Data Journalism in 4D

Tierney O’Dea Booker
Public Science League
USC Spatial Sciences Institute
• Who am I? Why am I here? (@tierneyodea on Twitter, #newsGIS)

• Some background of GIS for news, data journalism

• Map tools popular among journalists (psssst...Esri’s are better)

• Potential especially for environmental coverage, challenging misinformation, and advancing science literacy
How we see GIS.....
Common News Maps

How to explain GIS to most Journalists
How I end up explaining GIS to journalists...

WHAT CAN I SAY? IT'S A FANCY COMPUTER MAP.

NOT ONE OF THOSE VANILLA BULLSHI** MAPS. IT'S PRETTY PRETTY PRETTY GOOD.
Less money, more problems

• Constraints of resources, time, people, expertise. Environmental desks cut

• Even beat reporters usually report one press release, one study, one acute environmental news event at a time

• Data about the same subject from scientists, non-profits, government, private sector, same place – not connected

• Big news stories are reduced to “both sides” “scientists say” ”activists say” ”environmentalists say” “protestors say” ”but the _____ says _____”

... and my favorite, “some people are saying”
Common Findings from Interviews on News Map Practices & Perceptions

From approximately 50+ interviews:

• Never heard of GIS

• Heard of GIS, but use Mapbox or open source tools that require coding

• Love maps, aware of many tools, but don’t know how to find & prepare data

• Amazing at code, but not storytelling

• Knew of Esri, but thought it was only hard to learn expensive software

• Most common map/methods were either Google Maps
  ...or Google Maps traced in Adobe Illustrator to look prettier
Stumbling blocks

Create a tileset below for a ready-to-style version of your data, or create a dataset for an editable version of your data.

Read about the differences between tilesets and datasets in the Mapbox Studio Manual.

New tileset

Upload a MBTiles, KML, GPX, GeoJSON, Shapefile (zipped), or CSV to convert it into vector tiles. Upload a GeoTIFF to convert it into raster tiles.
Solutions

Education, GIS Journalist User Group, an outsourced environmental desk
Solutions

- ArcGIS Online
- Living Atlas of the World
- StoryMaps

Ready made easy to use data from authoritative sources, including “eyewitness accounts. “

A cost effective environmental news desk, able to discover stories, organize newsgathering, conduct analysis, and generate follow-up stories. Not just visualization!!!
**Esri Science Community Program**

**Esri CEO, Chief Sci**
- Earth Science Social Science
- ArcGIS Tech
- Sensor Tech (Partners)
- Big (Geo) Data

**Esri Dev CTOs R&D**
- Universities
  - Domain Science Depts
  - Geog/GIScience Depts
  - CS Depts
  - Research Facility Infrastructure
  - Platform for Integration Strategy
  - Research Offices
- NSF

**Federal Government**
- NOAA
- NASA
- USGS
- BLM
- BOEM
- EPA
- USDA Forest Service
- US Fish & Wildlife
- GEOSS, ESA

**State/Local Government**
- Cities & Counties
- Floodplain Managers
- Coastal Planners
- State GIS Offices
- State Fish & Wildlife
- State Forestry Programs
- Water/Sanitation Districts
- State Geological Surveys

**Energy Company Research Units**
- RPS, Shell, Kisters, etc.

**NGO/Conservation/Env Consulting**
- TNC
- Conservation Int’l
- SCGIS
- World Resources Institute
- Audubon
- Land Trust
- exactEarth
- Stone Environmental
- CSA Ocean Sciences
- Cal Academy of Sciences
- etc.

**Program Components**
- Chief Scientist, National Government Science Team Esri Education Team
- Internships for students
- Sabbaticals for faculty
- Esri Development Centers at universities
- Summits: Dev, Geodesign, Ocean, Health, etc. (UC Science Symposium starting in 2016)
- Software stacks (e.g., MultiD, SciPy, R integration)
- Data Stacks (e.g., ArcGIS Online content, Living Atlas)
- Resource Websites (blogs, use cases, webinars)
- Esri Press research monographs
- App challenges/Design competitions
- Informal MOUs with labs/orgs
FTFY!
Great Stories Hiding in Spreadsheets Everywhere
Case Study

Fracking in Kern County California


**Battle Lines Over Trump’s Lands**

**Policy Stretch Across 640 Million Acres**

By JACK HEALY and KIRK JOHNSON  NOV. 18, 2016

DENVER — Uranium mines around the Grand Canyon. Oil drilling rigs studding the Arctic National Wildlife Refuge. New coal and timber leases in the national forests. States divvying up millions of acres of federal land to dispose of as they wish.

---

**First 100 Days List**

---

**Energy and Environment**

**Trump orders review of national monuments, vows to ‘end these abuses and return control to the people’**

By Juliet Eilperin  April 26

President Trump signed an executive order Wednesday instructing Interior Secretary Ryan Zinke to review national monuments.

President Trump signed an executive order on the Antiquities Act on April 26. The Department of the Interior will review national monument designations over the past 21 years. (The Washington Post)
Public Lands Tracker
Through the Lens of Green Infrastructure
We as a nation have problems that we must face head-on. Visualizing them might be the first step in tackling them before it's too late. Now that we have such a potent image of 700 red dots on a map, only one question remains: Where do we go from here?

You tell us.

http://www.clickhole.com/article/we-put-700-red-dots-map-947
Join the Mission!

- Share your ideas
- Share your data
- Vent your grievances
- Help build solutions
- Elevate Public Discourse!

www.publicsci.org
tierney@publicsci.org
@tierneyodea
#newsgis

Thank you!