

Making Custom Maps With TileMill & CartoCSS

Portland Cartographic Symposium 2013
Justin Miller • MapBox



Overview

- What is TileMill? CartoCSS?
- Who is it designed for?
- How does it work?
- *Brief* demo



About Me

- Mobile Lead at MapBox
- I live & work here in Portland
- I am *most assuredly* not a cartographer
 - But: ask me questions & I can get them answered

About MapBox

- “Founded” in 2010
- Building geographic tools for everyone
- Building on open source & open data
- Trying to *focus*



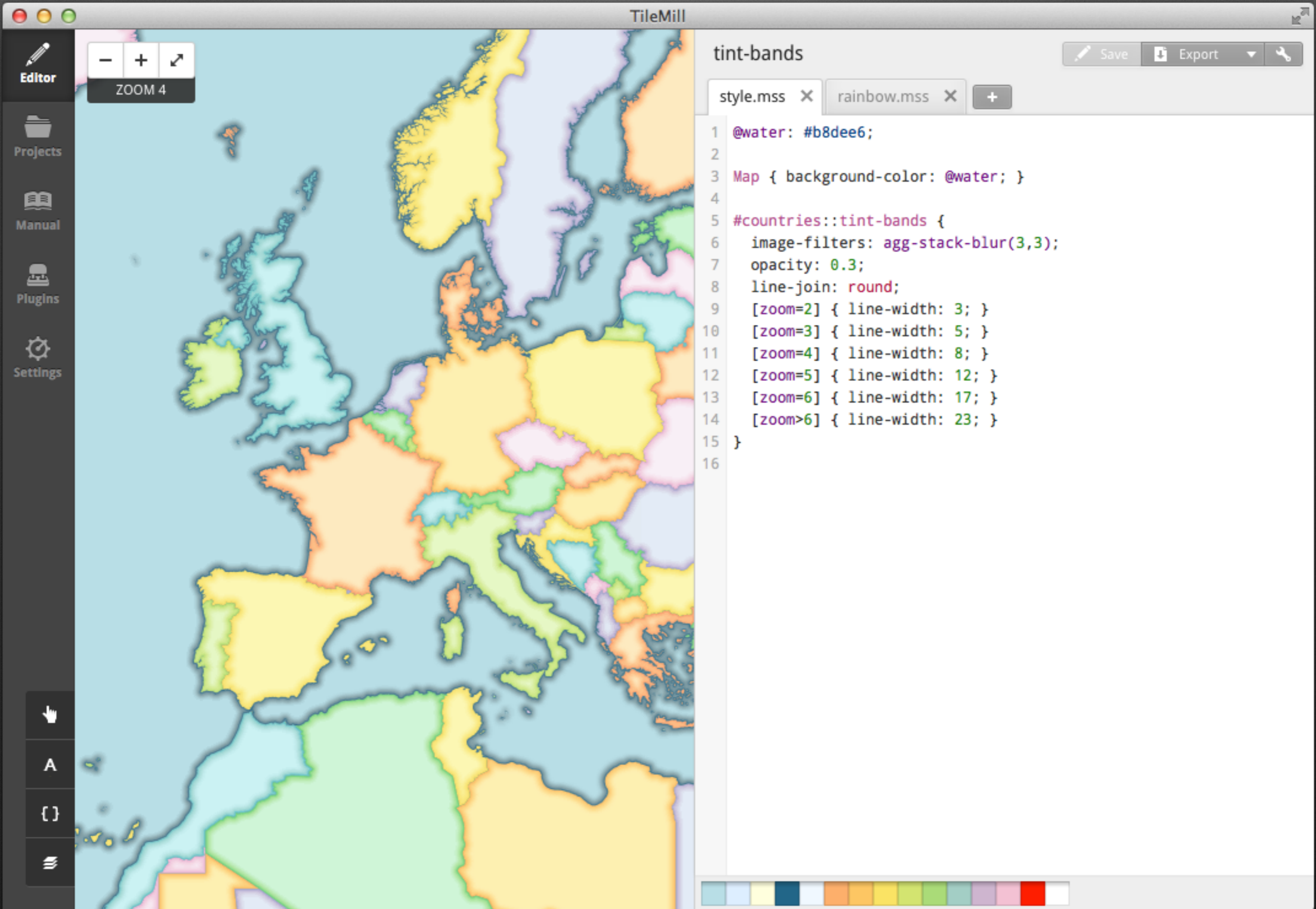
What is TileMill?

- Cartographic design studio
- Cross-platform desktop (Windows, Mac, Linux)
- Based on Mapnik
- Intended as a map design-enabler
 - *Oh, the humanity!*



What is CartoCSS?

- CSS-like styling language
 - Similar syntax, but also: cascading
- Intended for iterative design
- Made for TileMill



tilemill.com



This repository Search or type a command

Explore Gist Blog Help

incanus [icons]

mapbox / tilemill

Unwatch 110 Star 1,510 Fork 210

A modern map design studio. <http://tilemill.com>

5,336 commits 49 branches 37 releases 49 contributors

branch: master tilemill / +

https		
springmeyer authored 21 hours ago		latest commit 4204eec48f
_posts	Actually fix image link - refs #2080	a month ago
assets	add static map export preview and move static zoom to slider	a month ago
commands	touchup server doc	20 days ago
controllers	Non-blocking update checking on client startup	a year ago
data	Selectively copy sample data file to MapBox/cache dir. Refs #1114.	2 years ago
examples	update ancient example comments, fixes #1964	2 months ago
lib	solve #2024	a month ago
models	remove unused code	21 days ago
platforms	https	21 hours ago
plugins	Add semicolon	a year ago
servers	add static map export preview and move static zoom to slider	a month ago
templates	make popup pane scrollable - fixes #1784	10 days ago

<> Code

Issues 400

Pull Requests 6

Pulse

Graphs

Network

HTTPS clone URL

<https://github.com/>

You can clone with [HTTPS](#), [SSH](#), or [Subversion](#).

Clone in Desktop

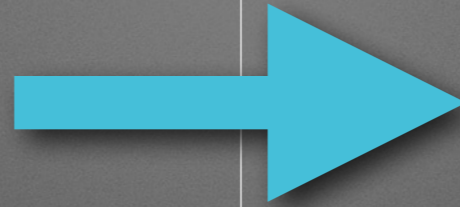
Download ZIP

Basic Process

Geodata

Import

`russia.shp`



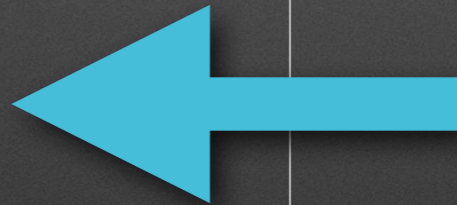
`#russia layer`

Export

Code/Style

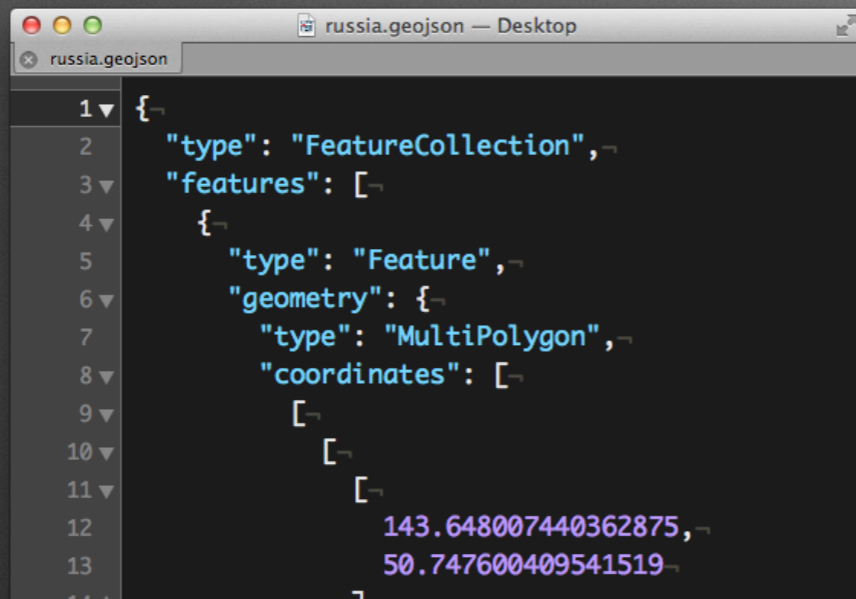


`map image(s)`



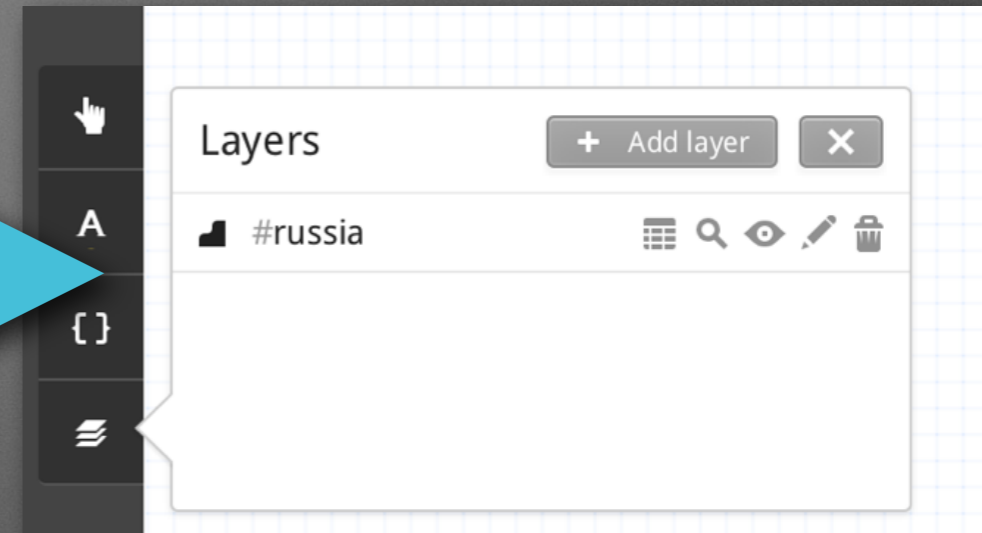
`#russia { ... }`

Geodata

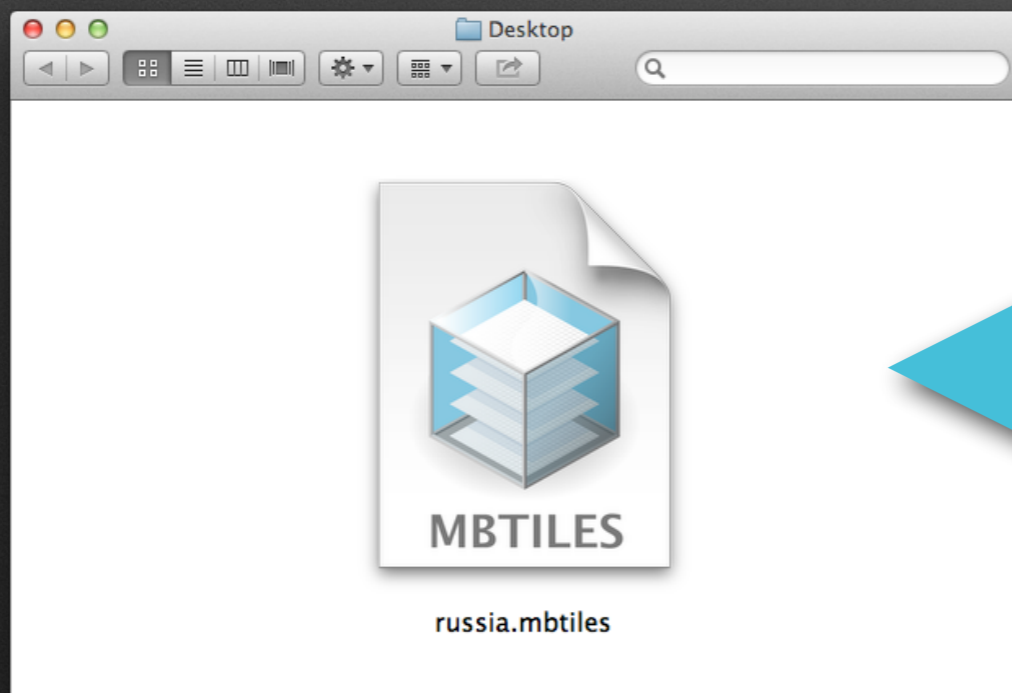


```
1 {
2   "type": "FeatureCollection",
3   "features": [
4     {
5       "type": "Feature",
6       "geometry": {
7         "type": "MultiPolygon",
8         "coordinates": [
9           [
10            [
11              [
12                143.648007440362875,
13                50.747600409541519,
```

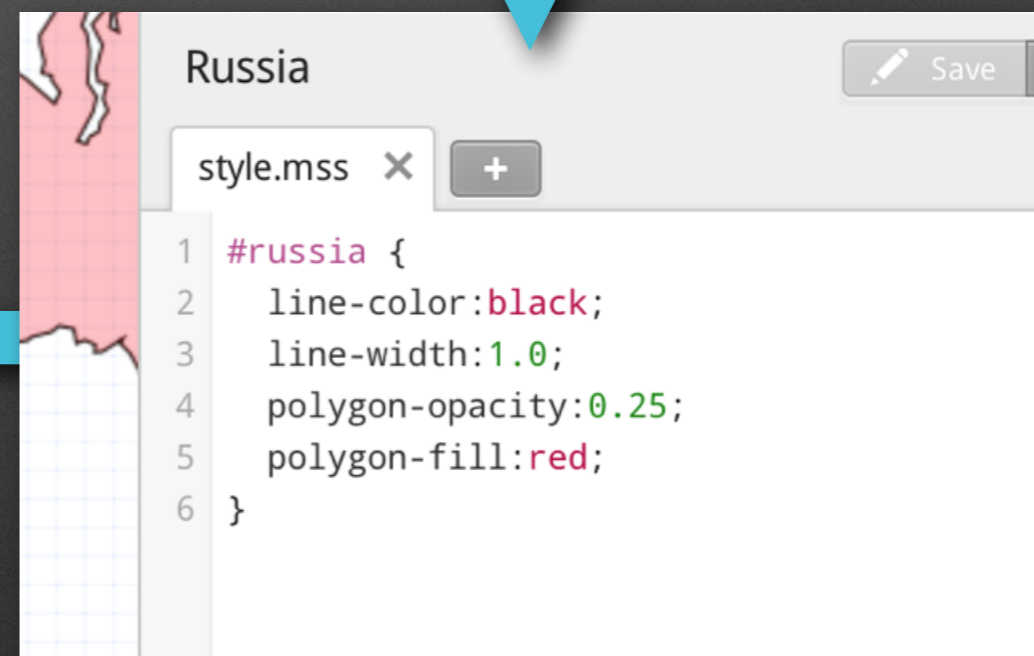
Import



Export



Code/Style



```
Russia Save
```

```
style.mss × +
```

```
1 #russia {
2   line-color:black;
3   line-width:1.0;
4   polygon-opacity:0.25;
5   polygon-fill:red;
6 }
```

Formats

- Esri Shapefile
- KML
- GeoJSON
- GeoTIFF
- CSV
- PostGIS
- SQLite



Editor

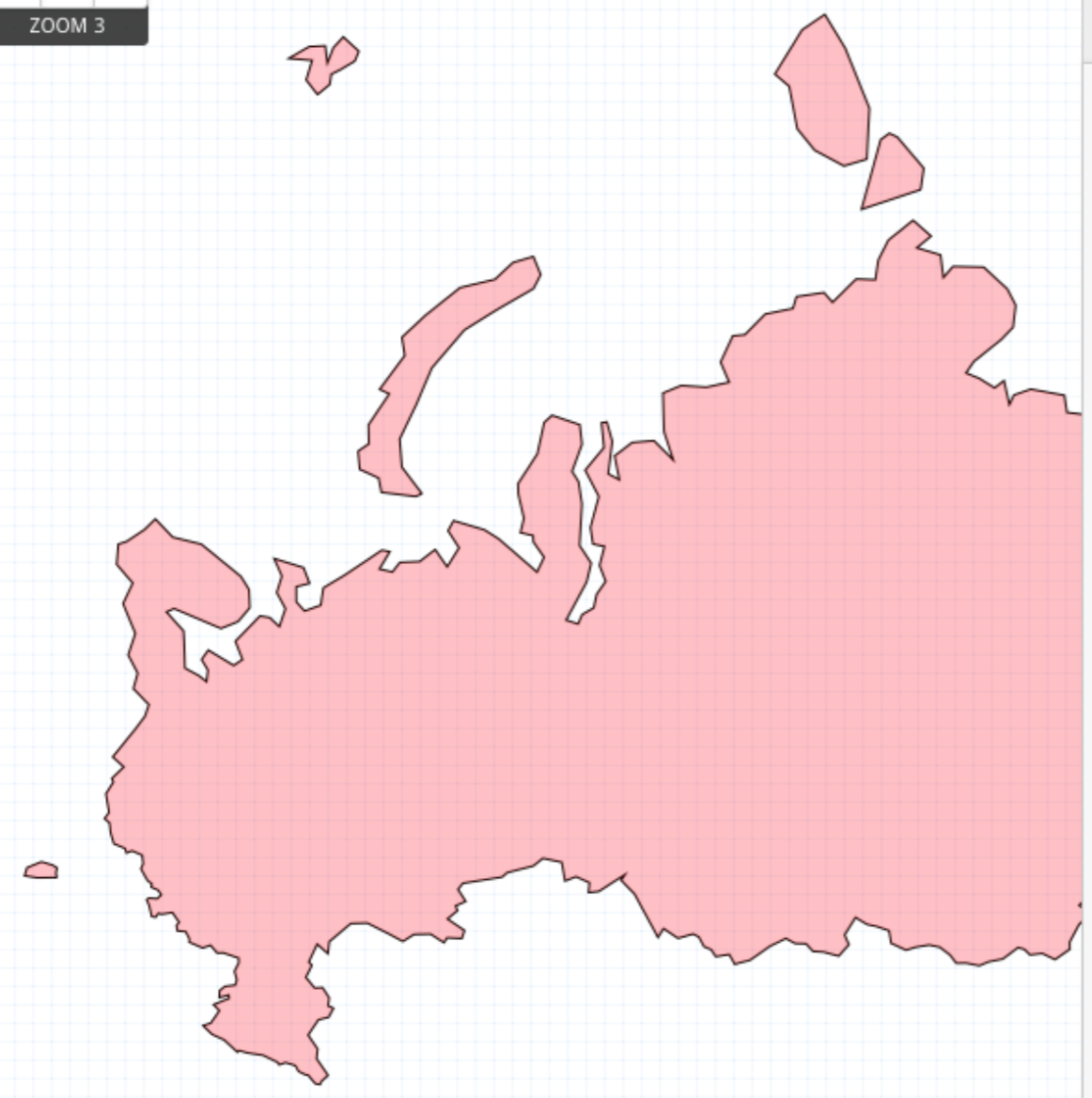
Map navigation controls: zoom in (+), zoom out (-), and pan (arrow). Below the controls, it displays "ZOOM 3".

Projects

Manual

Plugins

Settings



Russia

Save and Export buttons with a settings icon.

style.mss x +

```
1 #russia {  
2   line-color:black;  
3   line-width:1.0;  
4   polygon-opacity:0.25;  
5   polygon-fill:red;  
6 }
```

Layers

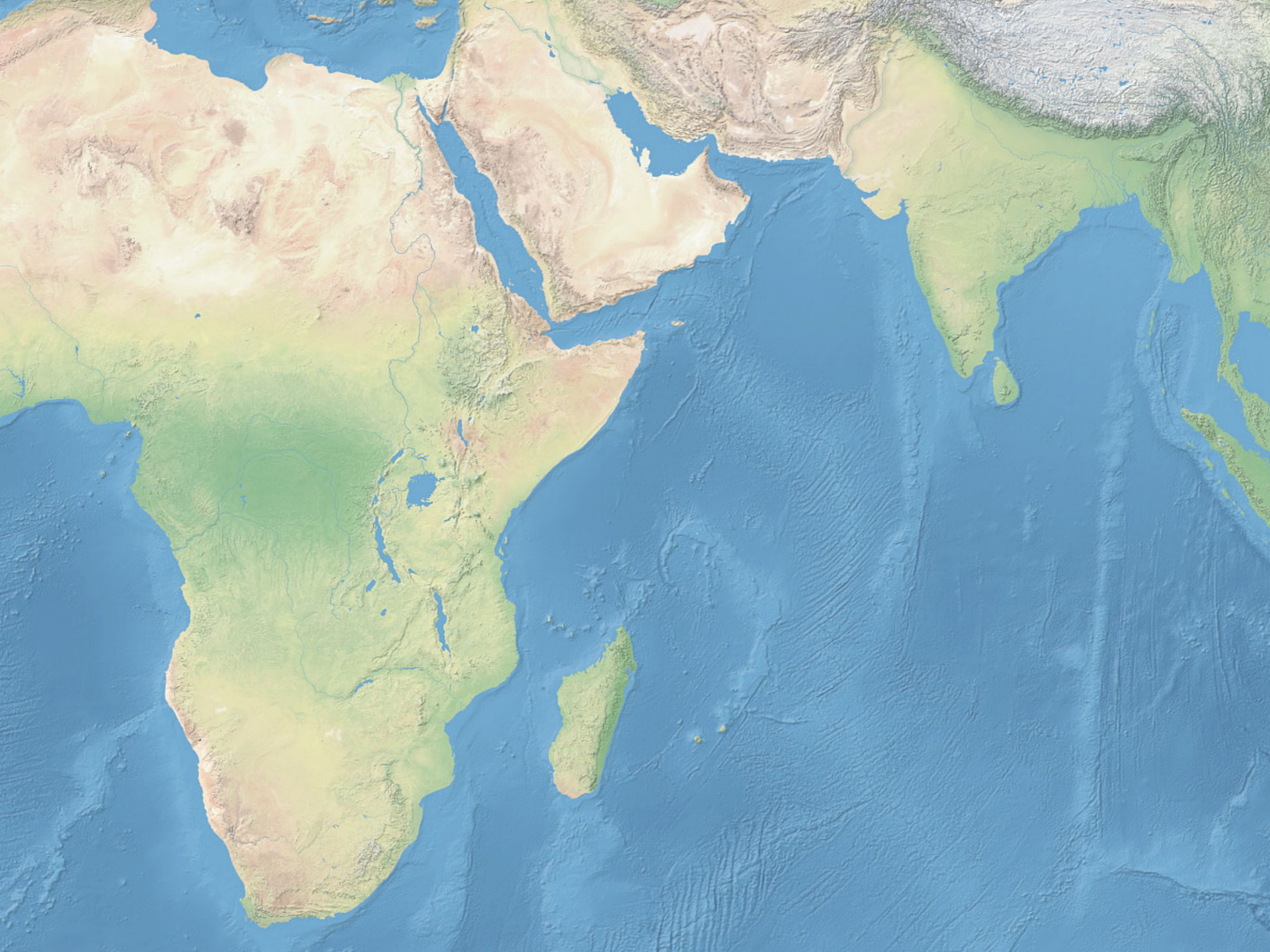
+ Add layer X

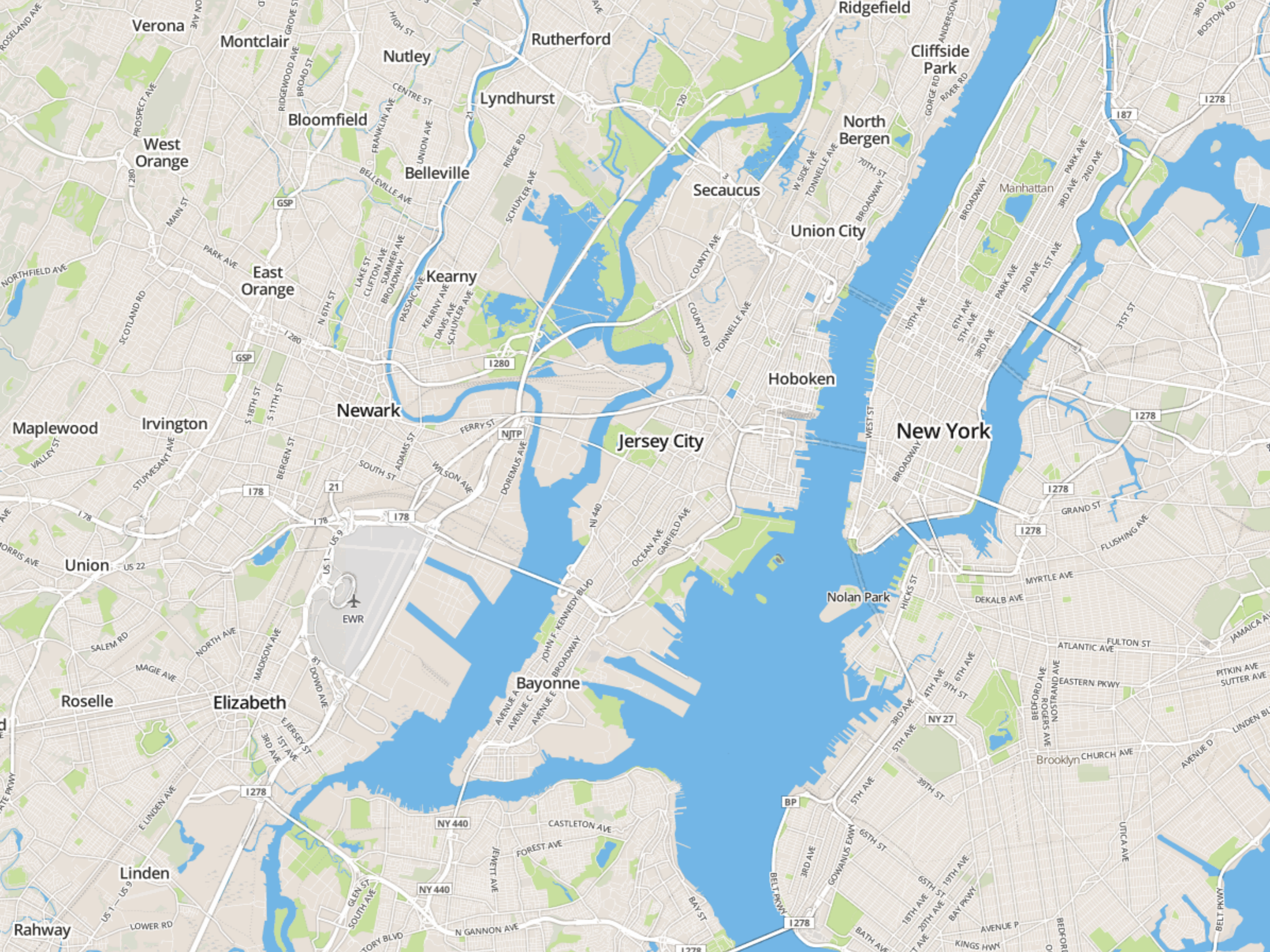
#russia [grid icon] [search icon] [eye icon] [edit icon] [trash icon]

A

{ }

≡







Albano

Bermuda

*Sargasso
Sea*

Gulf of Mexico

Bahamas

Alamo

Castine

Mexico

Havana

*Turks
and
Caicos
Is.*

Cuba

*Cayman
Is.*

Jamaica

*Dominican
Rep.*

*Puerto
Rico*

*Antigua
and
Barb.
Dominica*

Mexico City

Belize

Guatemala

Honduras

El Salvador

Nicaragua

Managua

*Costa
Rica*

Panama

Curaçao

Caracas

Barbados

*Trinidad
and
Tobago*

Venezuela

Colombia

Georgetown

Paramaribo

Guyana

Suriname



Stykkishólmur

Grundarfjörður

Ólafsvík

fellsjökull

Eiríksjökull

Hofsjökull

Tungnafellsjökull

Langjökull

Irisjökull

Borgarnes

Akranes

Reykjavík

Hafnarfjörður

Sandgerði

Hveragerði

Selfoss

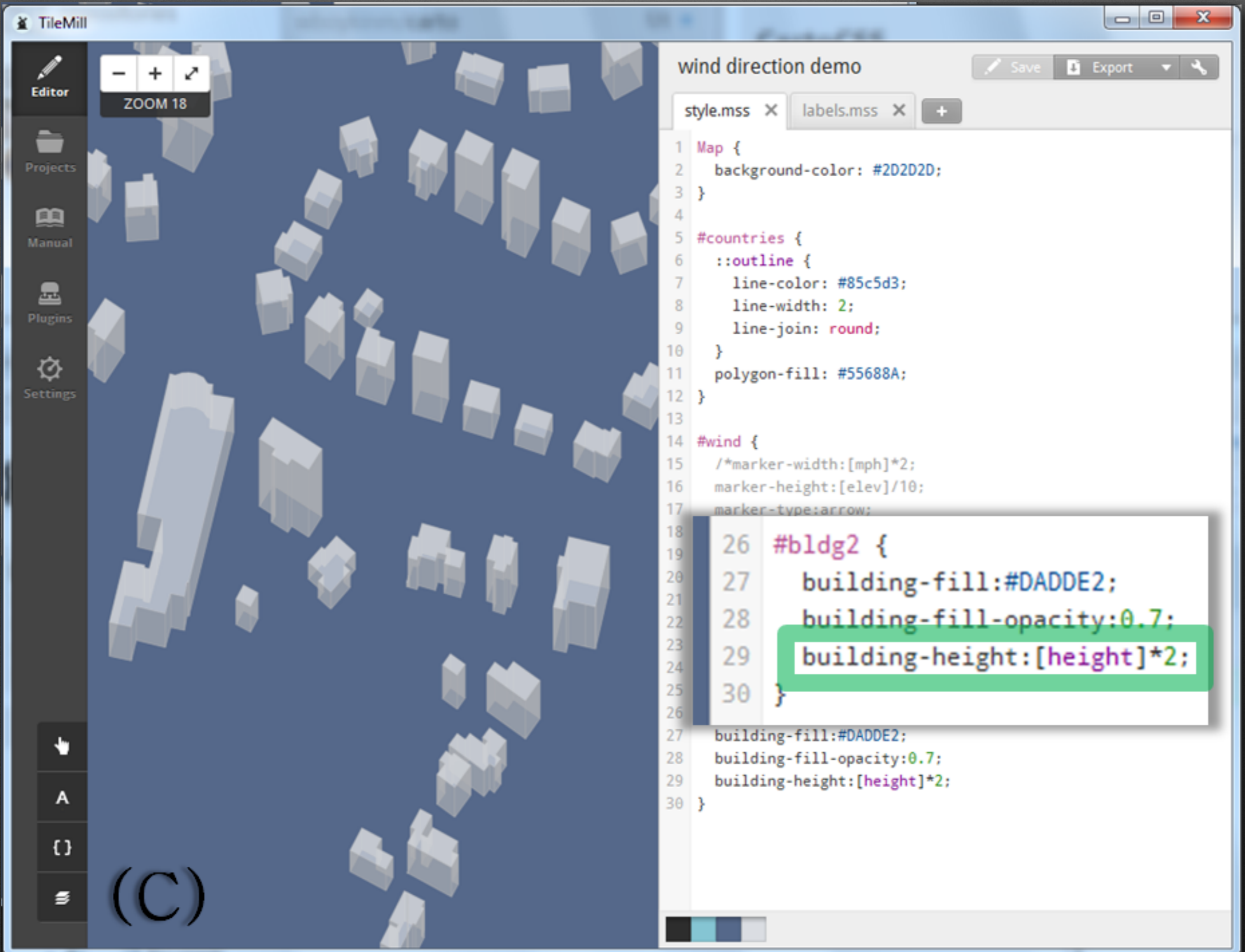
Grindavík

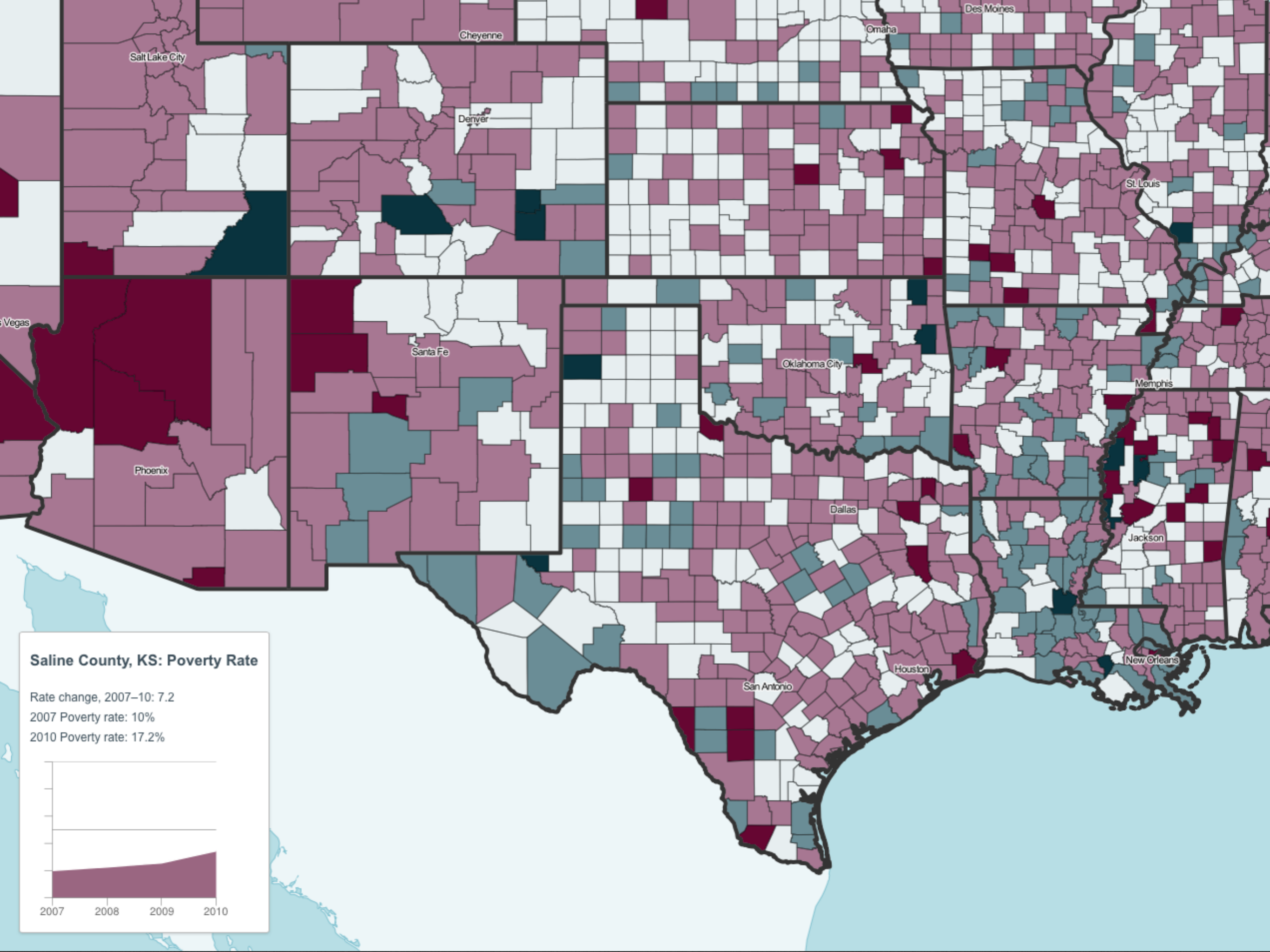
Þorlákshöfn

Torfajökull

Tindfjallajökull

Mýrdalsjökull





Saline County, KS: Poverty Rate

Rate change, 2007–10: 7.2
2007 Poverty rate: 10%
2010 Poverty rate: 17.2%

Year	Poverty Rate (%)
2007	10%
2008	~11.5%
2009	~14.5%
2010	17.2%

Demo

Thank You!

- I'll post the slides & project online
- Feel free to contact me & ask questions
 - justin@mapbox.com
 - [@incanus77](https://twitter.com/incanus77) & [@MapBox](https://twitter.com/MapBox)
 - [mapbox.com](https://www.mapbox.com) & [tilemill.com](https://www.tilemill.com)
 - github.com/mapbox

