



Government  
of Canada    Gouvernement  
du Canada



Humanitarian Aid  
and Civil Protection



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Embassy of Switzerland in Myanmar

MIMU



Myanmar Information  
Management Unit

# Myanmar Information Management Unit

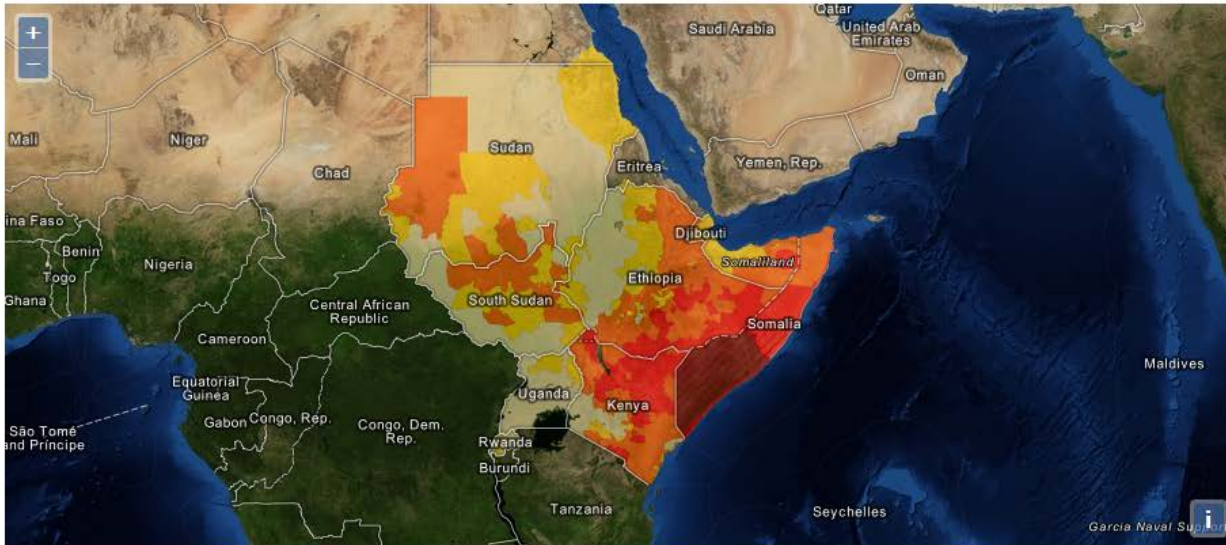
# Interactive Maps with

# OpenLayers3

25 November 2015

Will Francis

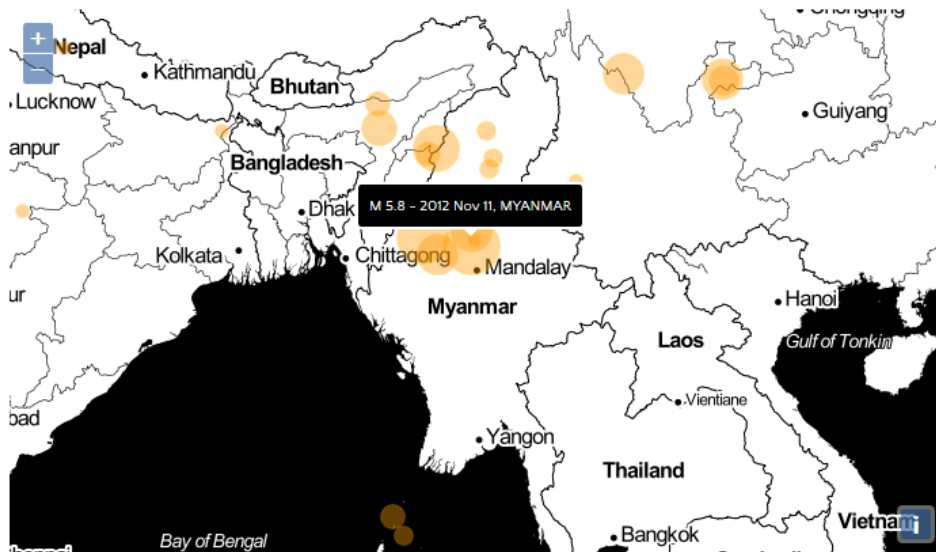
[www.themimu.info](http://www.themimu.info)



Click on layer nodes below to change their properties.

- OpenAerial layer
- Layer group
  - Food insecurity layer
    - visibility
    - opacity
    - hue
    - saturation
    - contrast
    - brightness
  - World borders layer

Layer group example



Earthquakes in KML



Popup example

# *What's special about it?*

- Javascript library – no application server required
- Works offline!
- Long history of development and supported by user community
- Examples
- Integrated with GIS products
  - Geoserver
  - QGIS

# *Other choices?*

- Leaflet
- GoogleMaps API

# *How to make a simple map*

- A couple of steps:
  - Map container
  - Add a layer
  - Style the layer
  - Add control

# *How to make a simple map*

- `<!DOCTYPE html>`
- `<html>`
- `<head>`
- `<title>Hello Map</title>`
- `</head>`
- 
- `<body>`
- `<div id='map'></div>`
- 
- `<!-- Scripts go here -->`
- 
- `</body>`
- `</html>`

# *How to make a simple map*

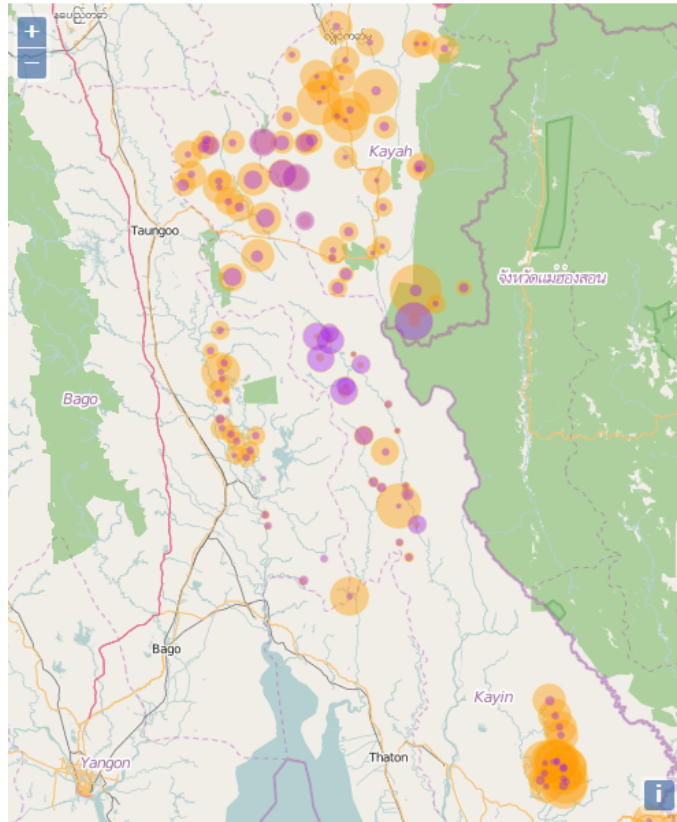
- `var myLayer = new ol.layer.Vector({`
- `source: new ol.source.GeoJSON({`
- `projection: 'EPSG:3857',`
- `url: 'data/geojson/countries.geojson'`
- `}),`
- `style: myStyle`
- `});`

# *How to make a simple map*

- `var myStyle = new ol.style.Style({`
- `fill: new ol.style.Fill({`
- `color: 'rgba(255, 255, 255, 0.6)'`
- `}),`
- `stroke: new ol.style.Stroke({`
- `color: '#319FD3',`
- `width: 1`
- `})`
- `});`



# Example 1: SE Indicator



## South East Indicators

Source 1:  
The Border Consortium (TBC)

Date: 2013

Survey form

Results

Source 2: Mercy Corps (MC)

Date: 2013

Results with survey notes

### Layers

Background layer: Open Street Map

TBC 1: Quantity of land accessible for agriculture

MC 1: Quantity of land accessible for agriculture

TBC 2: Time to nearest town

TBC 3: Teachers that speak the local language

MC 3: Teachers that speak the local language

TBC 4: Main expressed need

- Food security
- Healthcare
- Education
- Electricity
- Water & Sanitation
- Economic development (micro-credit and/or tax reform)
- Transportation (roads and/or bridges)
- Other (peace, environmental protection and/or community infrastructure)

TBC 5: Main ethnicity

- Sagaw Kayin
- Pwo Kayin
- Kayah
- Kayaw
- Paku
- Kayan
- Shan
- Palaung
- Pao
- Lahu
- Shan
- Mon
- Burman
- Other
- Mixed

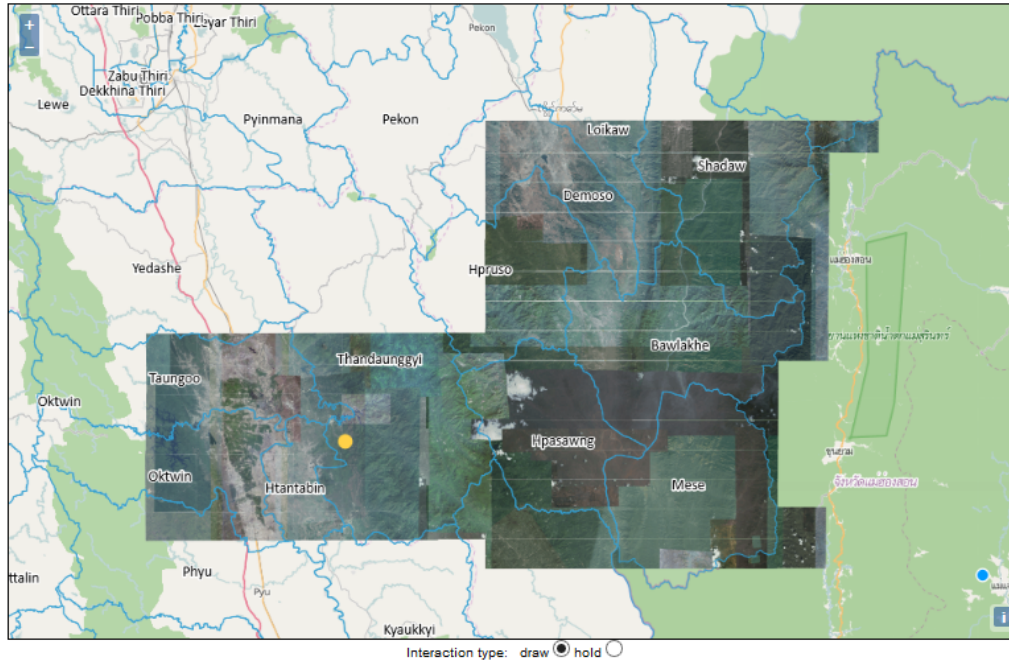
Village: Law Pwo Der

None: No Response, less than 2acres: No

Response, 2 to 5acres: All (or almost all), 5 acres

and more: No Response

# Example 2: Offline school mapping



- Reference Imagery 1
- Reference Imagery 2
- Reference Imagery 3
- Reference Imagery 4
- Completed school locations
- MIMU Village locations
- Township Boundaries
- Background layer: Open Street Map

ကျောင်းနှင့် ဝတ်သတ်ဆောင်ဆောင်အလတ်များ -

တိုင်း/ပြည်နယ်  မြို့နယ်  မြို့/ကျေးရွာအုပ်စု  ရပ်ကွက်/ကျေးရွာ

မကွေးတိုင်းဒေသကြီး  ဝဇာ  မြစ်ပြား  မြစ်ဖျား

ကျောင်းအမည်

အလကား(ခွဲ)(မြစ်ဖျား)

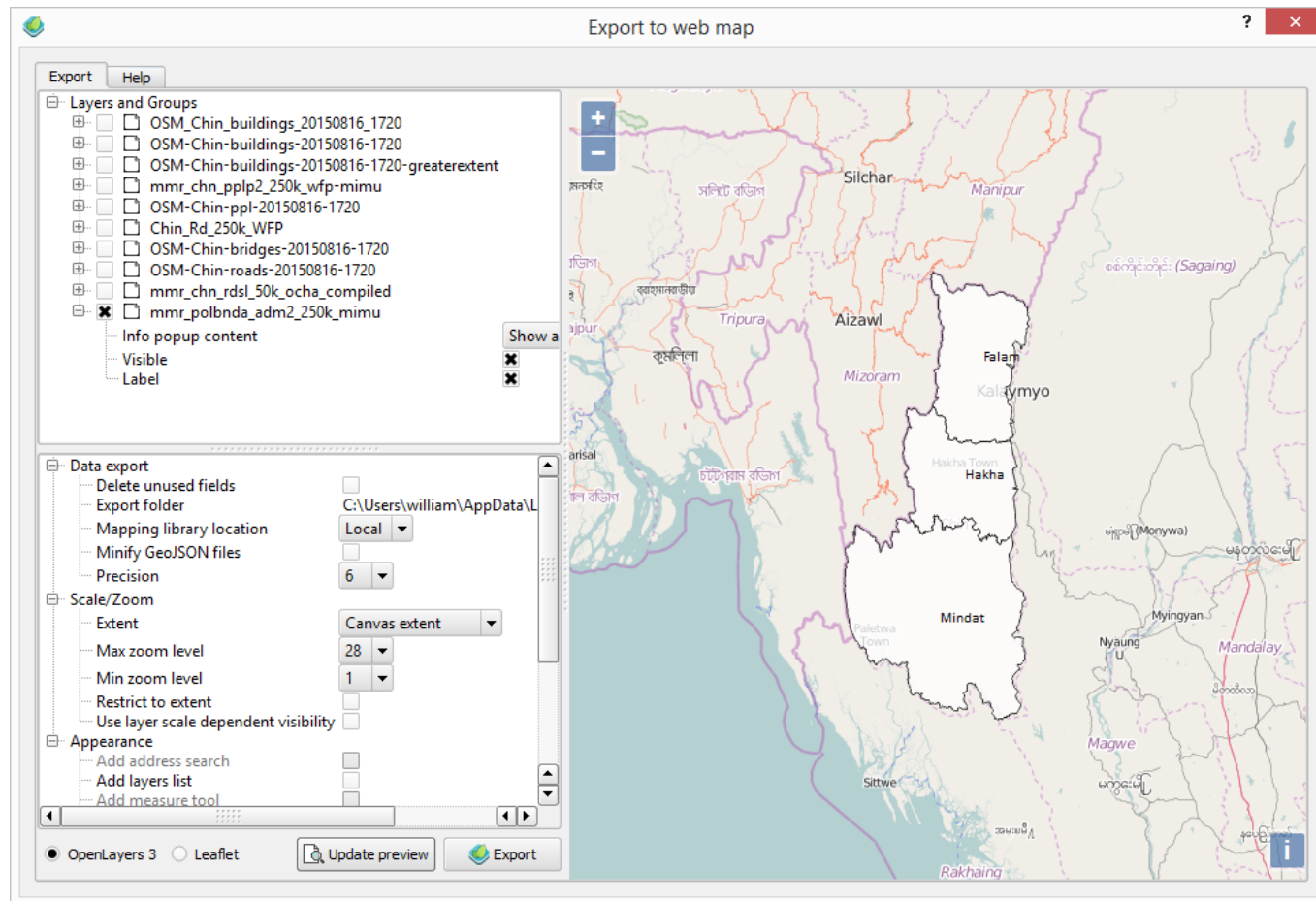
သင့်ကျောင်းကို စာရင်းကွပ် ရှာဖွေပေးပါက -

ကျောင်းအမျိုးအစား  ကျောင်းအမည် ရှိကိစ္စသည်ရန်

Latitude	Longitude	State and Region	Township	Village Tract	Village	School	School not on list	School type
18.855423408091655	96.65002270679886	MMR.009	MMR.009009	MMR.009009022	186380	SHL.009009013	-	-

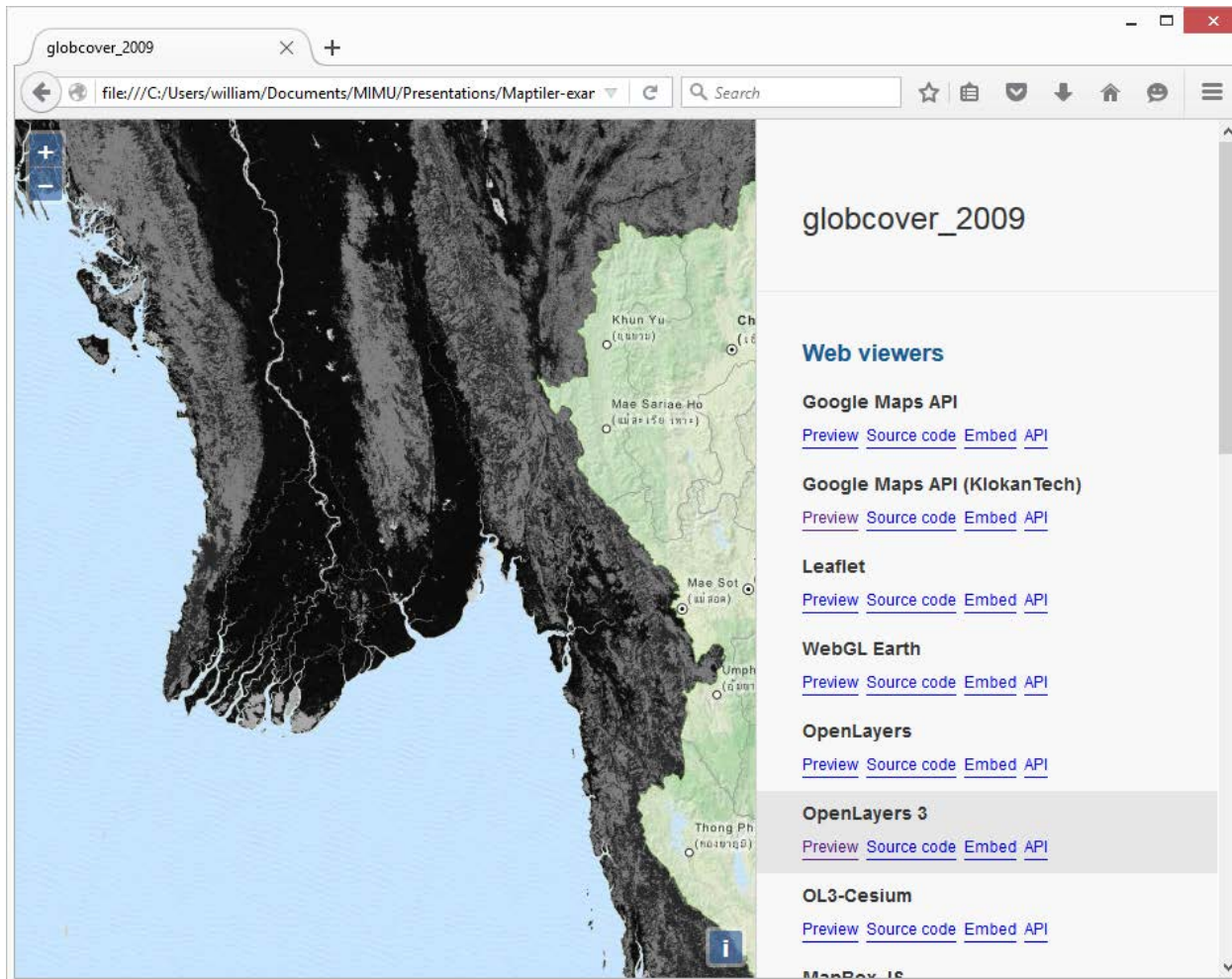
# Doing more without much coding

- QGIS: get qgis2web plugin



# Doing more without much coding

- MapTiler



# Doing more without much coding

- MapTiler

```
<!DOCTYPE html>
<html>
  <head>
    <title>globcover_2009</title>
    <meta charset="utf-8"/>
    <meta name="viewport" content="initial-scale=1.0, user-scalable=0"/>
    <script src="https://cdnjs.cloudflare.com/ajax/libs/ol3/3.9.0/"></script>
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/ol3/3.9.0/ol.css" />
  </head>
  <body>
    <div id="map" class="map"></div>
    <script>
      var extent = ol.proj.transformExtent([92.1727471, 9.67107772, 100.0, 10.0],
        'EPSG:4326', 'EPSG:3857');
      var center = ol.proj.transform([96.6715606, 19.1086649],
        'EPSG:4326', 'EPSG:3857');
      var view = new ol.View({
        projection: 'EPSG:3857',
        center: center,
        zoom: 4
      });
      var overlay = new ol.layer.Tile({
        source: new ol.source.XYZ({
          urls: [
            '{z}/{x}/{y}.png'
          ],
          extent: extent,
          minZoom: 4,
          maxZoom: 12,
          tilePixelRatio: 1
        })
      });
      var map = new ol.Map({
        layers: [
          new ol.layer.Tile({
            source: new ol.source.MapQuest({layer: 'osm'})
          })
        ]
      });
    </script>
  </body>
</html>
```

globcover\_2009

### Web viewers

- Google Maps API**  
[Preview](#) [Source code](#) [Embed](#) [API](#)
- Google Maps API (KlokanTech)**  
[Preview](#) [Source code](#) [Embed](#) [API](#)
- Leaflet**  
[Preview](#) [Source code](#) [Embed](#) [API](#)
- WebGL Earth**  
[Preview](#) [Source code](#) [Embed](#) [API](#)
- OpenLayers**  
[Preview](#) [Source code](#) [Embed](#) [API](#)
- OpenLayers 3**  
[Preview](#) [Source code](#) [Embed](#) [API](#)
- OL3-Cesium**  
[Preview](#) [Source code](#) [Embed](#) [API](#)

file:///C:/Users/william/Documents/MIMU/Presentations/Maptiler-example/index.html#globcover\_2009/ol3.code

***Questions?***

# THANK YOU

MIMU



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