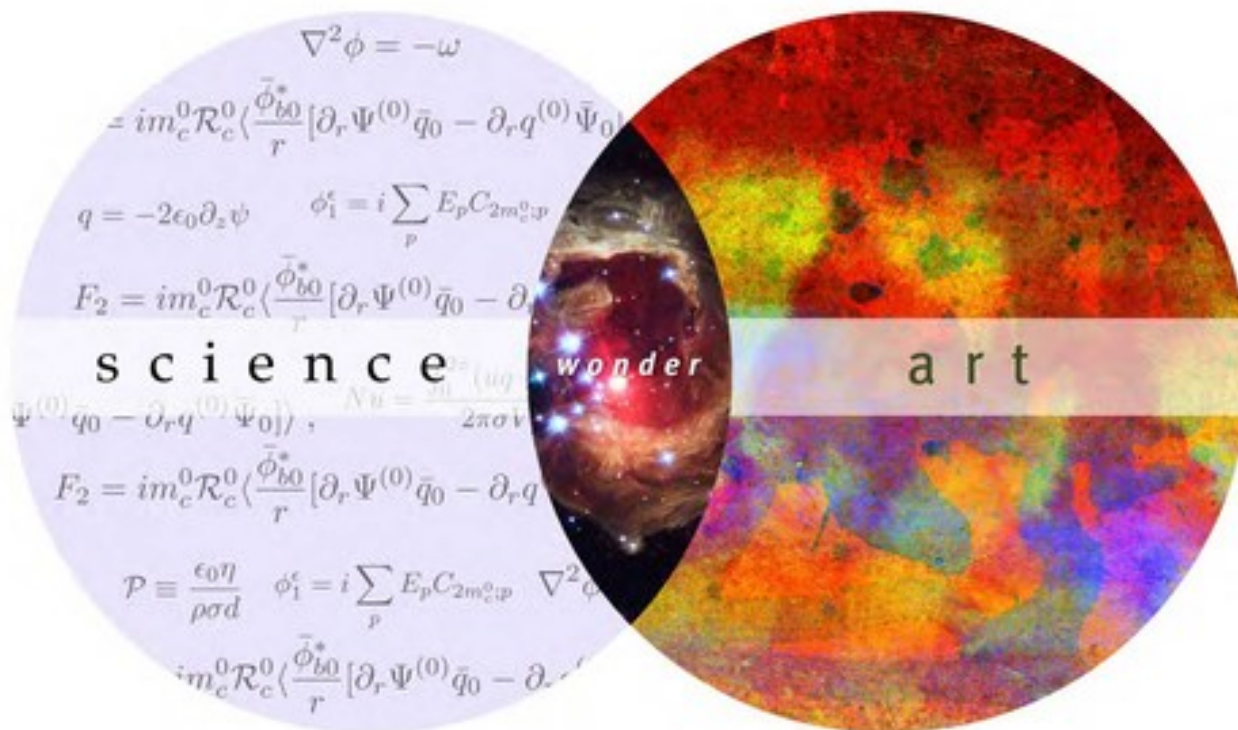




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## Science is an art.

When they come together that's when truly wonderful things happen.

I am going to challenge you to try to be your best scientist today,  
but also to challenge yourself to think like an artist today.

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You will receive both a group grade and an individual grade for this.

Here are some things you can do to be a good group member:

We all promise to listen to each other's ideas with respect.

We all promise to do our work as best as we can.

We all promise to do our work on time.

We all promise to ask for help if we need it.

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**With your group:**

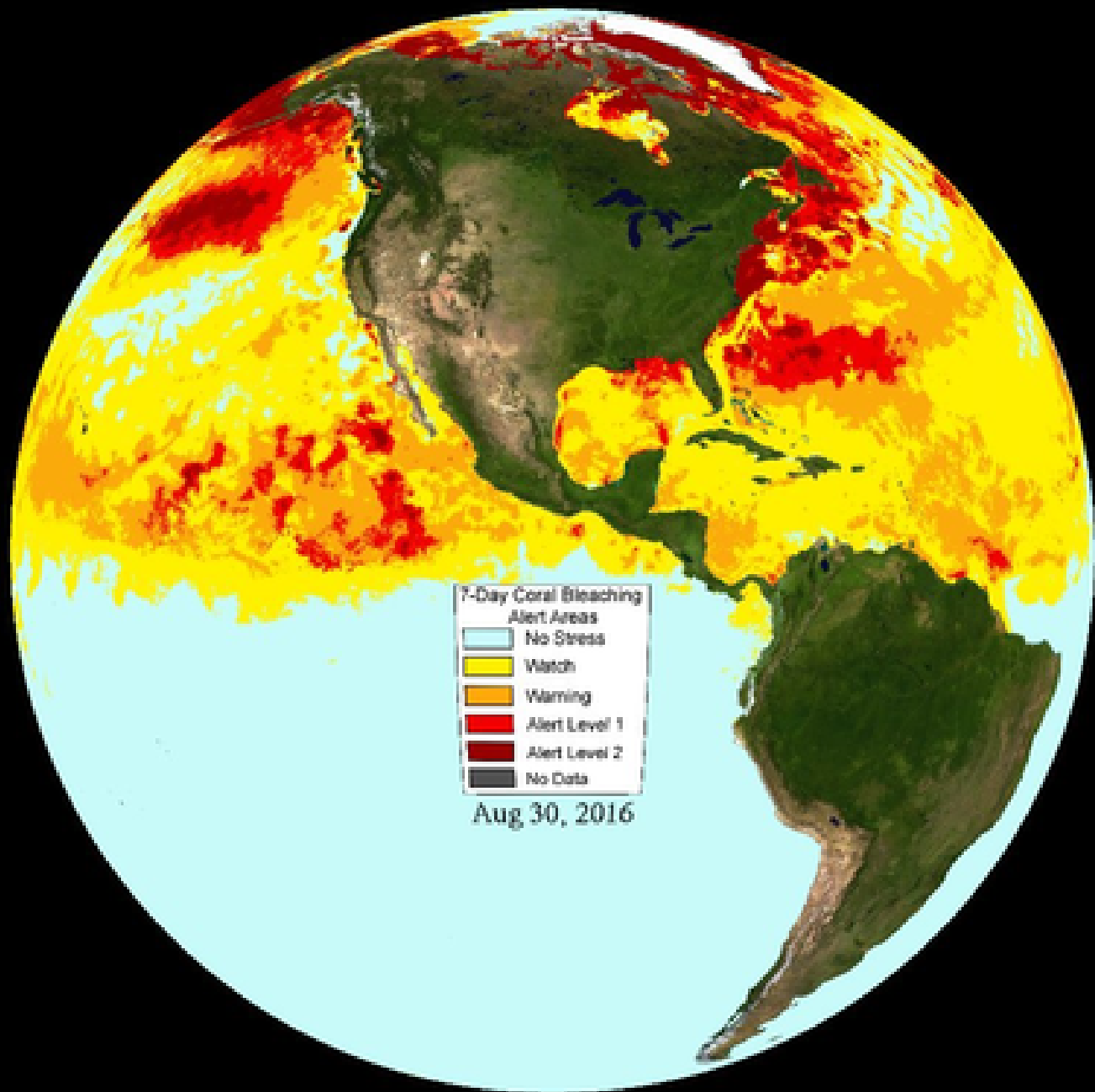
Look at the following maps, and figure out with your group which map you would want to reimagine.

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## Environmental Impact Maps (yellow)

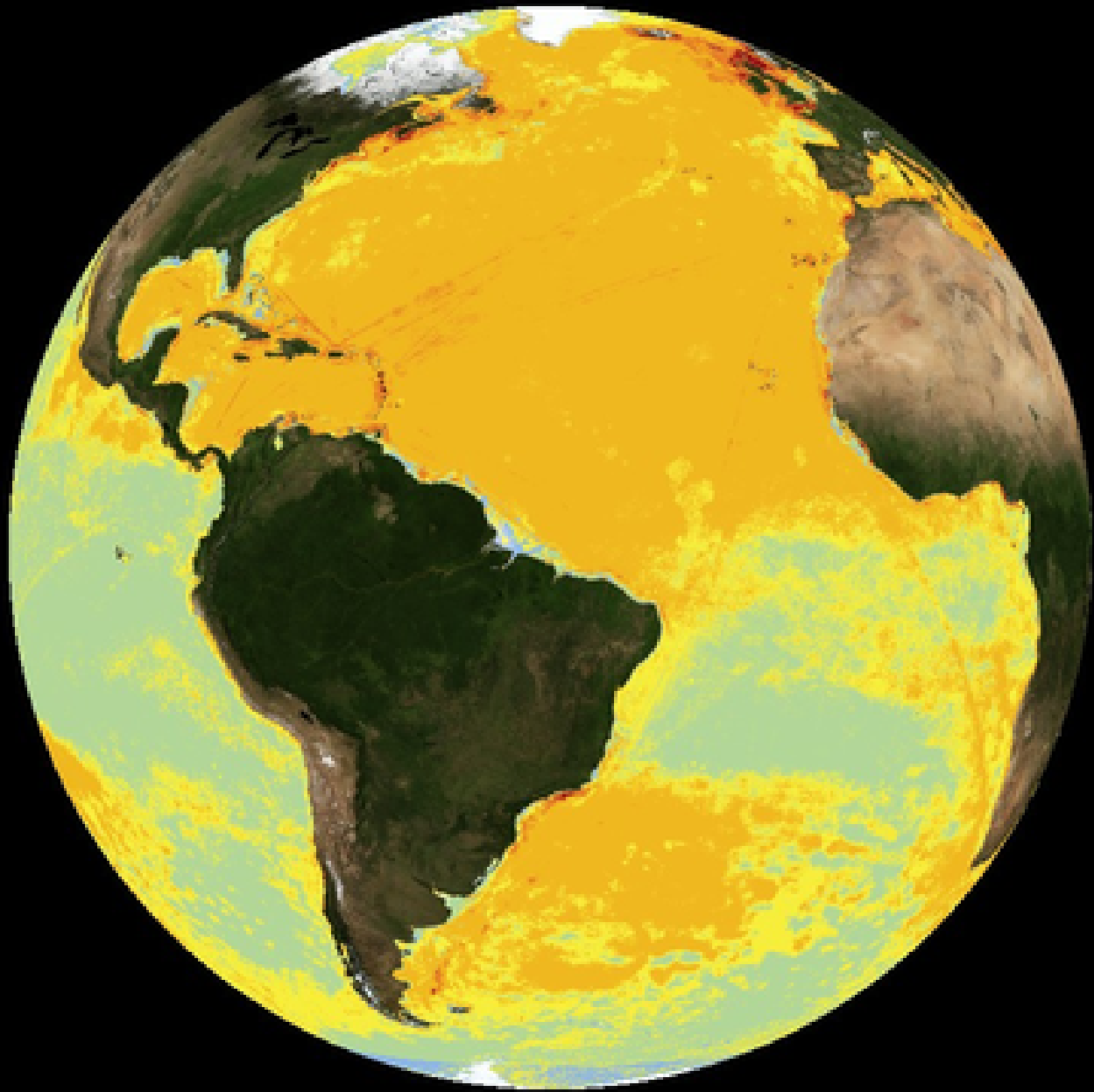
Your group must do 2 of the maps from the first maps (yellow cards).

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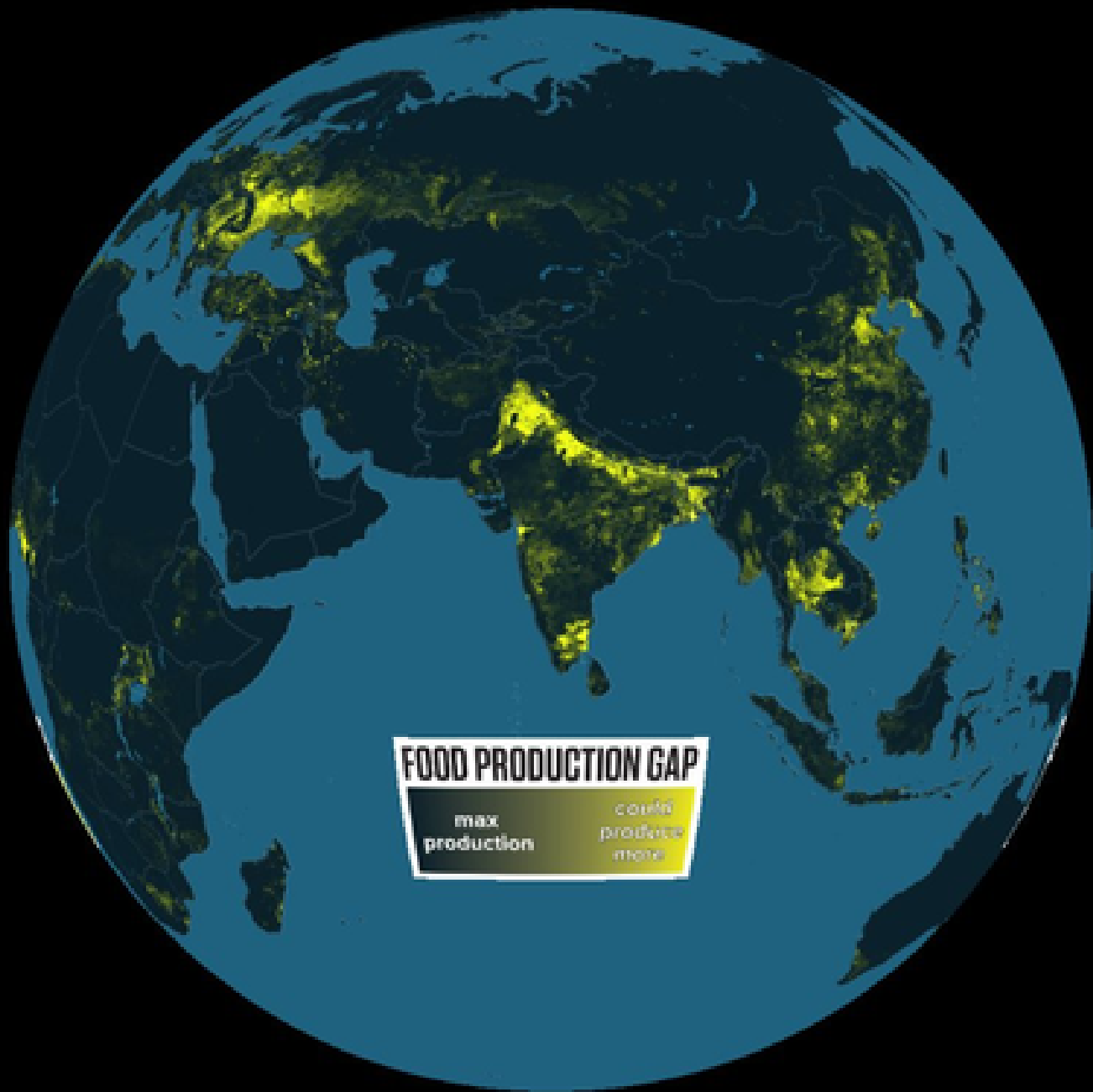
<https://sos.noaa.gov/catalog/datasets/coral-bleaching-alerts-real-time/>

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<https://sos.noaa.gov/catalog/datasets/human-influences-on-marine-ecosystems/>

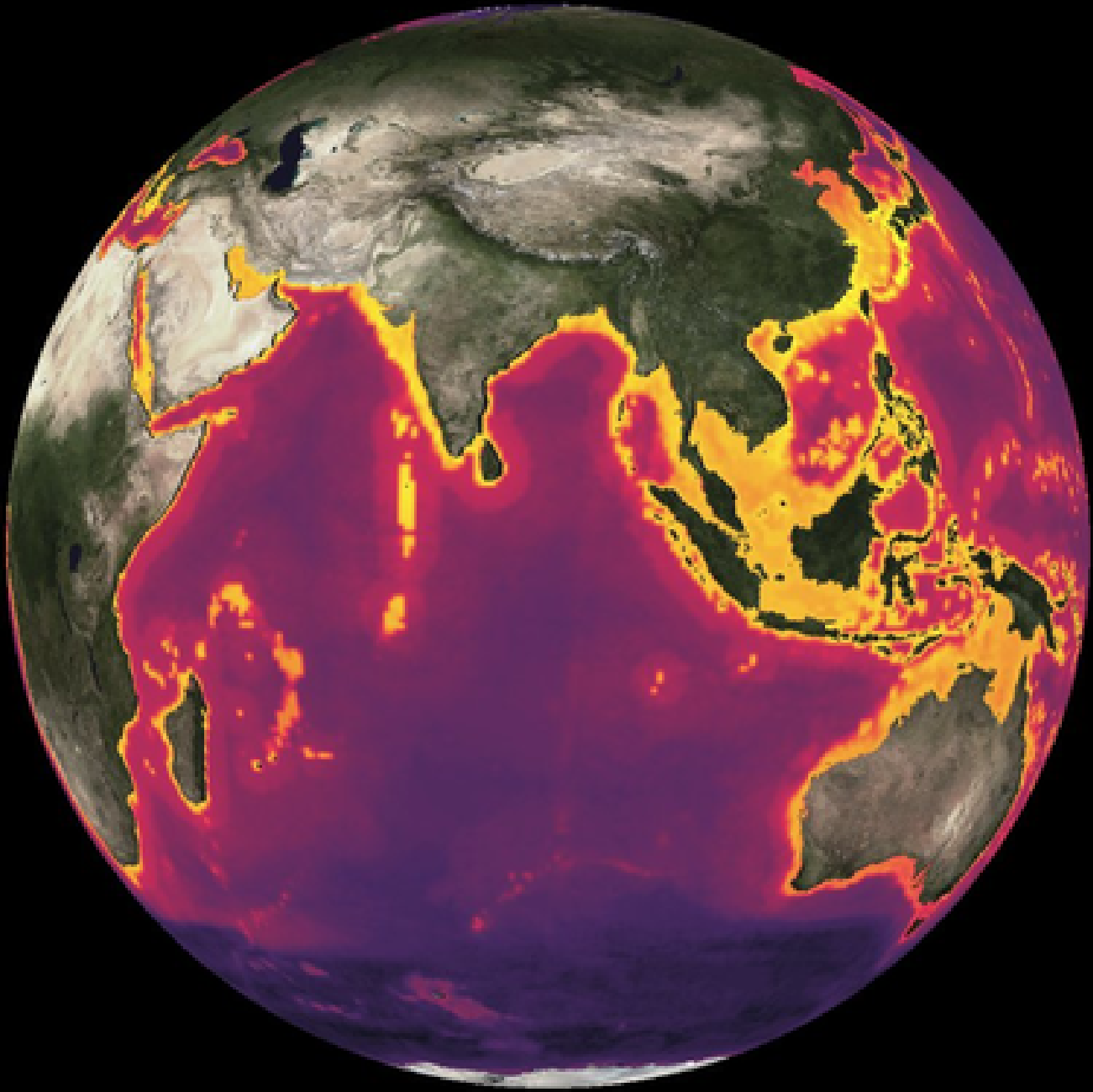
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<https://sos.noaa.gov/catalog/datasets/agriculture-cropland-production-gap/>

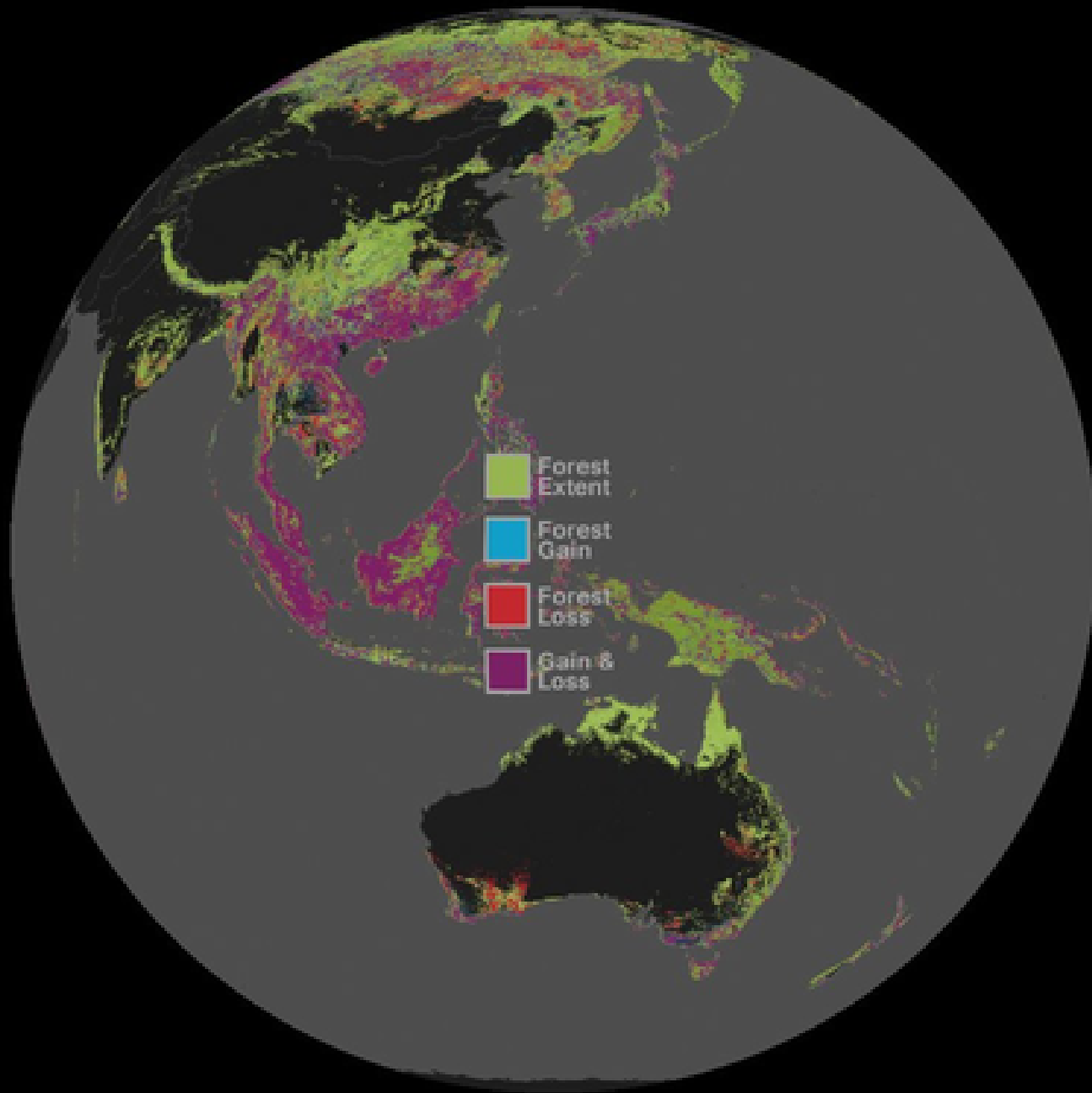


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<https://sos.noaa.gov/catalog/datasets/fisheries-species-richness/>

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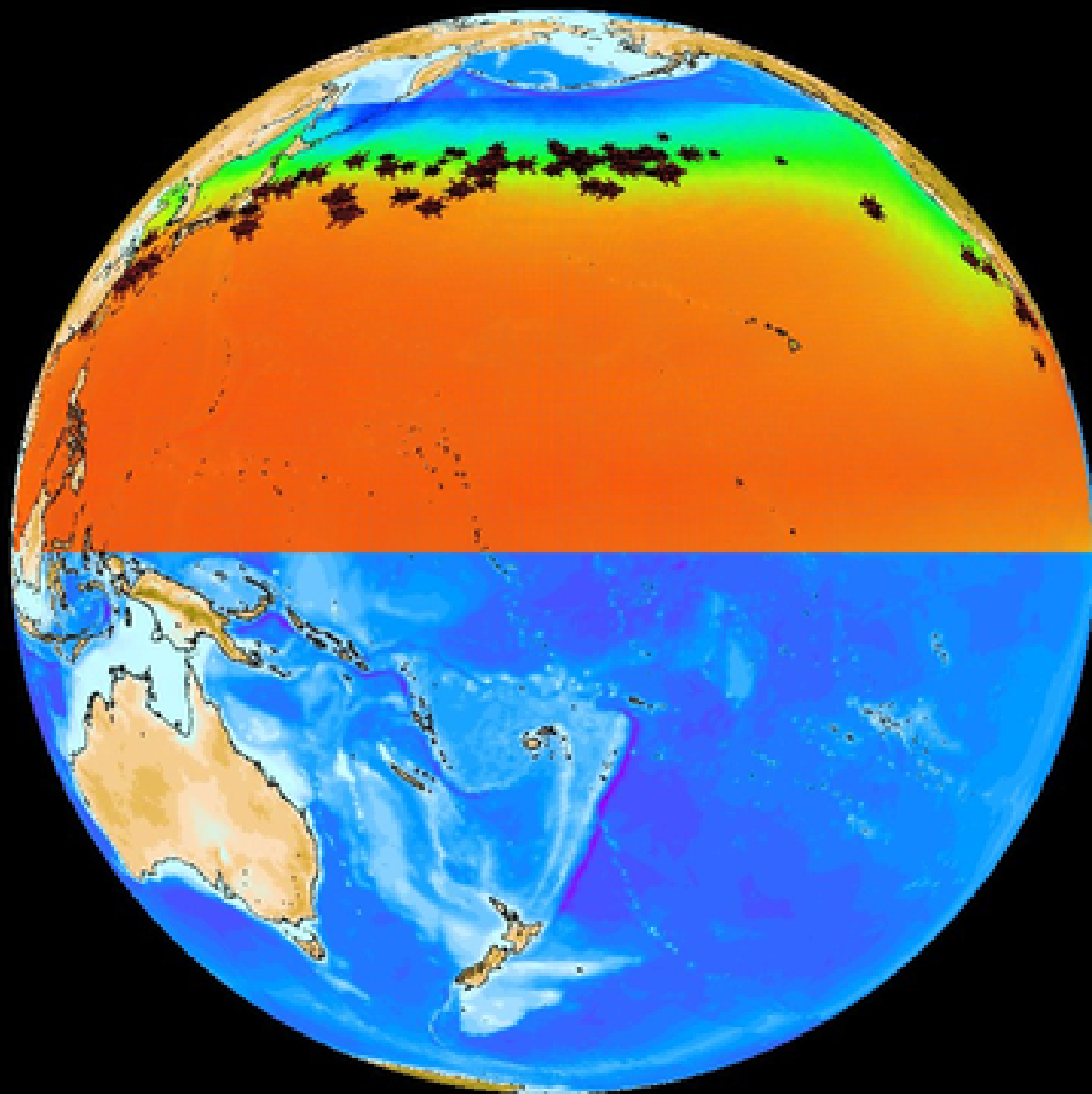


<https://sos.noaa.gov/catalog/datasets/forest-change-extent-gain-and-loss-2000-2014/>

<https://sos.noaa.gov/catalog/datasets/forest-change-extension-gain-and-loss-2000-2014/>

(Period 5 you cannot use this map)

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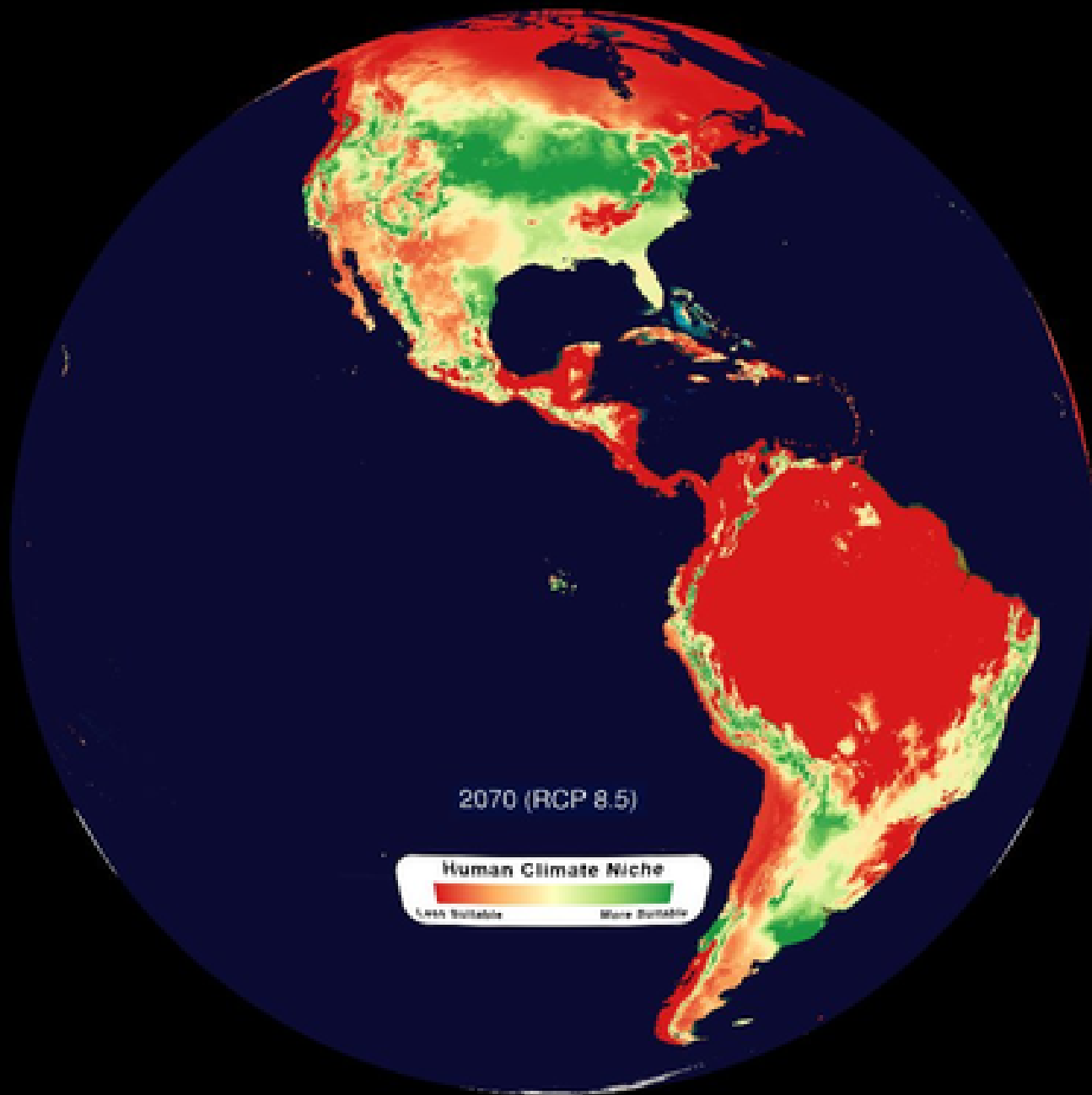
<https://sos.noaa.gov/catalog/datasets/loggerhead-sea-turtle-tracks/>

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## Human Activity Maps Group (purple)

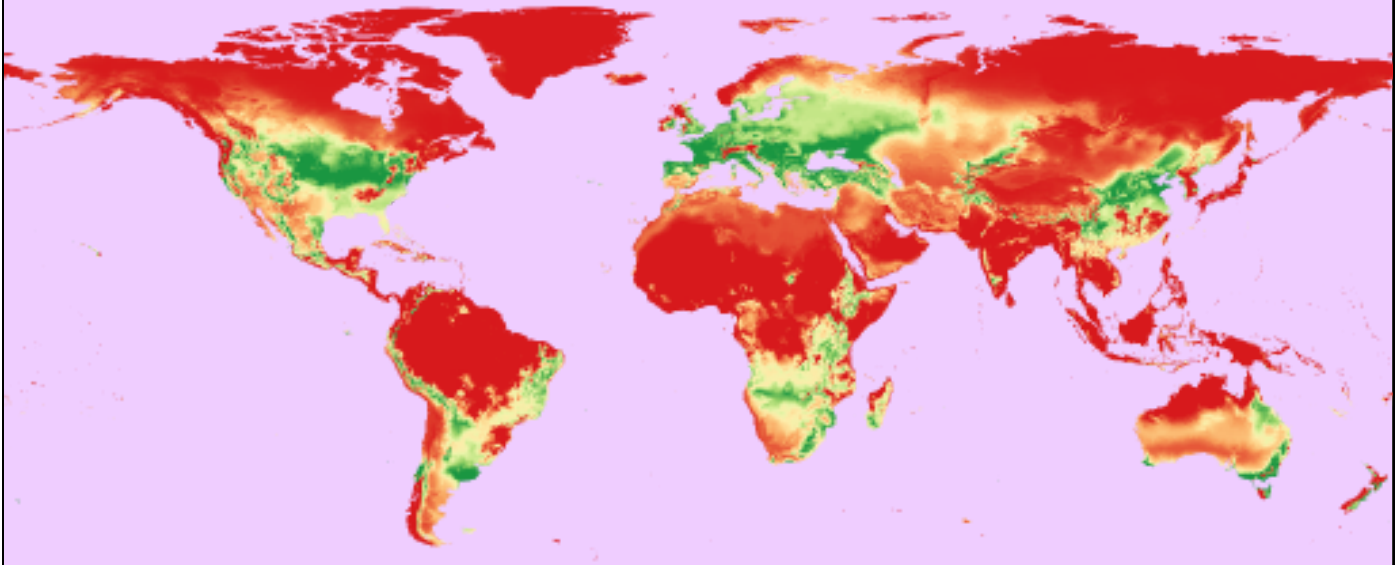
Your group must do 2 of these maps from this second group (purple cards).

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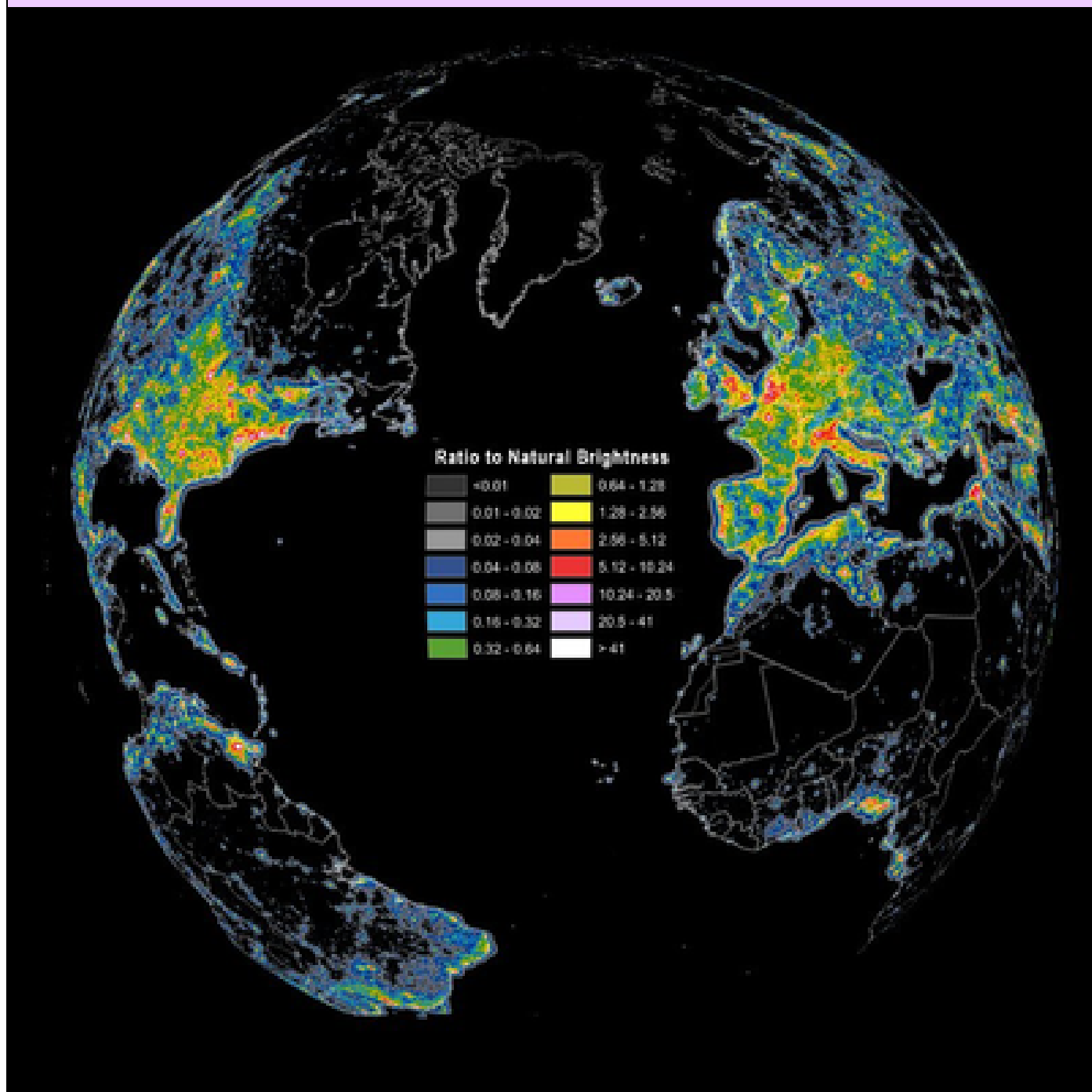
<https://sos.noaa.gov/catalog/datasets/human-climate-niche-2020-and-2070/>

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Since this map shows two different years, here's the flat map of JUST 2070.

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<https://sos.noaa.gov/catalog/datasets/light-pollution-artificial-sky-brightness/>



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<https://sos.noaa.gov/catalog/datasets/human-transportation/>

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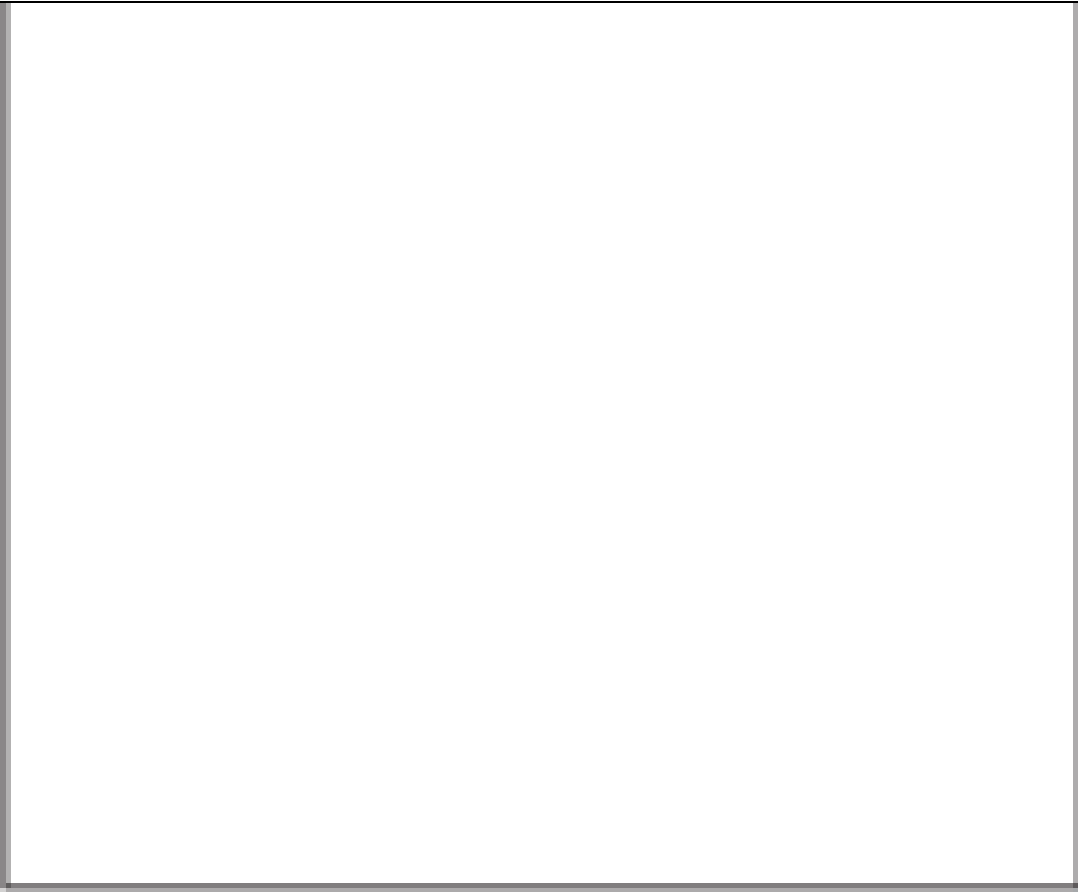
[https://drive.google.com/file/d/1Ez2Yr0BNh2g5DXV\\_PJ6iPIIaUgZVAUwr/view?usp=sharing](https://drive.google.com/file/d/1Ez2Yr0BNh2g5DXV_PJ6iPIIaUgZVAUwr/view?usp=sharing)

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EQUATOR

EQUATOR

**LEGEND:**



The #1 most difficult part of this project is imagining the new way you will show the data.

So we are going to do a practice version of our map legend.

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Think of your legend kind of like an inventory.

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It explains what is in the map.

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EQUATOR

EQUATOR

LEGEND:

Please open your notebook to  
your next open page.

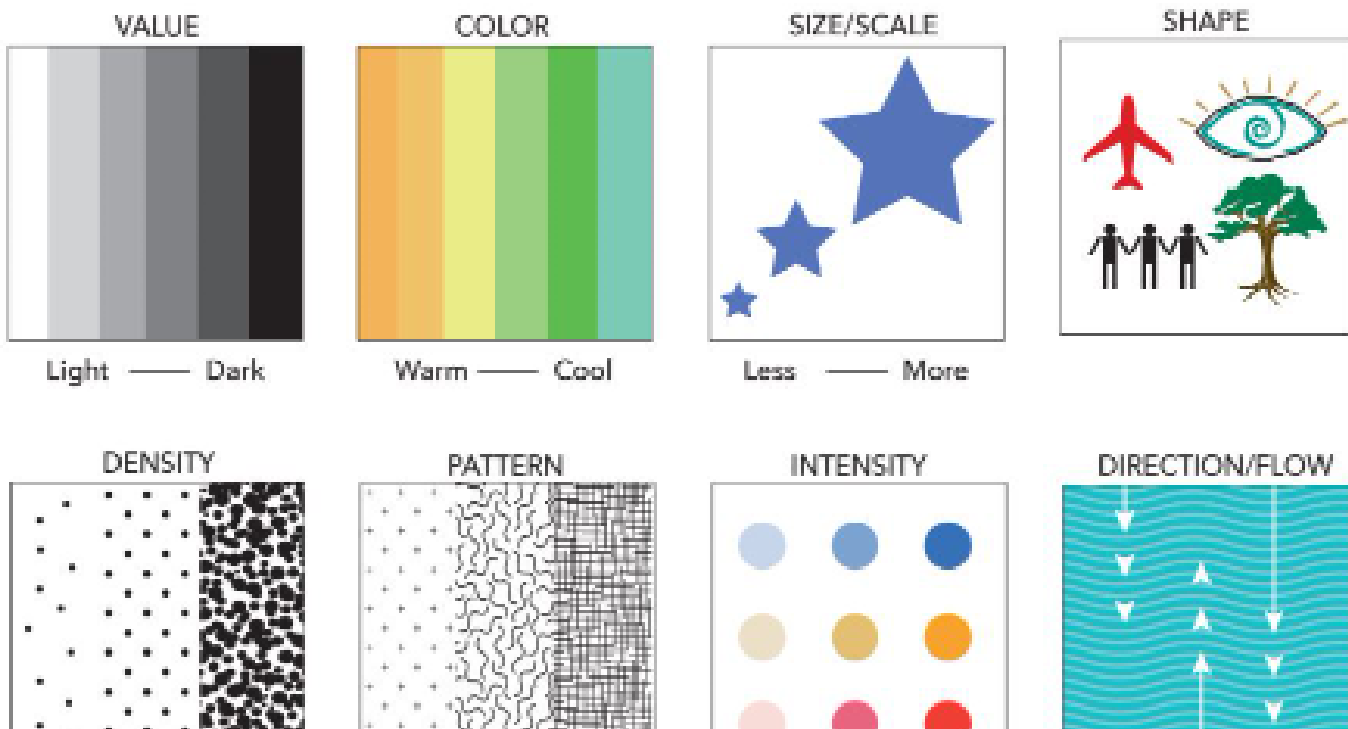
Please open your notebook to your next open page.

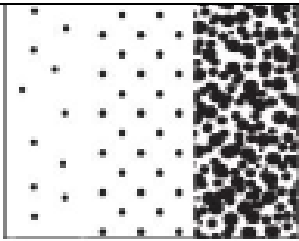
And draw in a blank legend box, it should be about one quarter (1/4) of the page.

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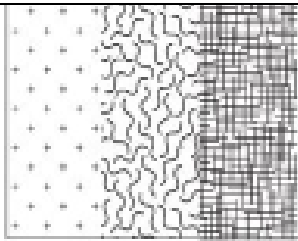
### Design Tools for Representing Data

Below are some key design elements you can use as a guide in creating your own visuals to represent data. You can combine colors, patterns and symbols to portray your data in a meaningful way.

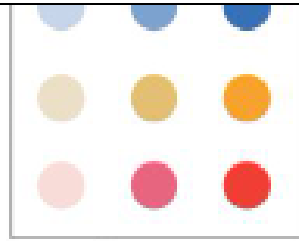




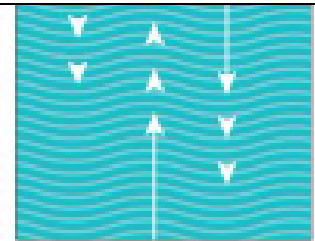
Fewer — Many



Calm — Busy



Weak — Strong



All of your maps currently use "color" as the main way to show the data.

You need to use a different category than just color. You cannot just use different colors and receive an A on this.



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# Coral Reef Bleaching Alerts

## LEGEND:

No stress -

Watch -

Warning -

Alert Level 1 -

Alert Level 2 -

No Data -

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## Human Impacts on Marine Ecosystems

**LEGEND:**

Very Low -

Low -

Medium -

Medium High -

High -

Very High -

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# Human Climate Niche 2070

LEGEND:

Less Suitable -

More Suitable -

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# Food Production Gap

**LEGEND:**

Max Production -

Could Produce More -

asolis65

# Fisheries Species Richness

**LEGEND:**

0 species -

10 species -

100 species -

350 species -

asolis65

# Forest Gain and Loss

## LEGEND:

Forest extent:

Forest Gain:

Forest Loss:

Gain and Loss:

asolis65

## Sea Turtle Tracks and Sea Temperature

**LEGEND:**

Turtle Track -

Warmer Ocean -

Colder Ocean -

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# Light Pollution

LEGEND:

Pristine Nighttime =

Can't see the Milky Way =

Never Fully Night =



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# Human Transportation

LEGEND:

Flights -

Ships -

Roads -

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# Population by Country

## LEGEND:

No Data =

9,450,000– 46,550,000 people =

46,550,000– 161,380,000 people =

161,380,000– 1,238,320,000 people =

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## LEGEND



Densely Urban



Urban



Settled



Rural



Ocean

Here's an example of what your legend might look like.

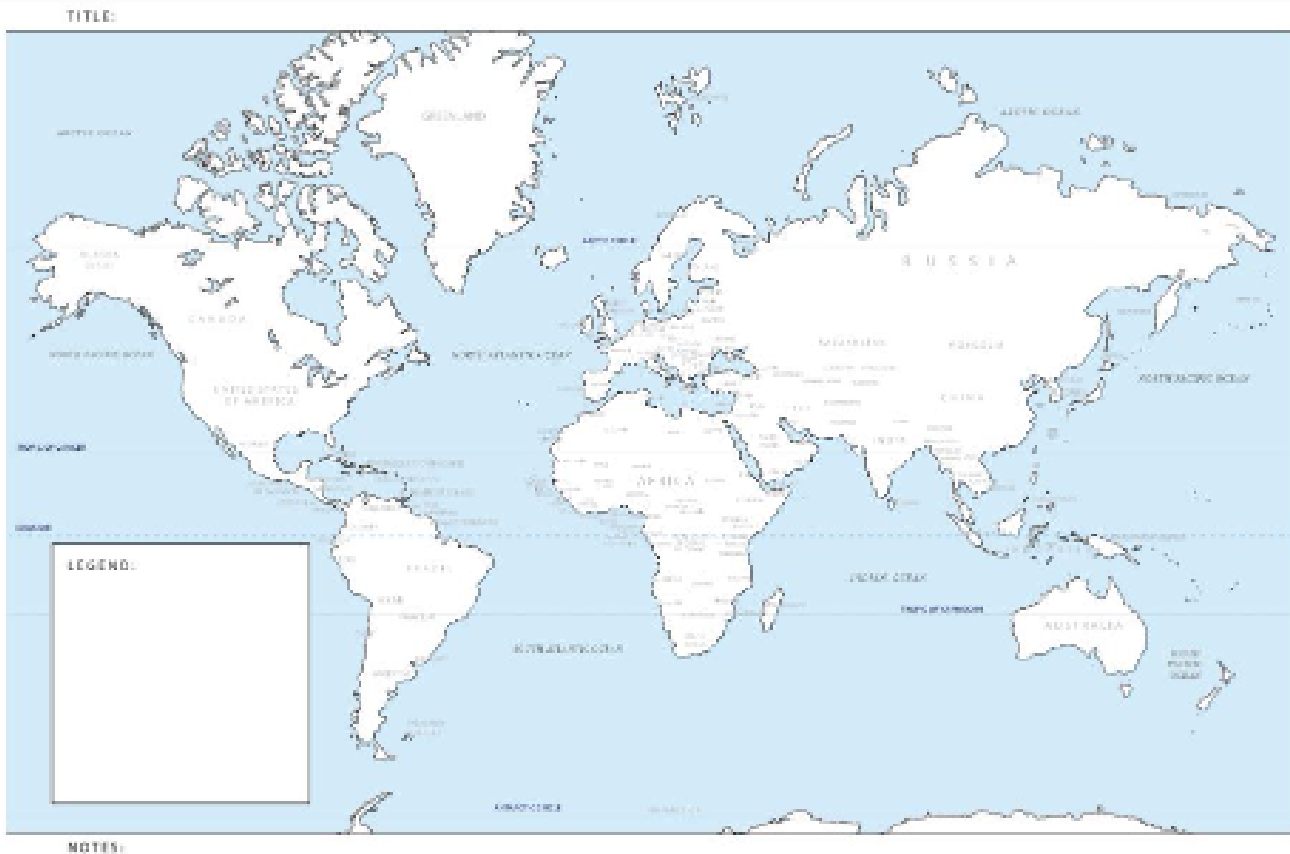
Here's an example of what your legend might look like.

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When you think your legend shows the data in a new way, please come and show me.

If I approve you will get the following materials.

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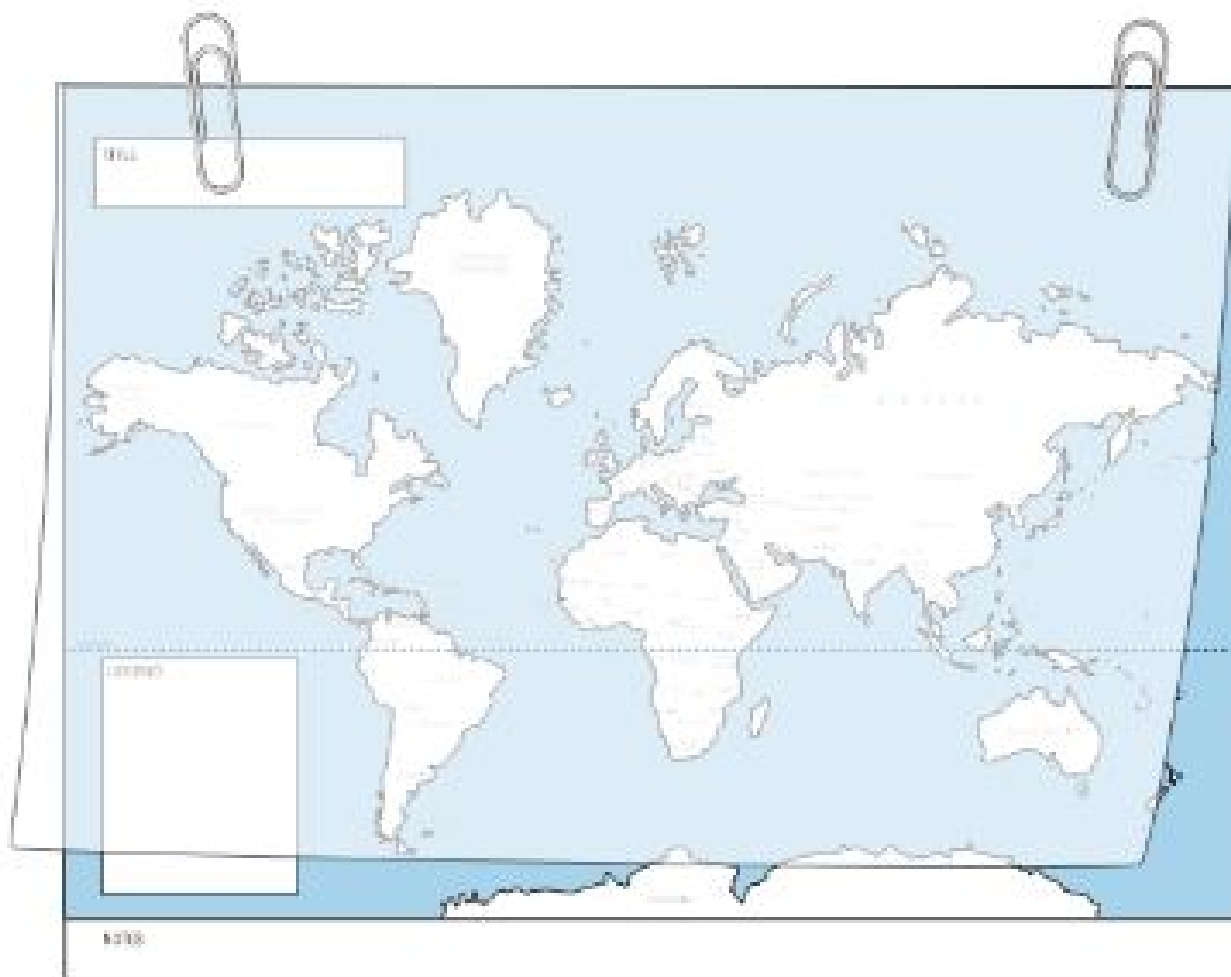


**DO NOT** write on this.

You will put your tracing paper over this.

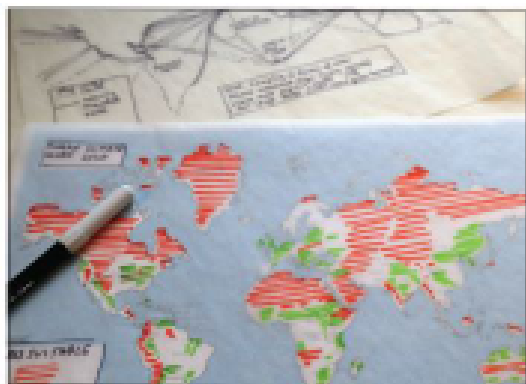
Don't even think about writing on this paper...

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Please use two paper clips to  
put your tracing paper on the big  
map

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## For the rest of class today:

1. Move to your assigned groups.
2. Go to Day 71 to see your maps again. You can also use your SOS Explorer app to see the flat version of the maps.
3. When I call your name come get your map from last class.
4. Look at the "legend" or "key" of the original map in the original website.
5. Now "translate" the data from the original map into your new and improved way, using your new legend.



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## Grading:

1. Map is complete
2. Map shows accurate data from original dataset
3. Map represents the data in a way that is different from the original dataset.

asolis65 (pm)

Leave the map with paper clips  
on your table.

Bring your map to the counter.

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All tables must have

2 maps with 2 paper clips each

1 "data tools" chart in sheet

protector

1 art box