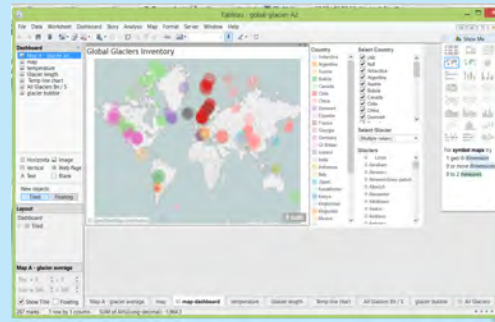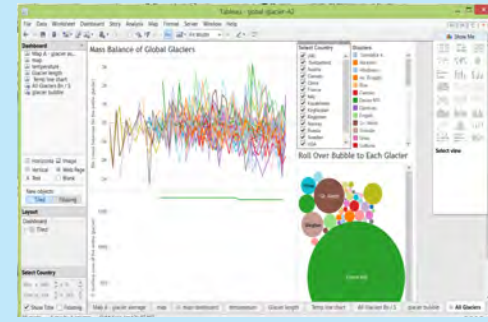# Interactive Global Glacier Data

www.monainspire.com/info/glacier

How it is made

Worksheet for map with global glaciers inventory.

Dashboard with all countries selected.

Excel files with global glaciers data.

I use Tableau to do the data visualization. I find data from National Snow & Ice Data Center. They have a details data for global glaciers inventory. In order to use the data in Tableau, I need to clean up the excel file a lot. The latitude and longitude of glaciers are in degree and Tableau use decimal; therefore, I use formula to convert all geolocation to decimal in excel before import. There are over one thousand records in excel files in grouping and merged cells, and I need to group each glacier's record in individual row for Tableau to read.

Tableau is a powerful and friendly use program for the data visualization without in depth programming knowledge. Once I connected to data, it gives me options of data visualization. I create different worksheet to visualized result. I set up three dashboard for the web site. There are some default actions to choose for the interaction with the data. I publish the dashboard to Tableau server. I assemble the web site in Dreamweaver with some html and CSS hand coding. I do both the interactive web site together with this pamphlet in InDesign for this project.

Mona Chiu

DAI 052301- Information Design

Global Glacier Inventory

Dec 17, 2014

SOURCES

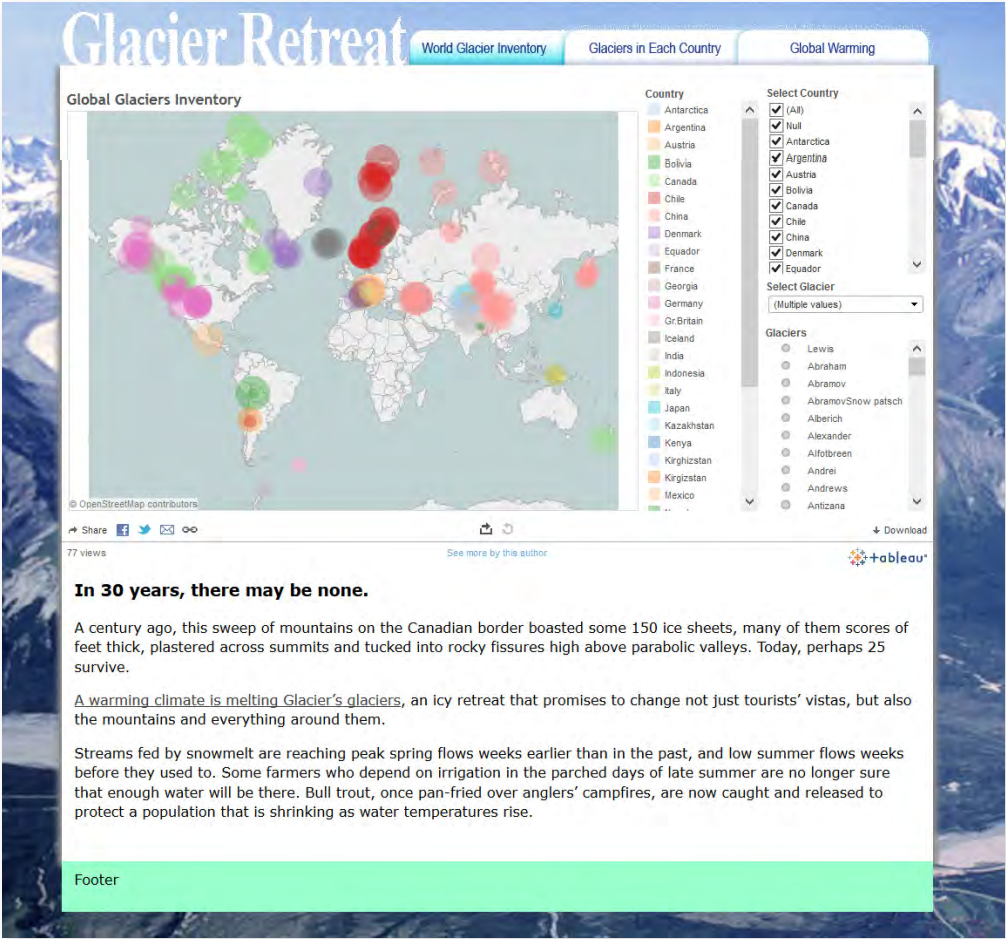Climate Change Threatens to Strip the Identity of Glacier National Park, By MICHAEL WINESNOV. 22, 2014, The New York Times.
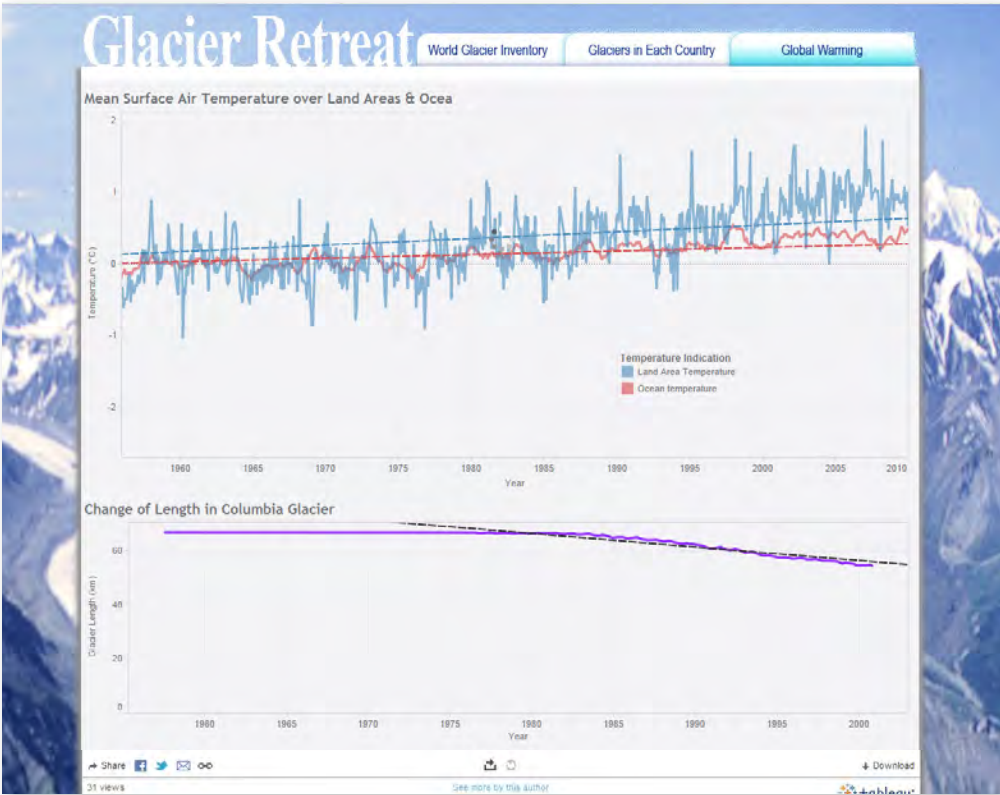
National Snow & Ice Data Center, http://nsidc.org/data/icesat/data.html
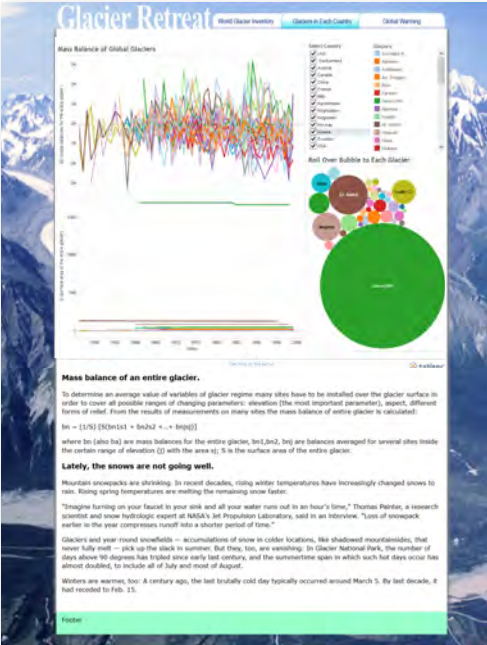
http://www.tableausoftware.com/

http://www.columbia.edu/

Glacier Retreat — World Glacier Inventory — Glaciers in Each Country — Global Warming

Mass Balance of Global Glaciers

Roll Over Bubble to Each Glacier

St. Sorlin
Sarennes
Ts. Tuyuksu

Glaciers in Each Country

Glaciers
Sarennes
St. Sorlin
Ts. Tuyuksu

Select Country
(All)
Switzerland
Austria
Canada
China
France
Italy
Kazakhstan
Kirghizstan
Kirgizstan
Norway
Russia
Sweden
USA

See more by this author

In 30 years, there may be none.
A century ago, this sweep of mountains on the Canadian border boasted some 150 ice sheets, feet thick, plastered across summits and tucked into rocky fissures high above parabolic survive.

A warming climate is melting Glacier's glaciers, an icy retreat that promises to change not just the mountains and everything around them.

Streams fed by snowmelt are reaching peak spring flows weeks earlier than in the past before they used to. Some farmers who depend on irrigation in the next that enough water will be there. Bull trout, once pan-fried protect a population that is shrinking

Mean Surface Air Temperature over Land Areas & Ocea

Temperature Indicators
Land Area Temperature
Ocean temperature

Global Glacier Inventory

Web page with all countries selected.

All countries are selected, and display all glaciers in map.

When Spain and Switzerland are selected, we can see the comparison of glaciers in these two country.

This is the locations of global glaciers.

When you choose individual country or multiple countries to view, the related glaciers with indication of size will show.

In 30 years, there may be none.

A century ago, this sweep of mountains on the Canadian border boasted some 150 ice sheets, many of them scores of feet thick, plastered across summits and tucked into rocky fissures high above parabolic valleys. Today, perhaps 25 survive.

A warming climate is melting Glacier's glaciers, an icy retreat that promises to change not just tourists' vistas, but also the mountains and everything around them.

Streams fed by snowmelt are reaching peak spring flows weeks earlier than in the past, and low summer flows weeks before they used to. Some farmers who depend on irrigation in the parched days of late summer are no longer sure that enough water will be there. Bull trout, once pan-fried over anglers' campfires, are now caught and released to protect a population that is shrinking as water temperatures rise.
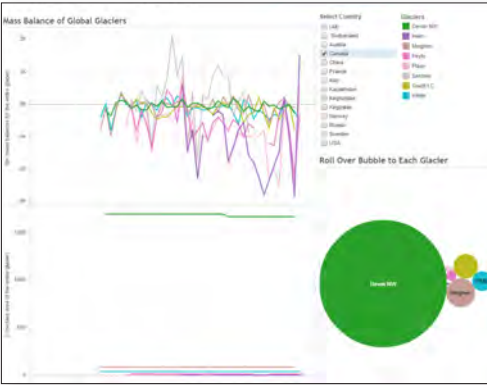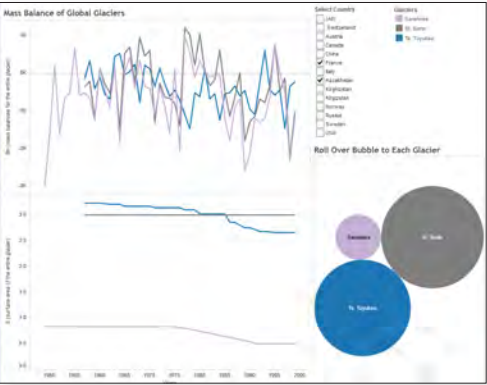
Glacier in Each Country

Web page with all countries selected.

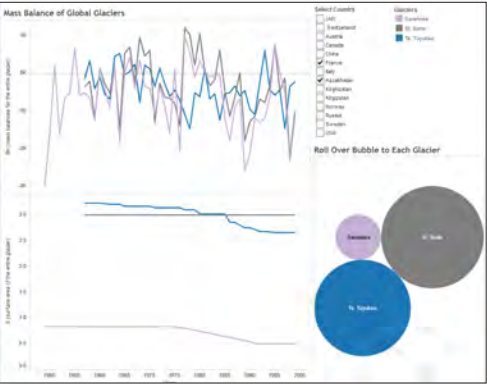These two graphs are the scientific data to calculate the size of glaciers in terms of volume and surface area. This covers top 13 countries with largest glaciers. You can choose individual or multiple countries for the glaciers information. You can roll over the bubbles or graph and show the details of data. When you hover certain bubble, the related line in graph will highlight simultaneously.
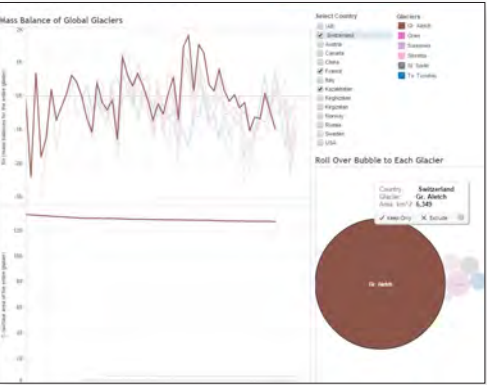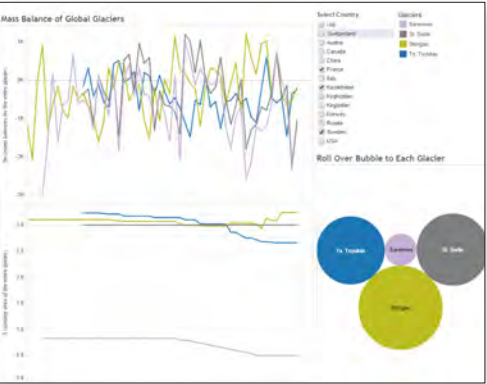

Average global sea level rises and falls

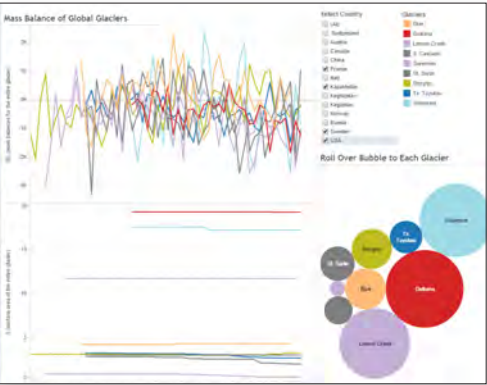Average global sea level rises and falls
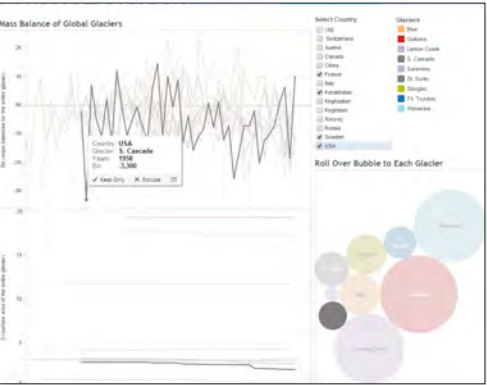

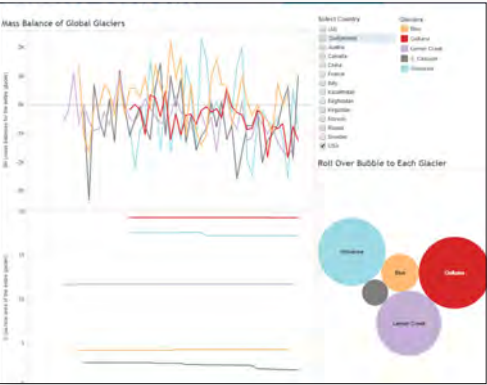Glaciers in France and Kazakhstan.
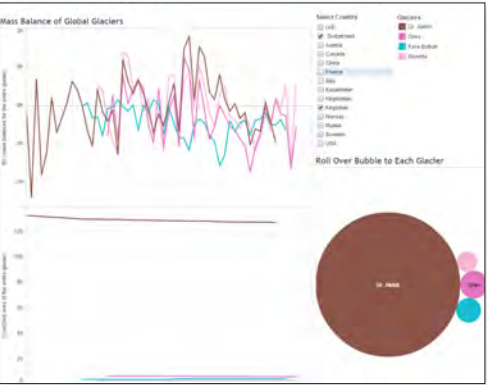

Glaciers in France, Kazakhstan, and Sweden

Glaciers in France, Kirzakhstan, Sweden, and USA

When you roll over any point in graph, it shows details of this glacier in particular year, and the bubble and line will highlight.

Glaciers in Canada

Glaciers in USA

Glaciers in Switzerland and Kirgiztan

Global Warming

I use Columbia Glacier to illustrate the consequence of global warming in glacier retreat. These two graphs are comparison of the ocean and land temperature change verse the retreat of Columbia Glacier's length from year of 1956 to 2010. There are animations for changes of global temperature and satellite image of Columbia Glacier.