



NORAD supported project in MRRD covering  
Capacity Building and Institutional Cooperation in the  
field of Hydrogeology for Faryab Province  
Afghanistan

# **GIS Course 4.6**

## **Advanced Online GIS Maps**

By Andreas de Jong  
October 2015

# PURPOSE OF THIS COURSE

The main purpose of this course is to:

- a) Review the maps participants produced since the last course & address any questions/issues.
- b) Introduce some 'advanced' topics:
  - Making maps of 'live' online data
  - Embedding maps in web sites.

# KEY REFERENCES

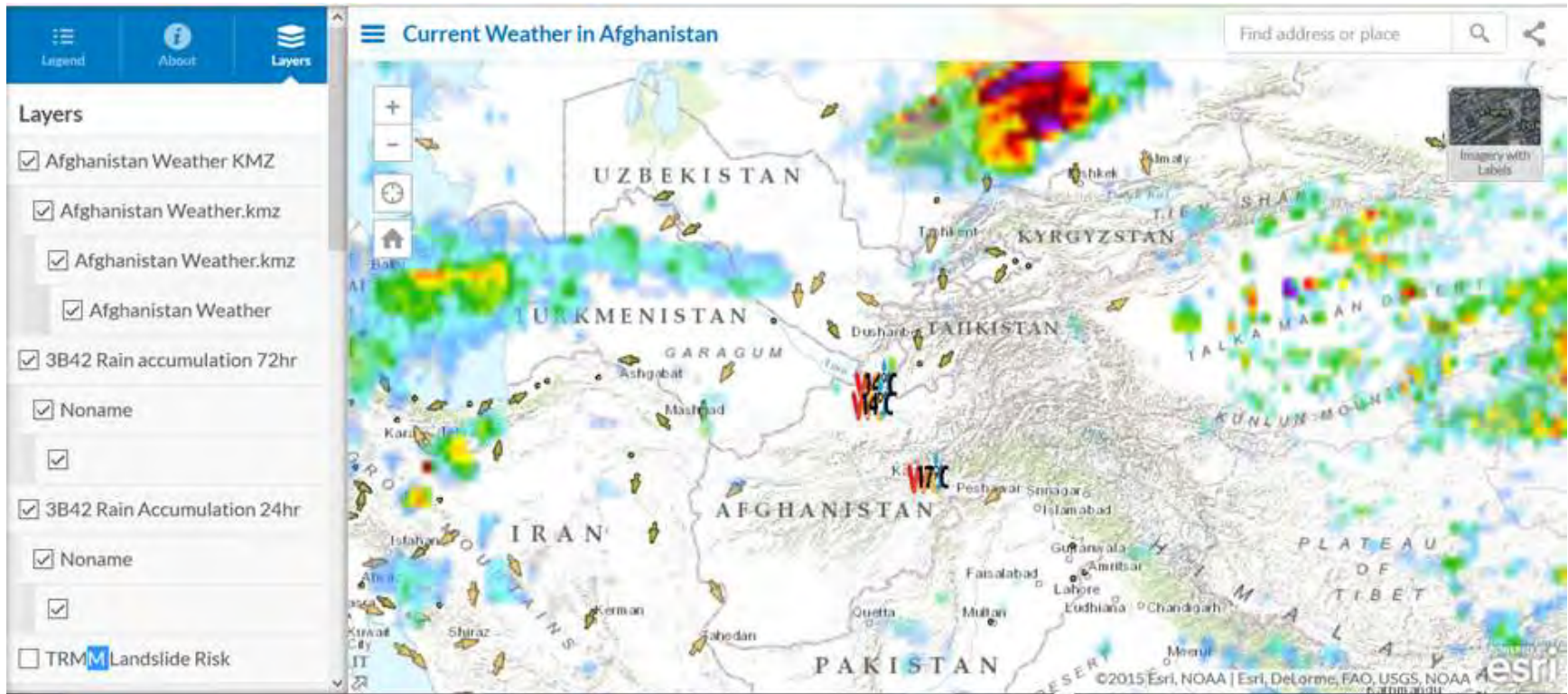
**ESRI ArcGIS Online:** [\*https://www.arcgis.com/features/\*](https://www.arcgis.com/features/)

**Documentation:** [\*http://doc.arcgis.com/en/arcgis-online/index.html\*](http://doc.arcgis.com/en/arcgis-online/index.html)

**Online Training:** [\*http://www.esri.com/training/main\*](http://www.esri.com/training/main) & [\*http://learn.arcgis.com/en/projects/get-started-with-arcgis-online/\*](http://learn.arcgis.com/en/projects/get-started-with-arcgis-online/)

**Blog:** [\*http://blogs.esri.com/esri/arcgis/category/arcgis-online/\*](http://blogs.esri.com/esri/arcgis/category/arcgis-online/)

# EXAMPLE OUTPUT BY END OF COURSE



Live Weather map of Afghanistan

# What you will need for this course



Internet (Fast!)



Internet Browser



MS Access



MS Excel



ArcGIS 10.0

	A	B	C	D	E	F	G
1	WPoint_ID	WPCode	Type	WPname	Village	District	Longitude
2	2038	353702065131501	Drilled bor	Dar e Shak	Dar e Shak	Gurziwan	65.22075
3	2056	353705065134801	Drilled bor	Dara e Sha	Dara e Sha	Gurziwan	65.23009
4	2099	353711065032801	Drilled bor	Kaykawos	Kaykawos	Gurziwan	65.05764
5	2055	353712065131502	Drilled bor	Dara e Sha	Dara e Sha	Gurziwan	65.22075
6	2035	353719065131302	Drilled bor	Dara e Sha	Dara e Sha	Gurziwan	65.22025
7	2133	353731065034701	Drilled bor	Kikawas	Kikawas	Gurziwan	65.06296
8	2104	353742065035801	Drilled bor	Perech	Perech	Gurziwan	65.06614
9	2134	353749065041201	Drilled bor	Kikawas	Kikawas	Gurziwan	65.06985

**Your own data & coordinates**

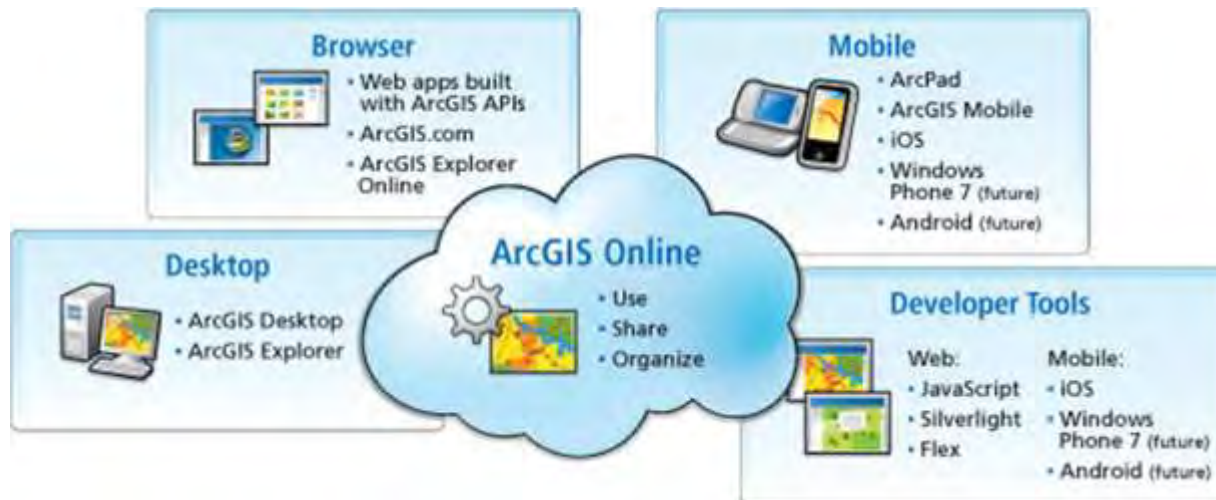
# Tentative Course Schedule

Day	Date	Activity
1	Tuesday 27/10/2015	Opening & Introduction
		Presentation: Review of Online GIS Mapping
		Workshop: Presentation of participants of Online GIS maps produced since the last training course (4.5). Questions & Answers
2	Wednesday 28/10/2015	Practical 1: Inclusion of live data in ArcGIS Online
		Practical 2: Embedding ArcGIS Online to web sites
		Workshop: Discussion on the practical implementation of online GIS maps in Afghanistan.



# GIS Course 4.6 – Advanced Online GIS Maps

1. Review of ArcGIS Online Courses
2. ArcGIS Online & 'Live' Internet Data
3. Embedding ArcGIS Online Maps in Websites



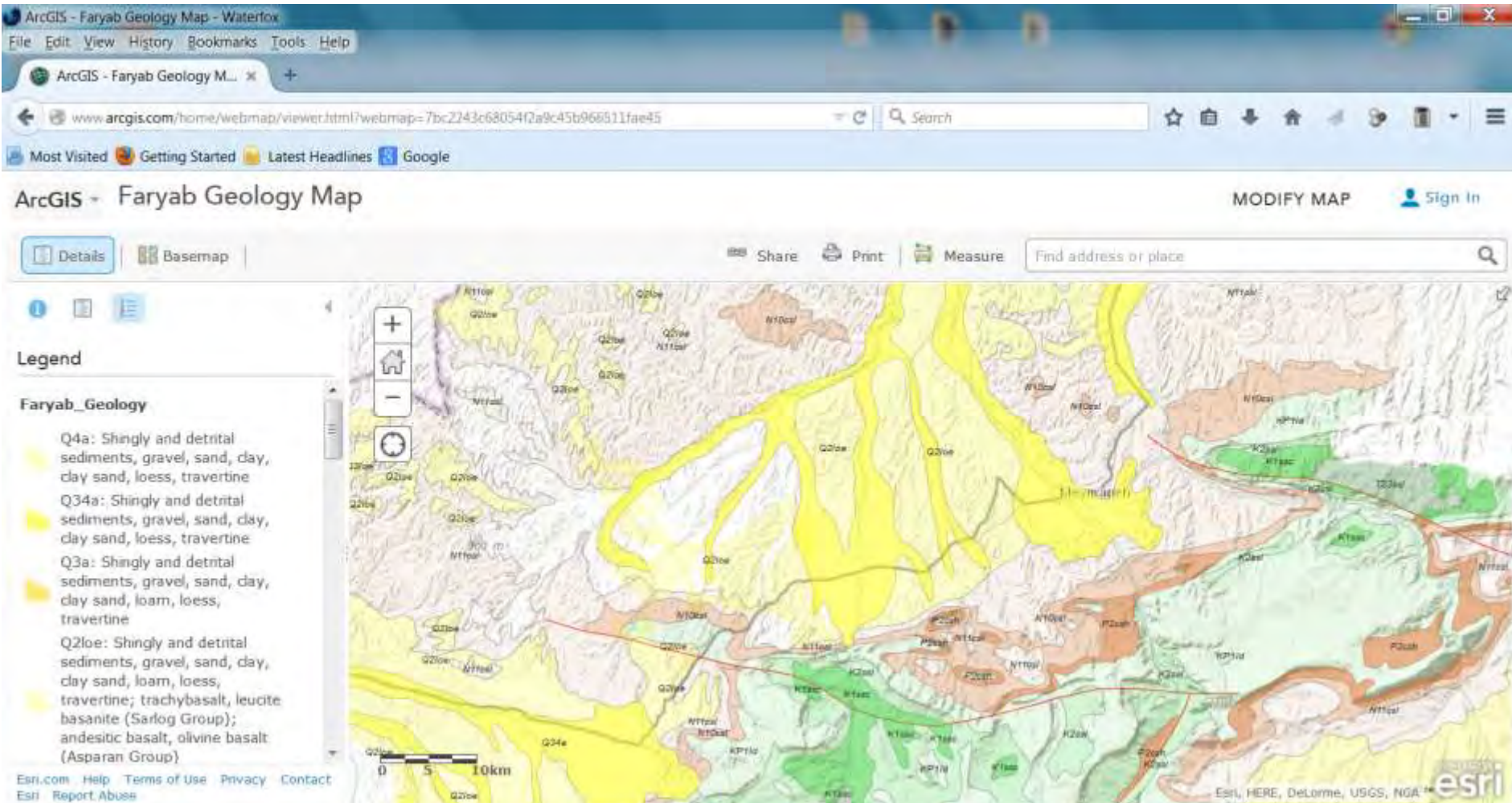
# Course 4.4: Learning ArcGIS Online



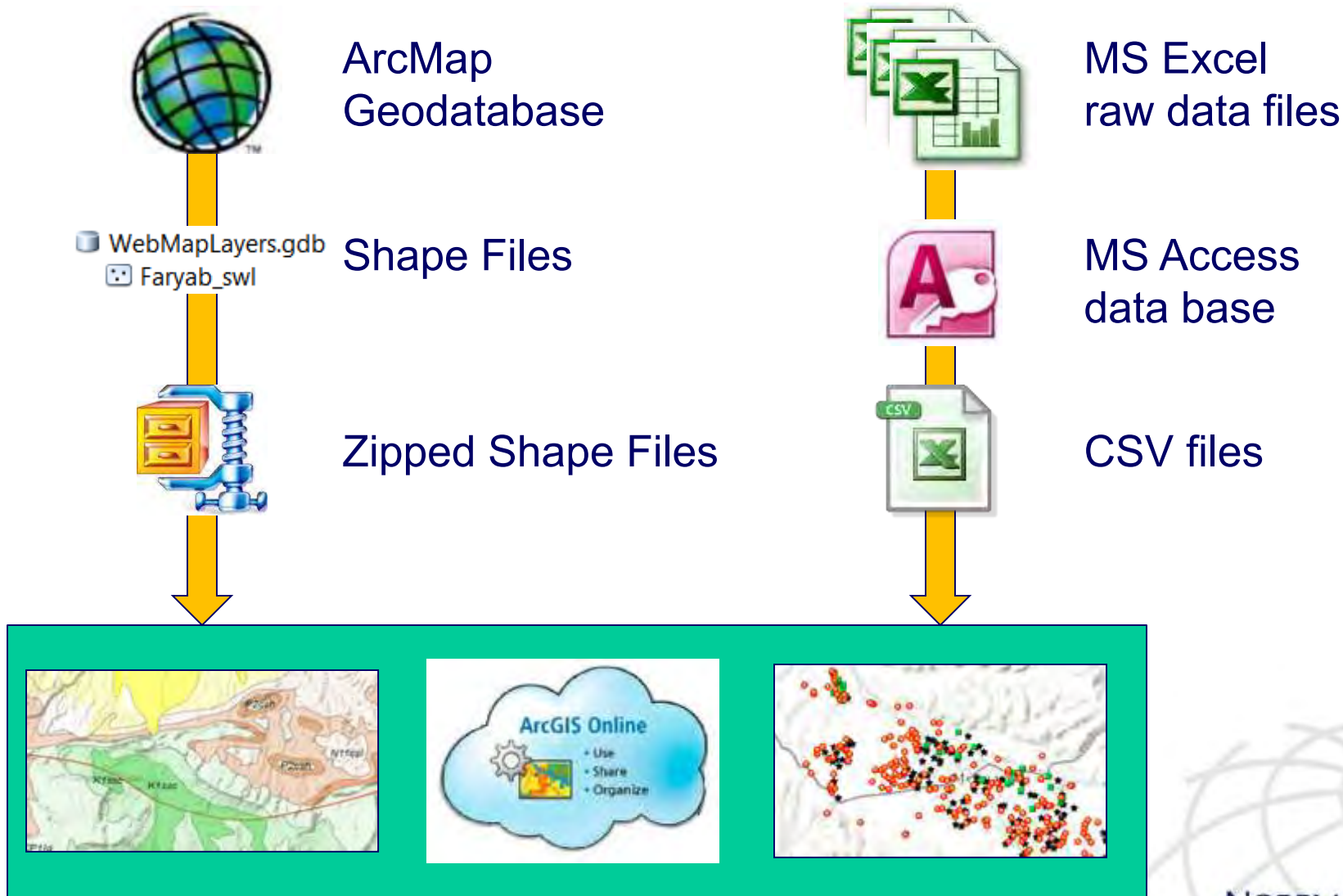
<http://learn.arcgis.com/en/projects/get-started-with-arcgis-online/>



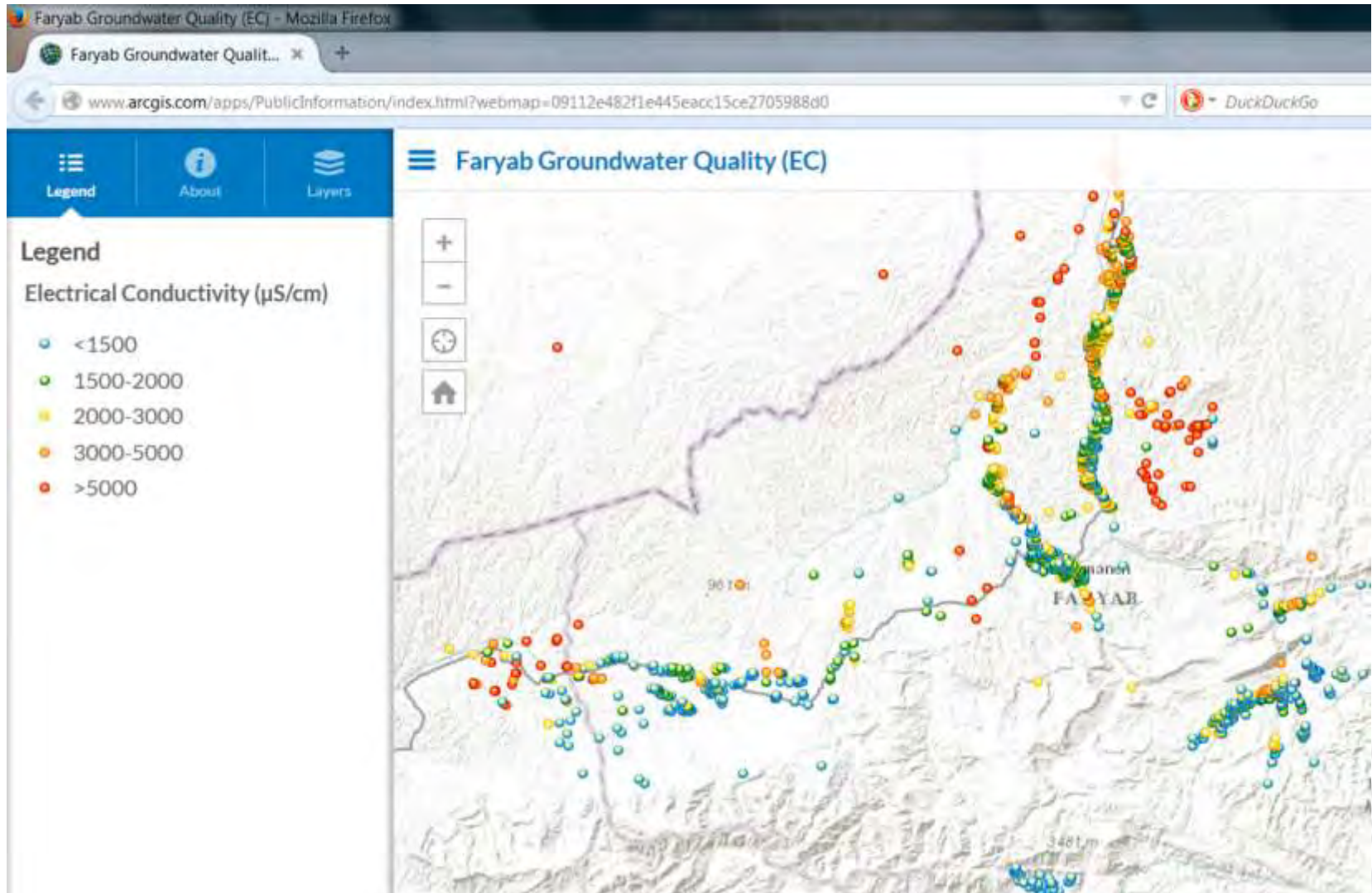
# Course 4.5: Making Online GIS Maps



# Course 4.5: Making Online GIS Maps



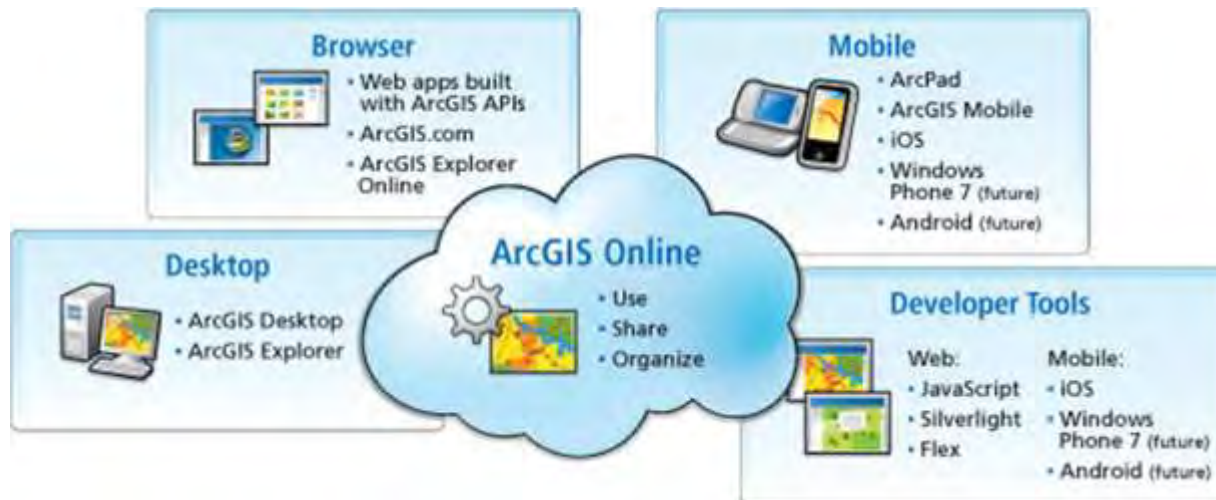
# Course 4.6: Review of Maps & Advanced Topics



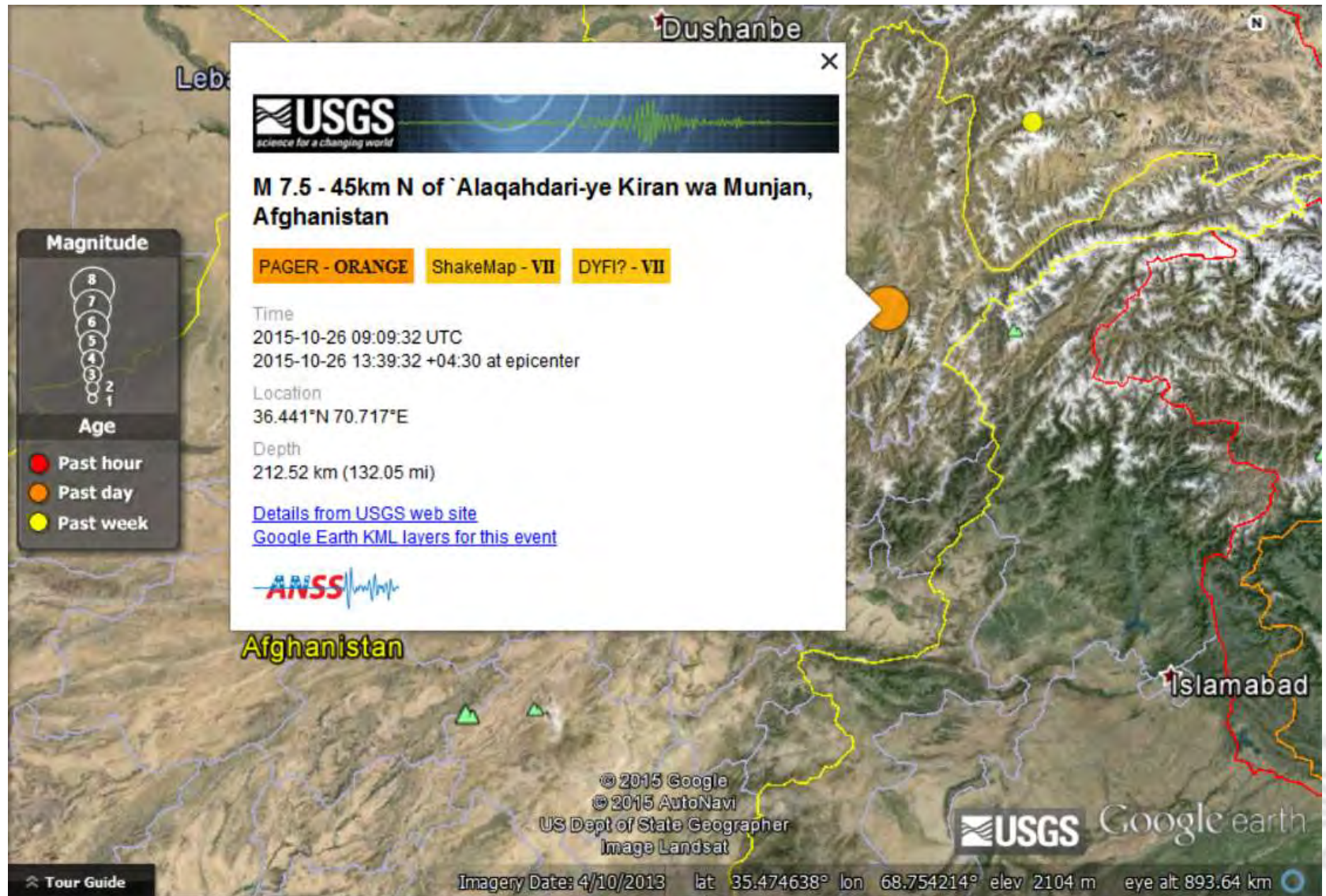


# GIS Course 4.6 – Advanced Online GIS Maps

1. Review of ArcGIS Online Courses
2. ArcGIS Online & 'Live' Internet Data
3. Embedding ArcGIS Online Maps in Websites



# Live Internet Data – Earthquakes from USGS





# Live Internet Data – Rainfall from TRMM

GODDARD SPACE FLIGHT CENTER

[+ NASA Homepage](#)

**TRMM** Tropical Rainfall Measuring Mission

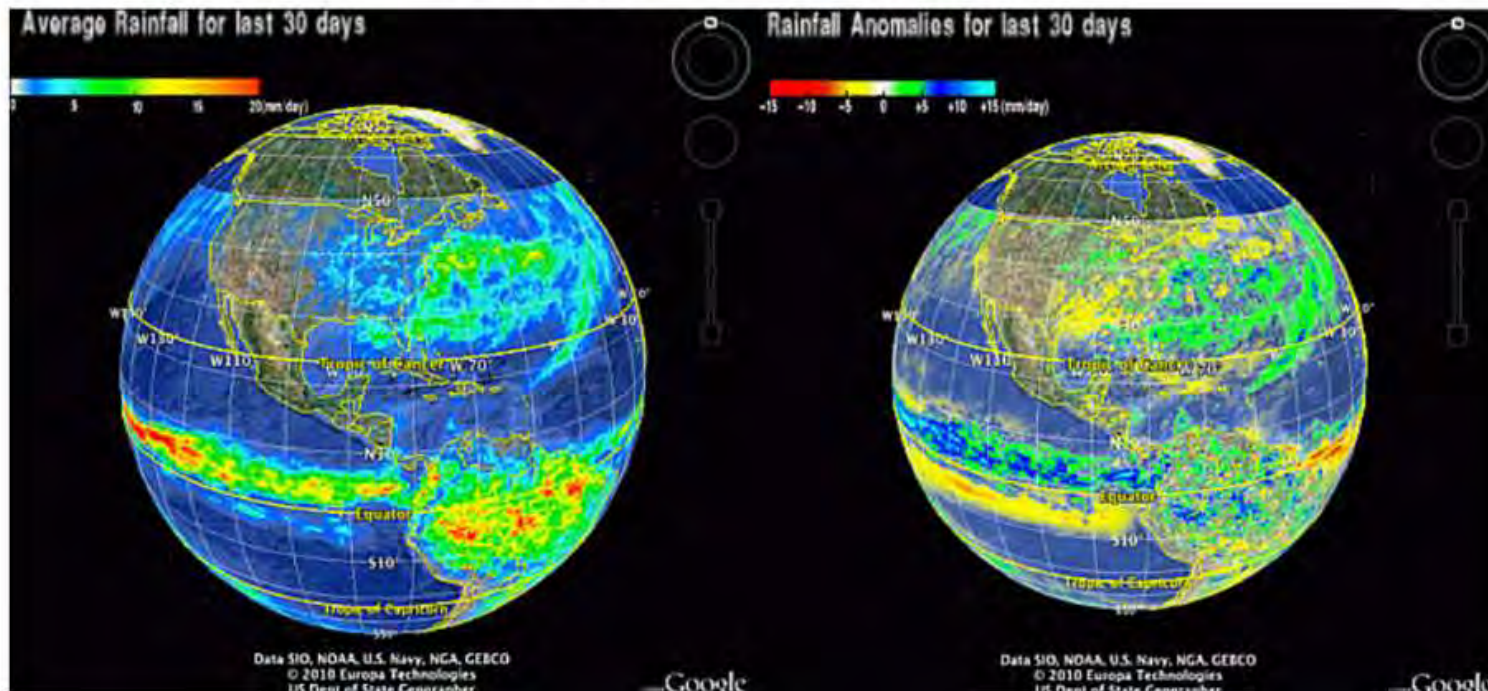


[+ ABOUT TRMM](#) [+ NEWS](#) [+ PUBLICATIONS](#) [+ SEARCH](#) [+ CONTACTS](#) [+ DATA](#) [+ IMAGE POLICY](#)

(Compatible with Google Earth 7.0.2.8415 12/13/2012)

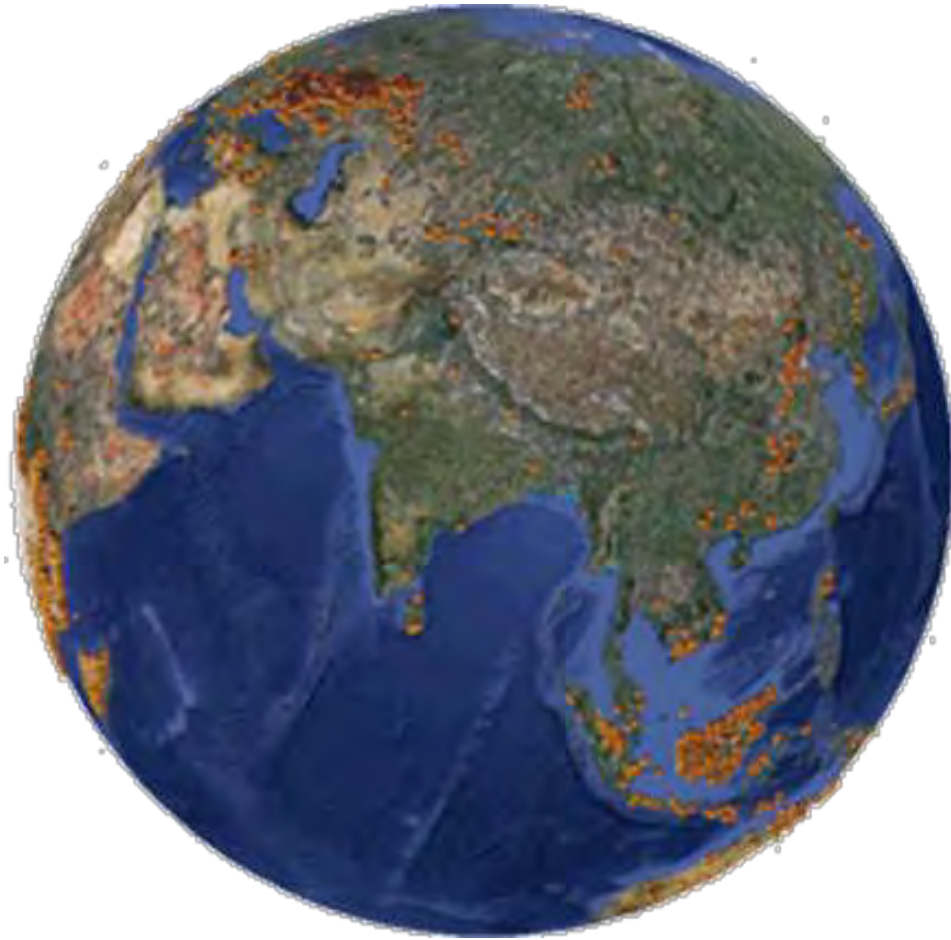
Content Updated: **23 OCT 2015 0600 UTC**

REALTIME 30 Day Average Rainfall and 30 Day Anomalous Rainfall





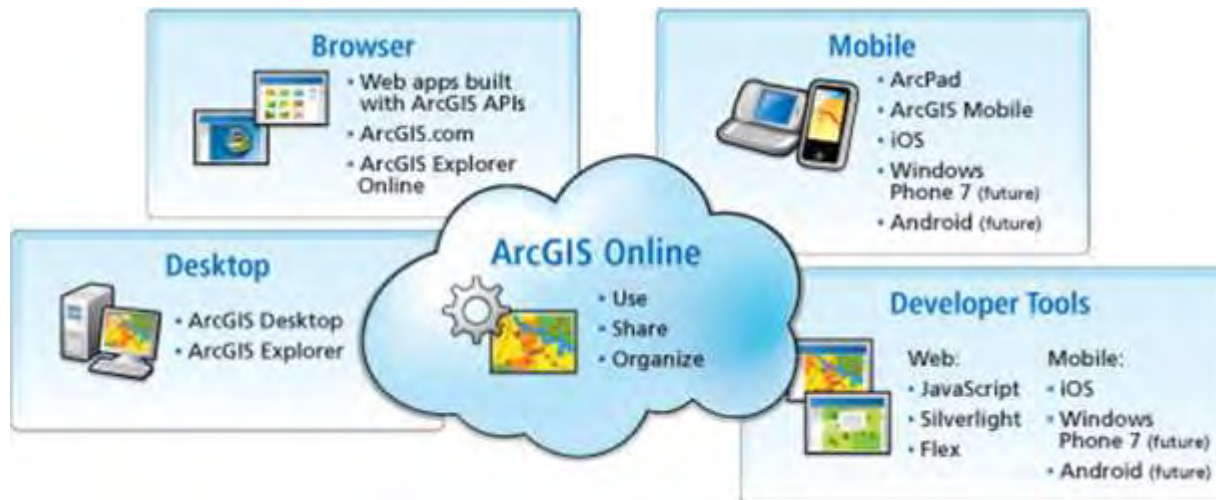
# Live Internet Data – Wild Fires from GFIMS



Global Fire Information Management System (GFIMS)

# GIS Course 4.6 – Advanced Online GIS Maps

1. Review of ArcGIS Online Courses
2. ArcGIS Online & 'Live' Internet Data
3. Embedding ArcGIS Online Maps in Websites



# Access ArcGIS Online via a web site

Untitled Document - Waterfox

File Edit View History Bookmarks Tools Help

Untitled Document x ArcGIS x +

norplan.af/Page\_GIS\_Web\_maps.html

Search

**Different maps covers:**

Water points showing:-

- Type of water point
- Water quality (EC)
- Dept to static water level
- Wells and drilling reports/logs

Also

- Geology
- Satellite images

**Source of data:**

- DACAAR water points
- MRRD data
- USGS
- Russian hydrogeological maps

Different layers of information will be added continuously as dynamic on-line maps

**Hydrogeological Map of Faryab**

**Faryab Water Points Functionality**

Map of Water Points Functionality in Faryab Province, Afghanistan

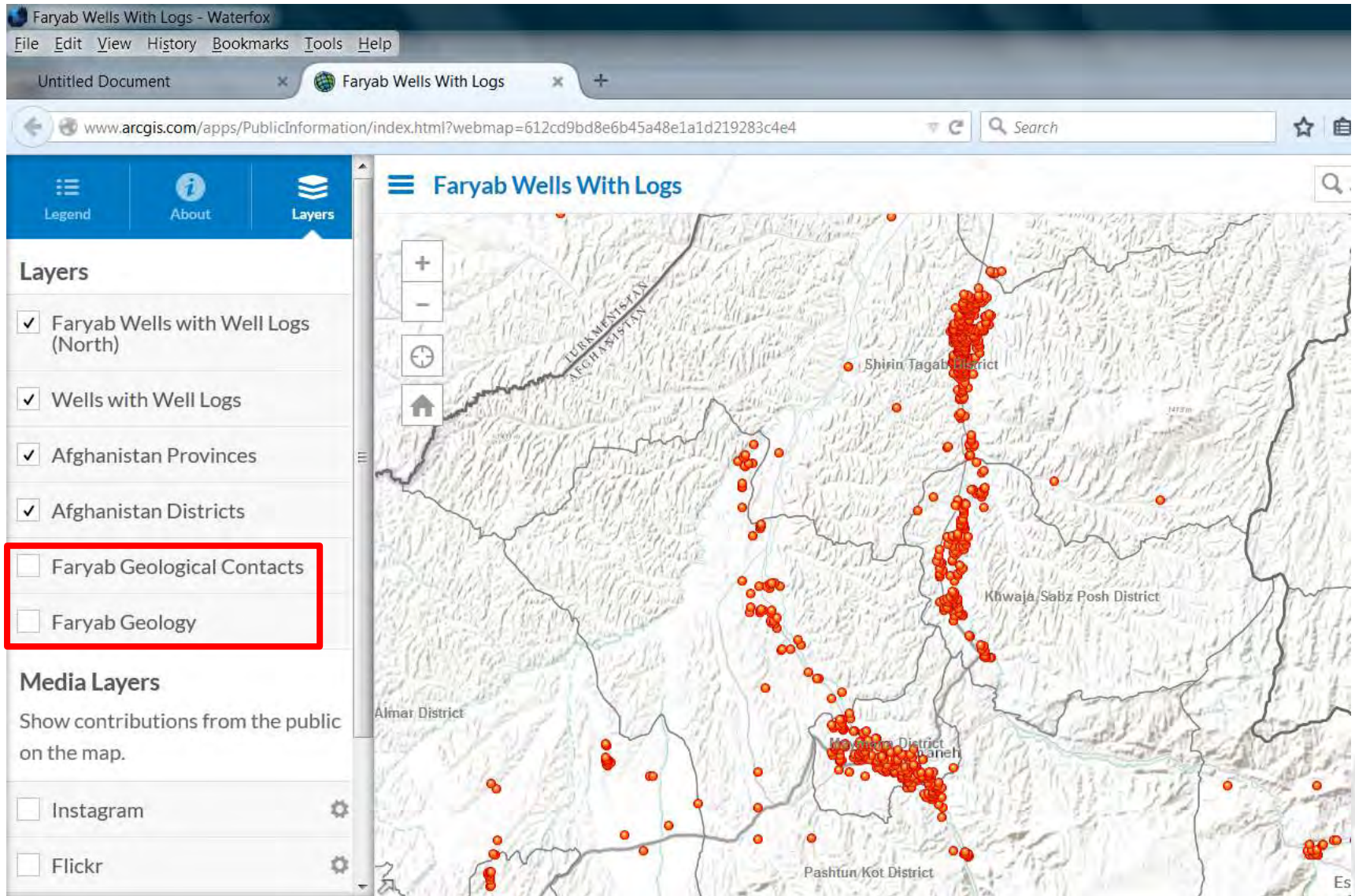
View Map

**Faryab Wells With Logs**

**Faryab Rest Water Levels**

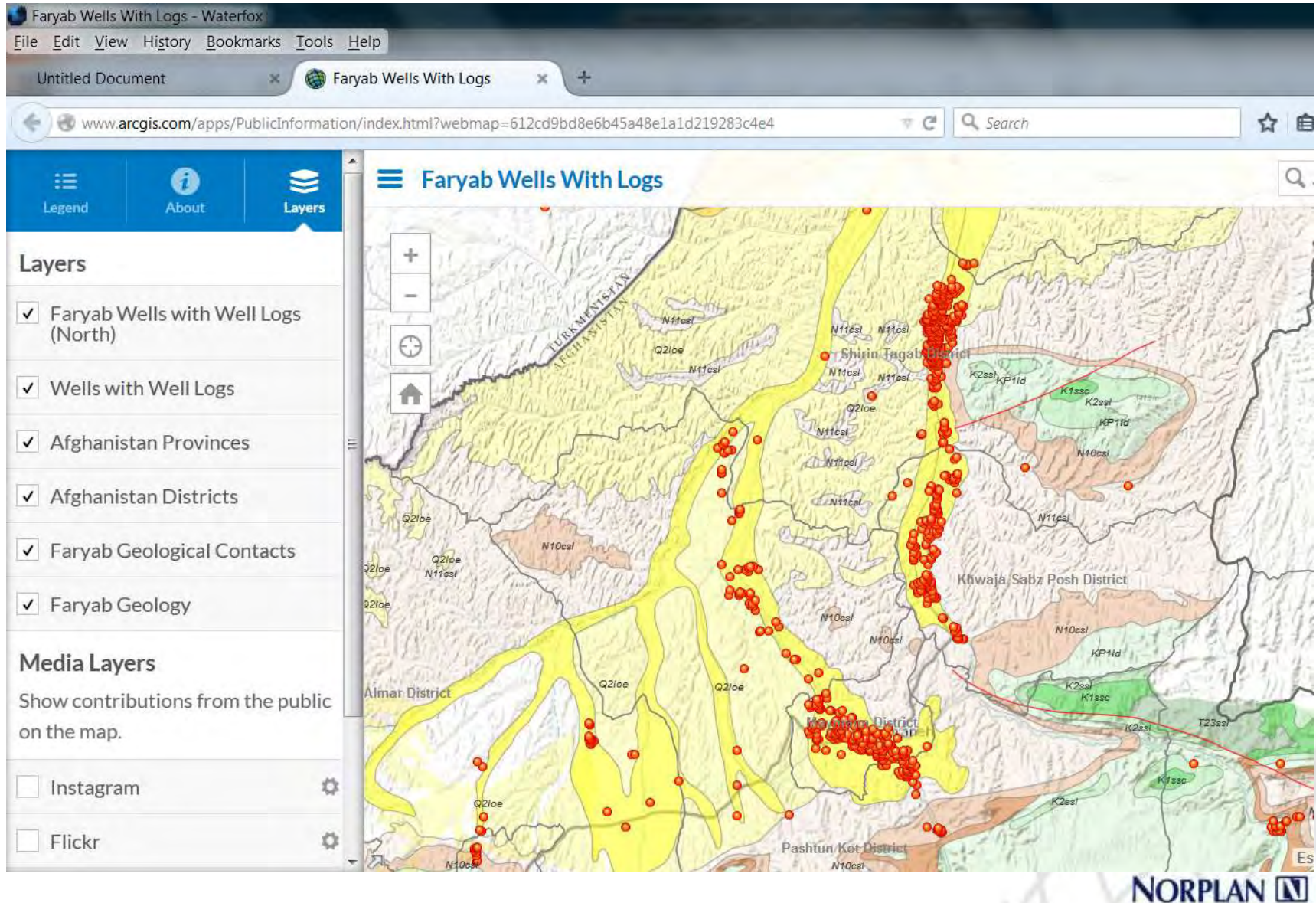


# Access ArcGIS Online via a web site





# Access ArcGIS Online via a web site





# Access ArcGIS Online via a web site

The screenshot shows the ArcGIS Online web interface for the 'Faryab Wells With Logs' map. The browser address bar displays the URL: [www.arcgis.com/apps/PublicInformation/index.html?webmap=612cd9bd8e6b45a48e1a1d219283c4e4](http://www.arcgis.com/apps/PublicInformation/index.html?webmap=612cd9bd8e6b45a48e1a1d219283c4e4). The map shows a geographical area with various wells marked by red dots. A pop-up window displays the following information for the selected well:

(1 of 6)	
<b>Jalaier 2 deep bore (Atomchi village)</b>	
ID	361459064444301
Longitude	64.74518
Latitude	36.24967
Elevation (m)	455
Type	Drilled borehole
Village	Jalaier (Atomchi village)
District	Shirin Tagab
Year constructed	2010
Data source	DACAAR
Use	Exploration
Well Depth (m)	200.00
Diam top (mm)	152
<a href="#">Zoom to</a>	

The interface also includes a legend, a layers list, and a media layers section. The layers list includes:

- ☒ Faryab Wells with Well Logs (North)
- ☒ Wells with Well Logs
- ☒ Afghanistan Provinces
- ☒ Afghanistan Districts
- ☒ Faryab Geological Contacts
- ☒ Faryab Geology

The media layers section shows contributions from the public on the map, with options for Instagram and Flickr.

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# Access ArcGIS Online via a web site

The screenshot displays the ArcGIS Online web interface for the 'Faryab Wells With Logs' map. The browser address bar shows the URL: [www.arcgis.com/apps/PublicInformation/index.html?webmap=612cd9bd8e6b45a48e1a1d219283c4e4](http://www.arcgis.com/apps/PublicInformation/index.html?webmap=612cd9bd8e6b45a48e1a1d219283c4e4). The map shows a geographical area with various wells marked by red dots. A popup window is open, displaying details for a well in the Jalaier (Atomchi) village, Shirin Tagab District, constructed in 2010. The popup window includes a table of well details and a 'More info' link.

**Faryab Wells With Logs**

**Layers**

- ☒ Faryab Wells with Well Logs (North)
- ☒ Wells with Well Logs
- ☒ Afghanistan Provinces
- ☒ Afghanistan Districts
- ☒ Faryab Geological Contacts
- ☒ Faryab Geology

**Media Layers**

Show contributions from the public on the map.

- ☐ Instagram
- ☐ Flickr

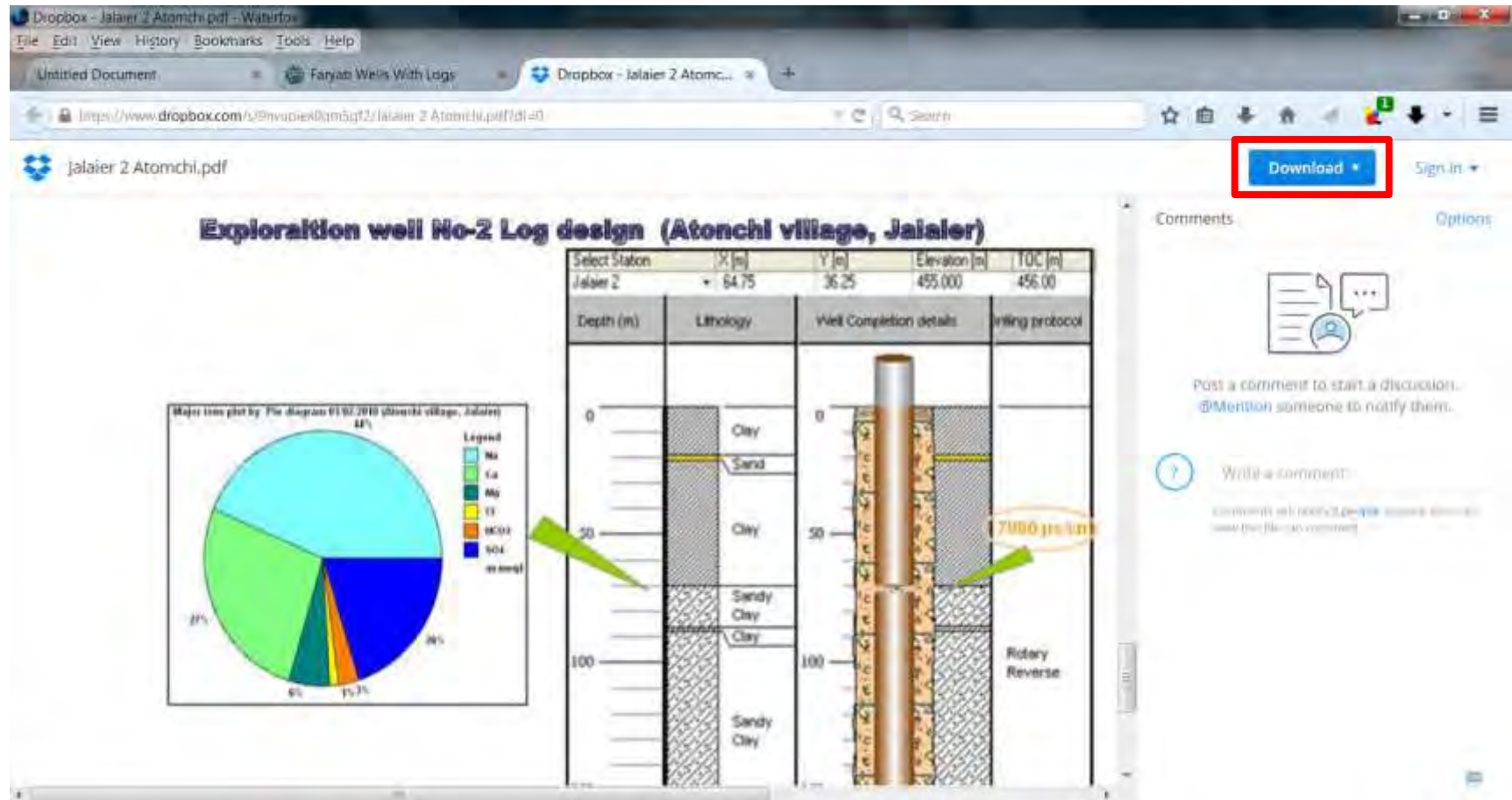
**Well Details (1 of 6)**

Village	Jalaier (Atomchi village)
District	Shirin Tagab
Year constructed	2010
Data source	DACAAR
Use	Exploration
Well Depth (m)	200.00
Diam top (mm)	152
SWL (m)	16.70
SWL date	July 2, 2010
Well report	DACAAR/Jalaier 2 Atomchi.pdf
Download data	<a href="#">More info</a>

[Zoom to](#)

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# Access ArcGIS Online via a web site



# Workshop:

## *Discussion on the practical implementation of online GIS maps in Afghanistan*



**Thank you  
for your attention!**