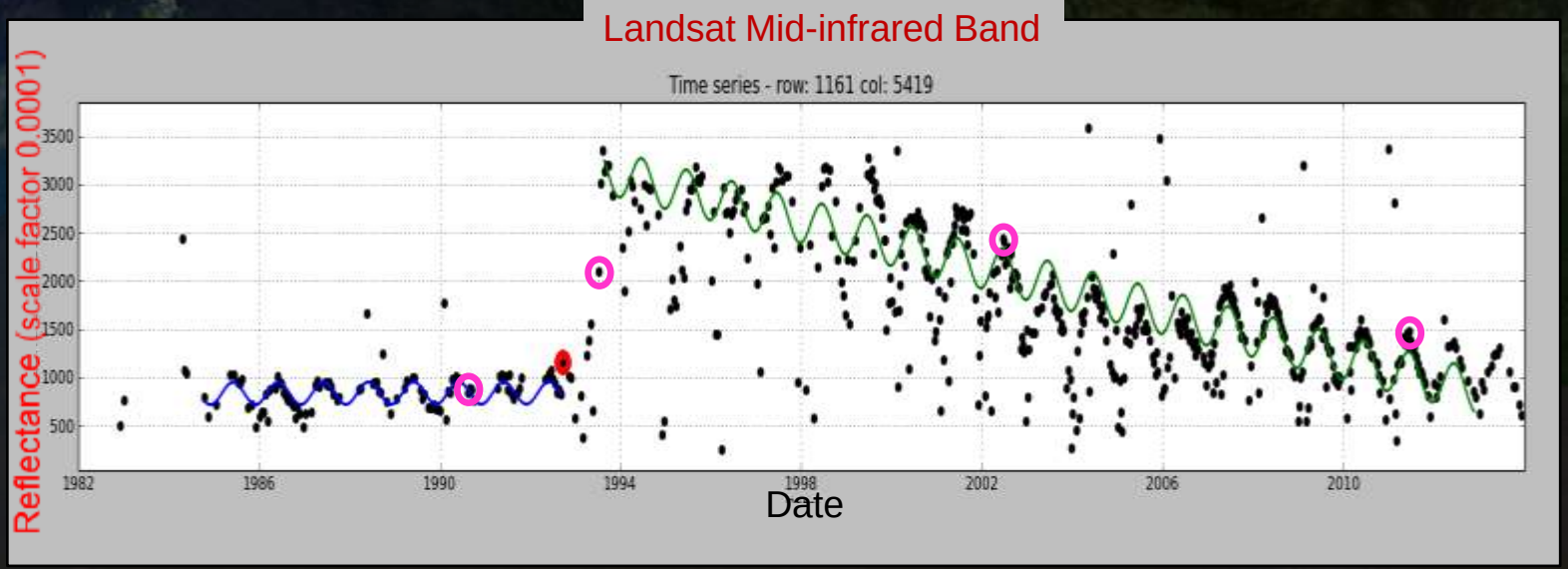
Reorienting national geospatial agencies: *strides and challenges in a rapidly changing world*

USGS examples:

- Advancing from data acquisition and distribution to analytics, integration, and decision support
- Public Private Partnerships
- Crowd sourcing and citizen science

GEOBUIZ SUMMIT
15-16 JANUARY

Landsat – our largest data archive. After 45 years of collection and distribution, enabling user access to “analysis ready data” and a new generation of time series algorithms for land cover and land change datasets.



L4-L8 Tier 1 data processed to surface reflectance and brightness temperature measurements, (Level-2 products).

LCMAP for lower 48 dates this year; USGS Earth Explorer platform. 6 test areas completed.

USGS

Landsat is a Public/Private Endeavor

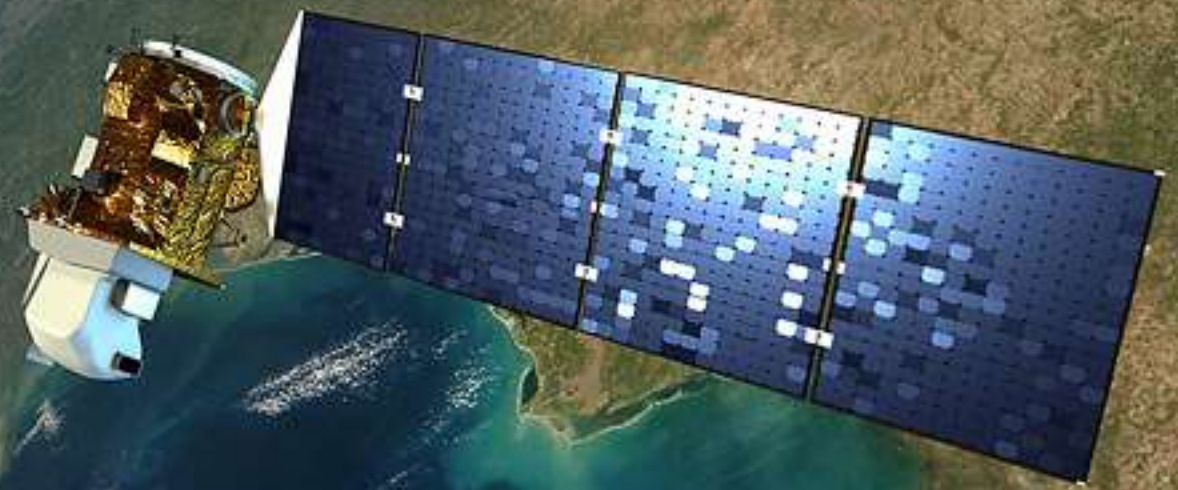
USGS science for a changing world

NASA

Orbital

Ball Aerospace & Technologies Corp.

Stinger Ghaffarian Technologies

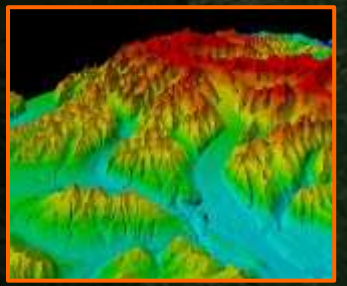


3D Elevation Program (3DEP)

Goals: complete acquisition of national lidar coverage with IfSAR in Alaska in 8 years, apply lidar technology to map bare earth and 3D data of natural and constructed features.

3DEP public private partnership:

- ROI 5:1, conservative benefits of $690 million/year, potential to generate $13 billion/year
- Leverage the capability and capacity of private industry mapping firms; achieves a 25% cost efficiency gain by collecting data in larger projects
- Vendors provide technology and methodologies that result in accurate and consistent data across unique and varied data collection projects
- 3DEP is working through the private sector mapping firms to investigate new technologies that have the potential to further reduce costs and increase data quality



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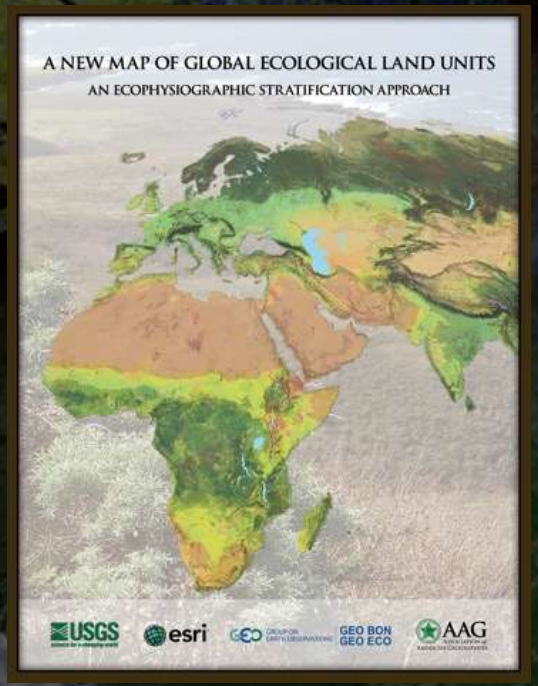
Global Ecoystem Mapping



Public Private Partnership integrating bioclimate, lithology, land cover, and landform type to map 3,923 ELUs globally. Esri web application; 250 m resolution. Mapping of global Marine Ecological Units recently completed.

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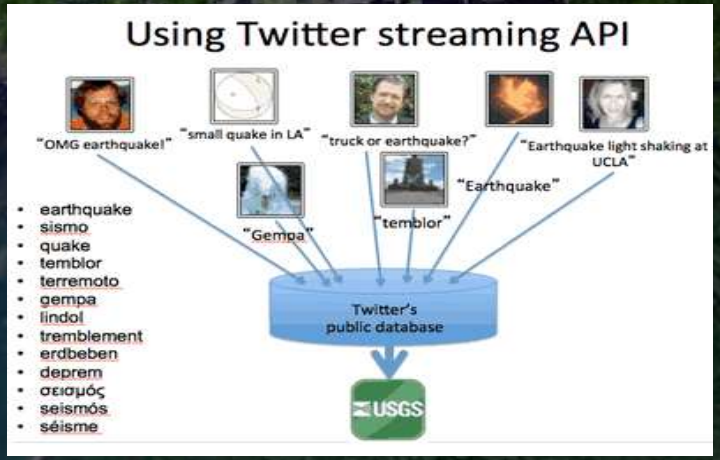
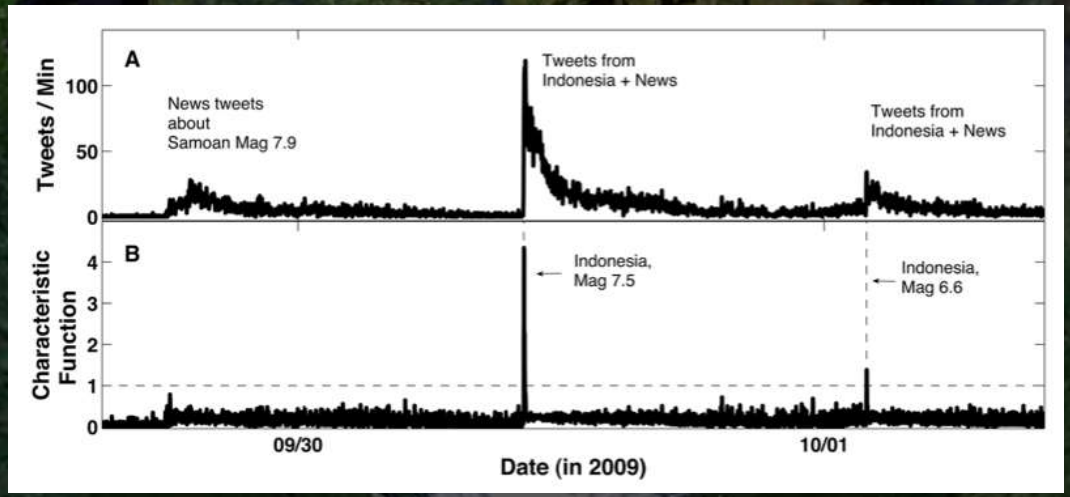
Crowd Sourcing and Citizen Science: Earthquake Early Warning





TED detects two to three earthquakes a day, on average. Especially in regions with few seismometers, TED reports often come in before traditional seismic networks detect an earthquake, giving seismologists early warning. TED sometimes detects earthquakes entirely missed by USGS's automatic processing system. In addition, the tweet text and attached images sometimes offer a rapid qualitative assessment of an earthquake's impact.

USGS

Tweet Earthquake Dispatch complements Did You Feel It?