

Wayback Imagery: Fluctuating Lakes

Lake water levels fluctuate. The fluctuation of lakes depends on both the time of the year and the global decline of water. You have been tasked with presenting imagery from the past 5 years to show the fluctuation of the following lakes:

- Poyang Lake, China
- Lake Faguibine, Mali
- Aral Sea (South Aral Sea), Karakalpakstan
- Lake Assal, Djibouti

Build skills in these areas

- Use temporal images
- Make a Swipe Story Map
- Use a URL in a Story Map

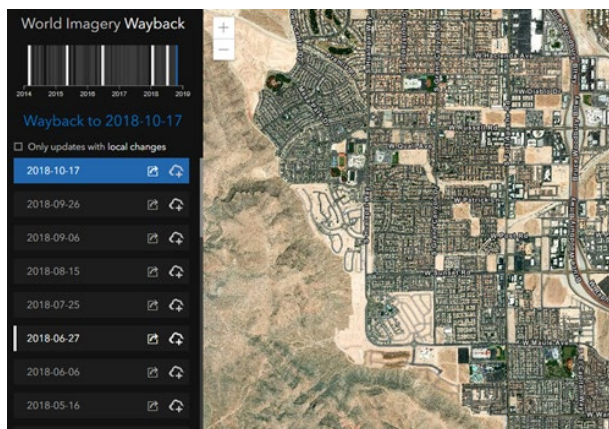
What you need

- Account required
- Estimated time: 30 mins

Publication Date: November 2018

Use World Imagery Wayback App

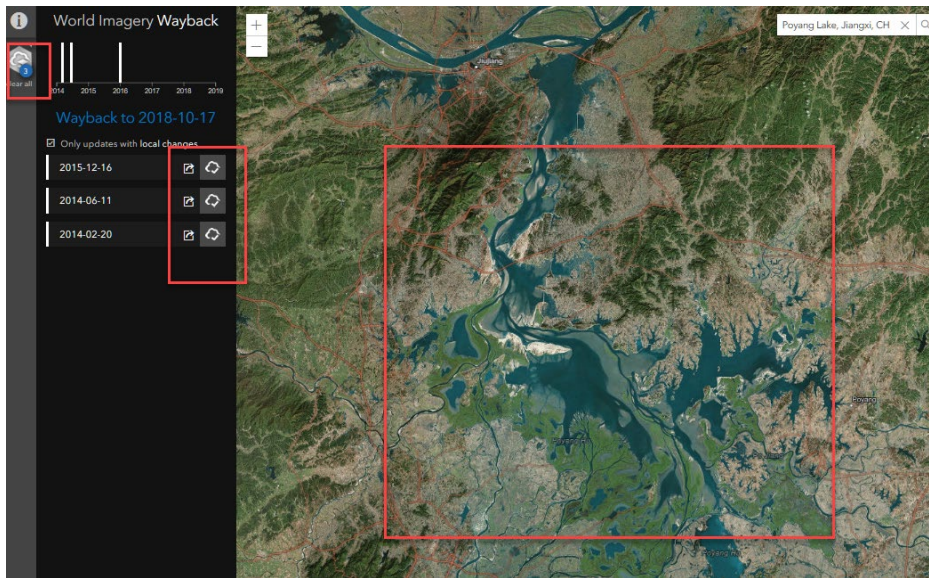
Wayback imagery is a digital archive of the World Imagery basemap, enabling users to access different versions of World Imagery captured over the years. Each record in the archive represents World Imagery as it existed on the date new imagery was published. Wayback currently supports all updated versions of World Imagery dating back to February 20, 2014.



Find available temporal images of Poyang Lake, China.

1. Open [World Imagery Wayback App](#).
2. Search for Poyang Lake, China in the upper right location tab.
3. Check on **Only updates with local changes**.
4. Click on the **Add this update to an ArcGIS online Map** next to each layer (*a checkmark will appear when it's selected*).

5. Click the **Choose updates from the list to build a set of Wayback layers for use in a new web map** button on the top left corner of the interface. (*Looks like a cloud with the number of layers*).



6. Sign in using your ArcGIS online account credentials.
7. If necessary, click **Choose Updates** again.
8. Add the appropriate metadata: Title, Tags, Description.
9. Create Wayback Map.
10. Open Wayback Map.
11. Sign into your [ArcGIS account](#) again.
12. Select images that are appropriate.

Tip: The layers load over top the Imagery basemap. Any layers that are the same as the basemap should be removed.

13. Remove **Wayback 2015-12-16** and **Wayback 2014_06-11**.
14. Save.

Note: The last image shown is usually the same as the Imagery basemap. If change is not visible do not add the date.

Wayback 2015-12-16 and Wayback 2014-06-11 seem to be nearly the same as the basemap. Since the latest image 2015-12-16 seems to be the same it has already been incorporated in the original basemap.

Constructing a Pre and Post Swipe Map

Compare images from 2014 to 2016

1. Turn on Wayback Image 2014.
2. Save the map as **Poyang 2014** with appropriate metadata.
3. Turn off Wayback Image 2014.
4. Save the map of just the original Imagery basemap, and title it **Poyang 2016** with appropriate metadata.
5. On the top ribbon click **Share**.
6. Click **CREATE A WEB APP**.
7. Click **Build a Story Map >> Story Map Swipe and Spyglass**.
8. Click **CREATE WEB APP**.
9. If necessary, add a Title: **Poyang 2014**
10. Add a summary description: **Comparison of 2014 and 2016 Poyang Lake**
11. Click **DONE**.
12. Choose **Vertical bar style** and **Next**.
13. Select the **Two web maps** option type.
14. For the Right Web map ID: select **Poyang 2014**.
15. Click **Next >> Next**.
16. **Open the app**.

Optional Task: Do some research on your own and add text describing each map.

17. Click **Save**.
18. Click **Share**.

19. Click **Preview**.

Poyang Lake is subjected to seasonal water-level fluctuations. These fluctuations are caused both the natural seasons and can be intensified by irrigation, drought and upstream development.



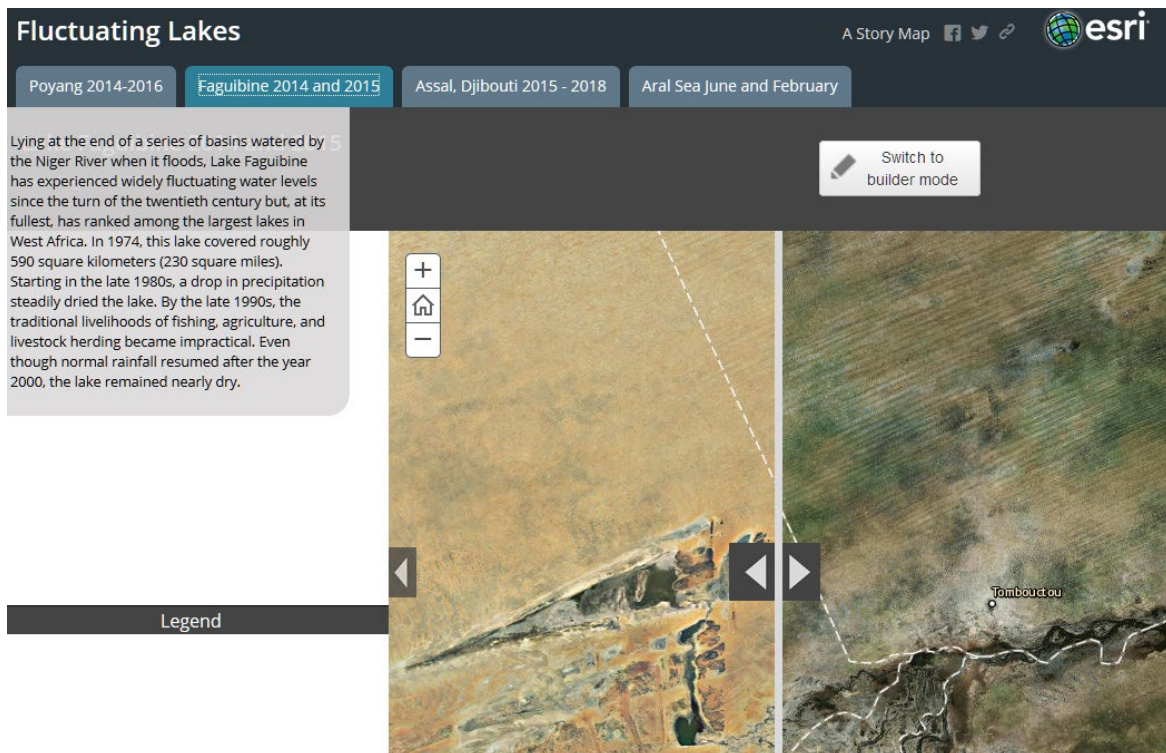
Combine Maps into a Cumulative Story Map

1. Following the above steps make a swipe story map for Lake Faguibine, Mali.
 - a. Save the **Imagery with Labels** basemap which is 2015-12-16 as Faguibine 2015 and the 2014-02-20 Wayback as Faguibine 2014.
 - b. Remove 2015-12-16 and 2014-06-11.
2. Following the above steps make a swipe story map for the Aral Sea (South Aral Sea), Karakalpakstan.
 - a. Save Wayback image 2014-02-20 as Aral February and Wayback image 2014-06-11 as Aral June.
 - b. Remove 2015-12-16.
3. Following the above steps make a swipe story map for Lake Assal, Djibouti.
 - a. Save the **Imagery with Labels** basemap as Assal 2018 and the Wayback imagery 2015-12-16 and Assal 2015.
 - b. Remove 1018-03-28, 2018-01-16, and 2018-01-18.

Now all four swipe story maps need to be combined into one tabbed story map.

1. Click the back arrow and go back to **Content**.
2. Click **Poyang Lake 2014-2016 web application**.
3. Open the web application and copy the URL.

4. Return to your Content page and click the **Poyang 2016 web map**.
5. Click **Poyang 2016**.
6. Click **Create Web App >> Using a Template**.
7. Click **Build a Story Map >> Story Map Series**.
8. Click **CREATE WEB APP**.
9. Add a title: *Fluctuating Lakes*
10. Add a summary: *Fluctuating Lakes of the World*.
11. Click **DONE >> Tabbed >> START**.
12. Click Blue Arrow.
13. Add a Title: *Poyang Lake 2014-2016*.
14. Select **Web Page** and paste the URL in the Web Page Link.
15. Click **Configure** and **Add**.
16. Click **Save**.
17. Repeat steps 16 and 17 for **Lake Faguibine 2014 and 2015**.
18. Repeat steps 16 and 17 for **Aral Sea June and Aral Sea February**.
19. Repeat steps 16 and 17 for **Lake Assal, Djibouti 2015 – 2018**.



Learn more

Compare different places of change within your county or state using Wayback Imagery. Remember, it is for the last five years.

[Using World Imagery Wayback](#) by Bern Szukalski

[Story Map Swipe and Spyglass Tutorial](#)

[Embedding a Story Map within a Story Map](#) by Bern Szukalski

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