disaster Risk Reduction  
2015 Sendai Japan



**United Nations**  
Framework Convention on  
Climate Change





Image credit: Ian Joughin, University of Washington

**THANK YOU!** |