Ideas

→ Map (Global Fisheries Production in 2020)

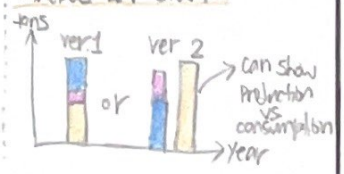
Proportional symbol map?

Choropleth map?

→ Fish & seafood Production vs Consumption

Stacked area chart?

Stacked bar chart?



→ Animal Protein Consumption (Global vs Malaysia)

Stacked bar chart?

↳ better to compare % of fish by each country

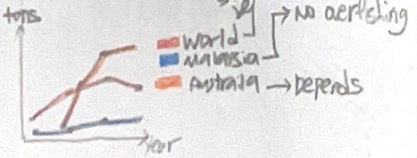
Pie chart?

↳ highlighting each sector of protein by country

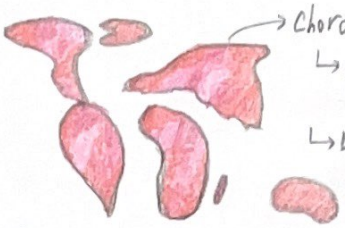
→ Over fishing

Bubble chart?

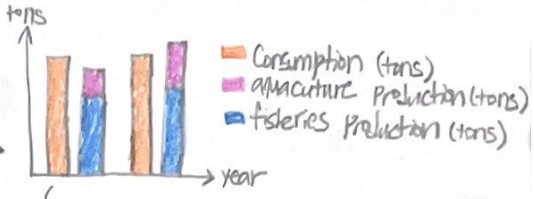
Line chart?



Filter



→ Choropleth map
↳ Colour indicates Fisheries Production
↳ Dataset focus in 2020



↳ Can emphasis wild fish production is way lesser than consumption so that it leads to increasing aquaculture farm

→ Can emphasis malaysia cons. is higher than global

→ Size & colour based on argument of bubble chart

Categorise

Capture fisheries production → usage of wild fish

↓

total fish & seafood production and consumption

↓ find the relationship

aquaculture production increasing

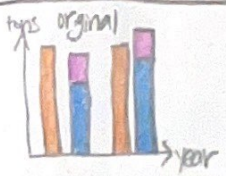
↓

% of seafood & fish consume

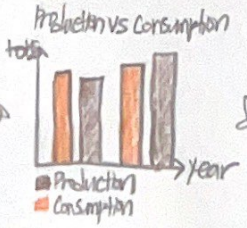
↓

overfishing

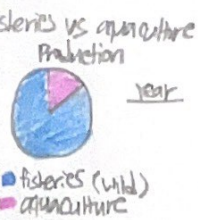
Combine & Refine



Refine →

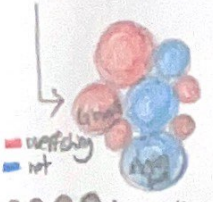


&



I believe this seperated ver. might give better impact on overfishing and amount of aquaculture production.

Refined version of Bubble chart



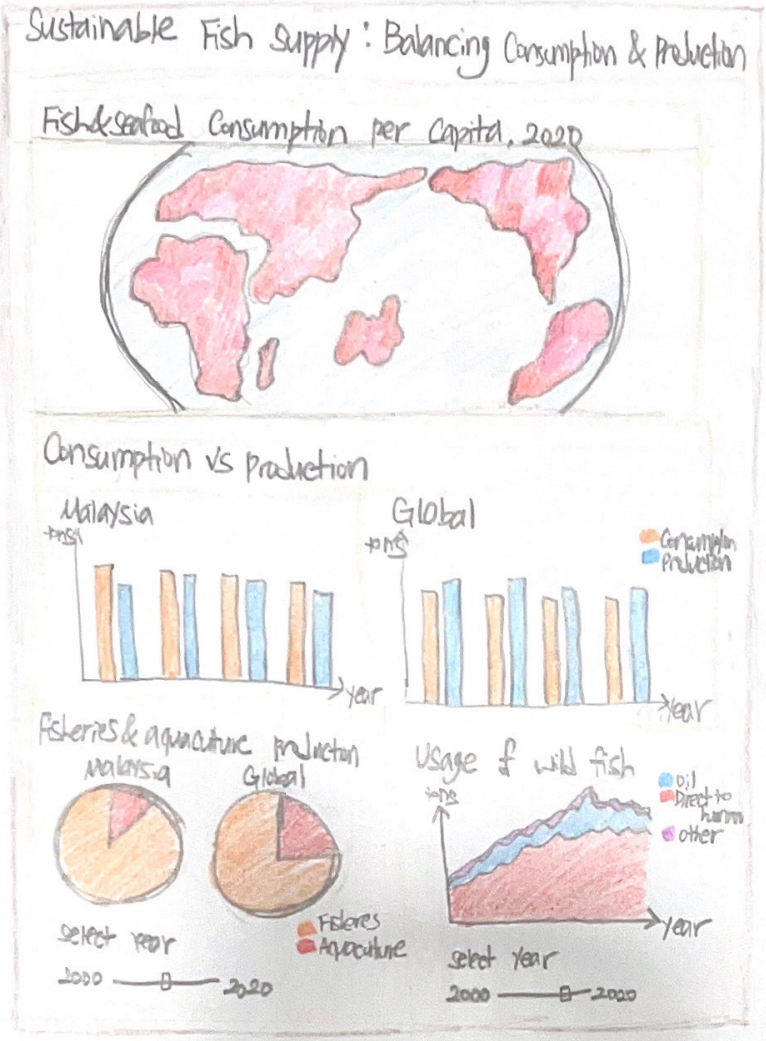
The main changes are:

1. size indicates the consumption of fish & seafood
2. In bubble chart there's two different colour red & blue
   red: overfishing (production ↑)
   blue: not overfishing (consumption ↑)

Question

- Does this tell a clear story?
- Does everything in one line of topic?
- Is it engaging for the audience?
- Does charts can give direct and clean view?

Layout



Title : Sustainable Fish Supply
Author : Darin Park
Date : 26/09/2024
Sheet : 2
Task : Focused on consumption

Operation

Global Fish consumption per Capita:
Provides a comparative overview of fish consumption globally, showing which regions consume more fish relative to others.

Consumption vs production:
These charts highlight the gap between consumption and production, especially in Malaysia, where consumption significantly exceeds production, indicating over-reliance on imports or potential overfishing.

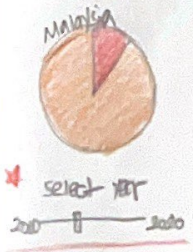
Fisheries vs. Aquaculture:
Shows the increasing role of aquaculture in meeting fish demand as fisheries face limitations, stressing the importance of sustainable fish farming.

Usage of Wild Fish:
Tracks changes in wild fish exploitation, providing insight into sustainability and the shift toward alternative sources like aquaculture.

Focus

Malaysia has higher consumption of fish and seafood compare to production.

gap between consumption and production indicates amount of overfishing. in fact of Malaysia, Consumption is higher than production which be showing negative value for overfishing



By sliding the year, able to check is increase of aquaculture production by time pass.

Detail

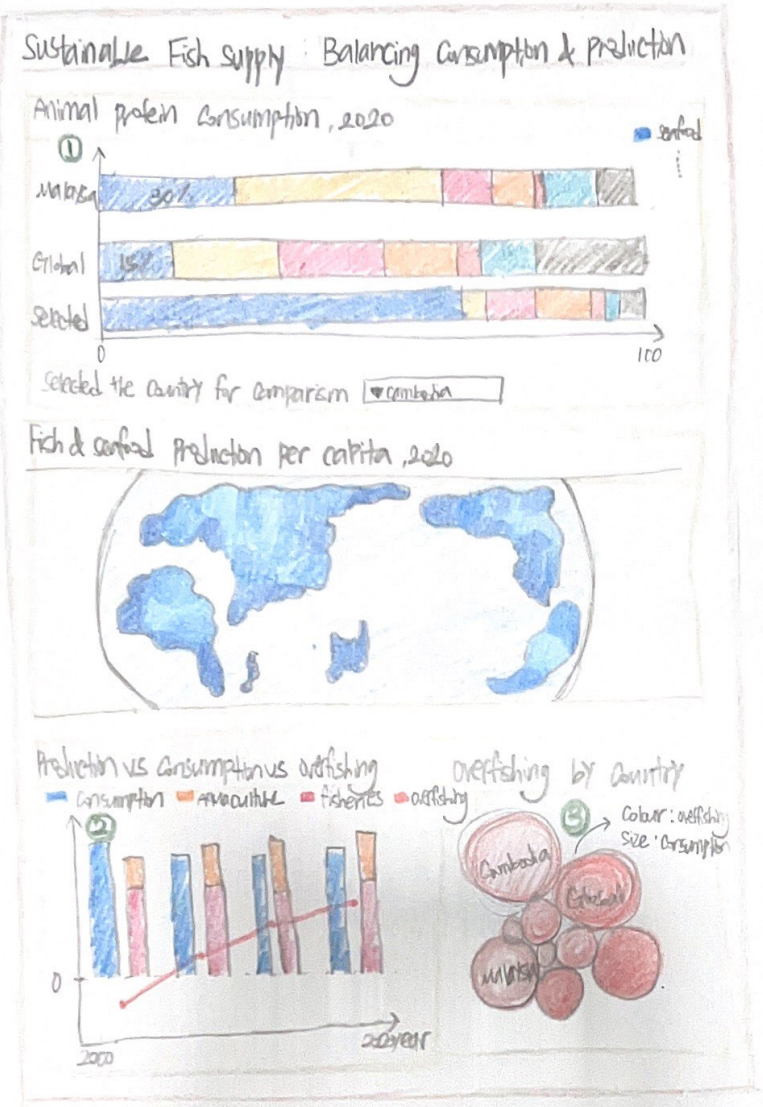
Data sources : The chart will use data from publicly available databases on consumption, production, and overfishing.

Timeline : development will take approximately 2 weeks, including pre-process, chart creation, and combine into HTML

Technical Tools :

Pre-process - Python
Create chart - vega-lite
Final dashboard - HTML, CSS, Javascript

Layout



Title: Sustainable Fish supply
Auther: Sarah Park
Date: 26/09/2024
Sheet: 3
Task: Focused on overfishing problem

Operation

Stacked bar chart: users can select a third country from the dropdown to compare its animal protein consumption to Malaysia and global averages.

World map: this map provides users with a global perspective on which regions contributes the most to fish and seafood production.

Line and bar chart: Helps users analyze the trends in overfishing by comparing fish production and consumption levels over time, giving insights into the sustainability of Malaysia's fishing practices

Bubble chart:

Users can hover or click on a country to view detailed statistics on overfishing and consumption. It provides a clear visual representation of the severity of overfishing in different countries, allowing users to understand the correlation between overfishing rates and consumption levels.

Focus

① In the stacked bar chart there's two default values displayed in Malaysia & Global. User can choose the last bar to comparism of the protein consumption.

② The line chart indicates the overfishing values by year in Malaysia

+ values which indicates overfishing (prod > cons)

- values, indicating don't have overfishing (prod < cons)

↳ can have the insights with overfishing with consumption
(eg. has the effect of overfishing by decrement of consumption)

③ Colour of bubble indicates overfishing and size indicates the amount of consumption

* can see the relation with colour & size *

Detail

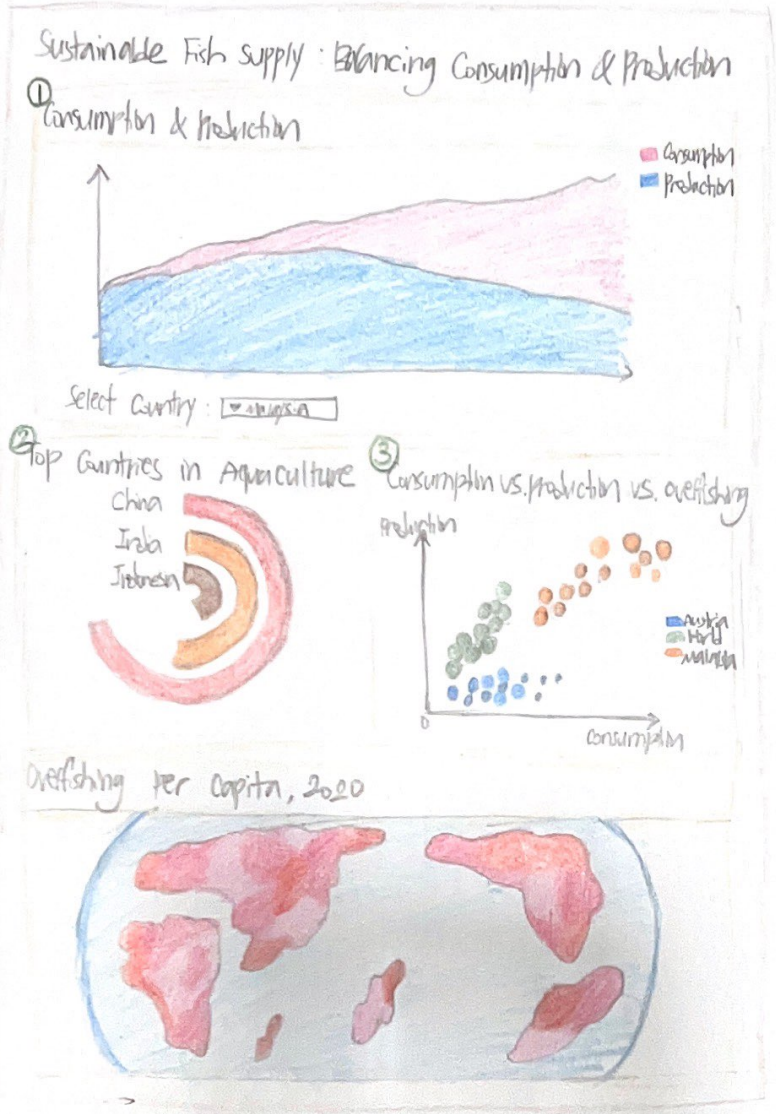
Data sources: This visualisation will use fish production, consumption overfishing from our world in data.

Timeline: About 2 weeks to complete pre-processing, creating chart and visualise it into HTML.

Technical Tools:

Pre-process – python
create chart – vega-lite
Final dashboard – HTML, CSS, Java script

Layout



Title : Sustainable Fish supply
Author : Darin Park
Date : 26/09/2024
Sheet : 4
Task :

Operation

Consumption vs Production : Demonstrates the imbalance between fish consumption and production over time for different countries. Highlights the role of aquaculture in meeting rising demand.

Top Countries in Aquaculture :

Compares aquaculture development across leading nations (e.g. China, India, Indonesia and Vietnam) emphasizing their role in sustainable fish supply.

Overfishing and its impact :

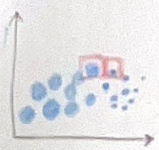
Shows regions most affected by overfishing and how it correlates with gaps between consumption and production.

Focus

① Main : Showing the supply and demand of seafood and fish. This is the main story telling of why the aquaculture is increasing. Consumption is uptrend ↗ but capture fisheries production is downtrend ↘

② This should be the first insight of which country has developed with aquaculture to support the gap between supply & demand.

③ In case of Austria, when we focus on red box, can see that



Production is still same but consumption increases. So the size of circle reduced. This visualisation shows that the overfishing is depends on production and consumption.

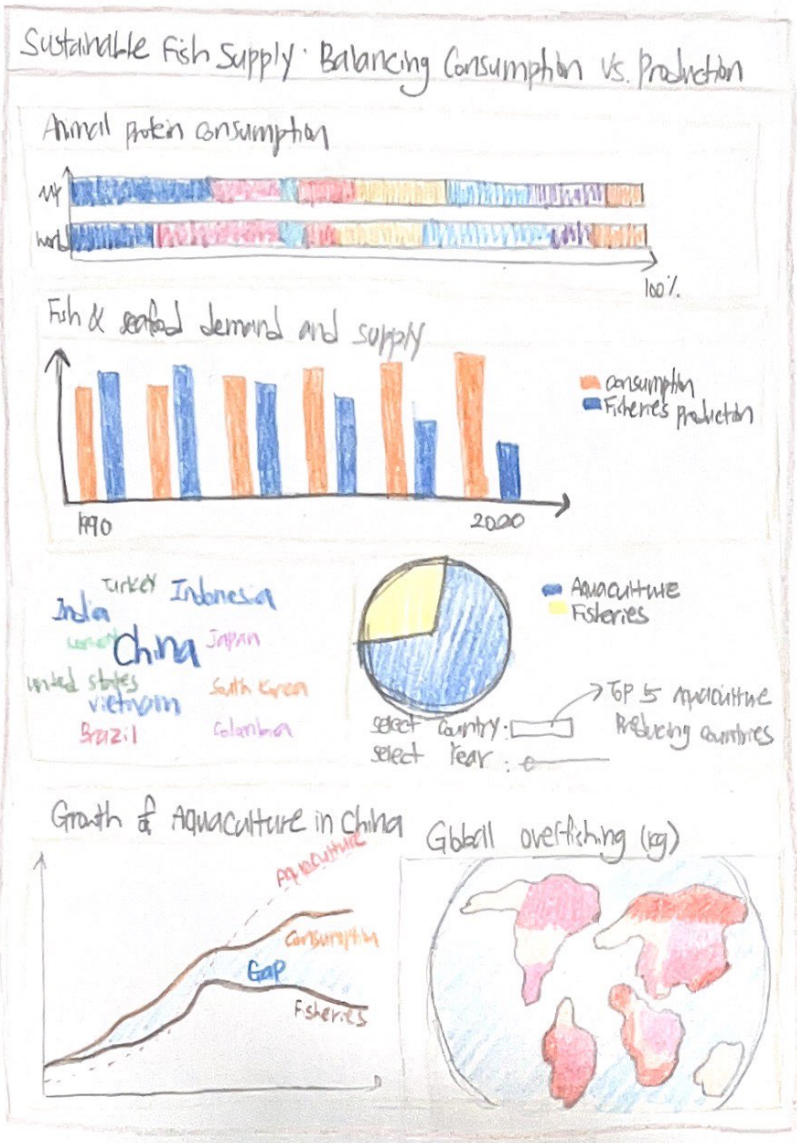
Detail

Data sources : Uses data from global databases on aquaculture, consumption and overfishing

Development time : Approximately 2 weeks

Technical Tools : Python for data pre-processing, plot creation, and final dashboard (HTML, CSS, and Java)

Layout



Title: Sustainable Fish supply
Author: Darin Park
Date: 26/09/2024
Sheet: 5
Task: Final Implementation design

Operation

Interactive visualisation:

Users can explore data on animal protein consumption and fish production through hover effects, enabling detailed data exploration by interacting with charts

Country-specific insights:

Clicking on individual countries will update the charts to reflect specific consumption and production statistics for that selected country.

Linked data views:

Interaction in one visualisation, such as selecting a year on country, will automatically update related charts to show the relevant trends in consumption and production.

Focus

Storytelling of this visualisation

In Malaysia consumption of seafood & fish is highest

But, consumption is increasing and production is decreasing

We need Aquaculture product to fill the gap.

Identify the top country of aquaculture for further analysis

Double check with the top country data that aquaculture is the key to support consumption

Indicates there's overfishing issues

Detail

The data for this visualisation was sourced from multiple csv from our world data.

This visualisation was developed using Python, vega-lite and HTML/CSS.

Python was used for data pre-process This is essential due to vega-lite is sensetive with Dataset