



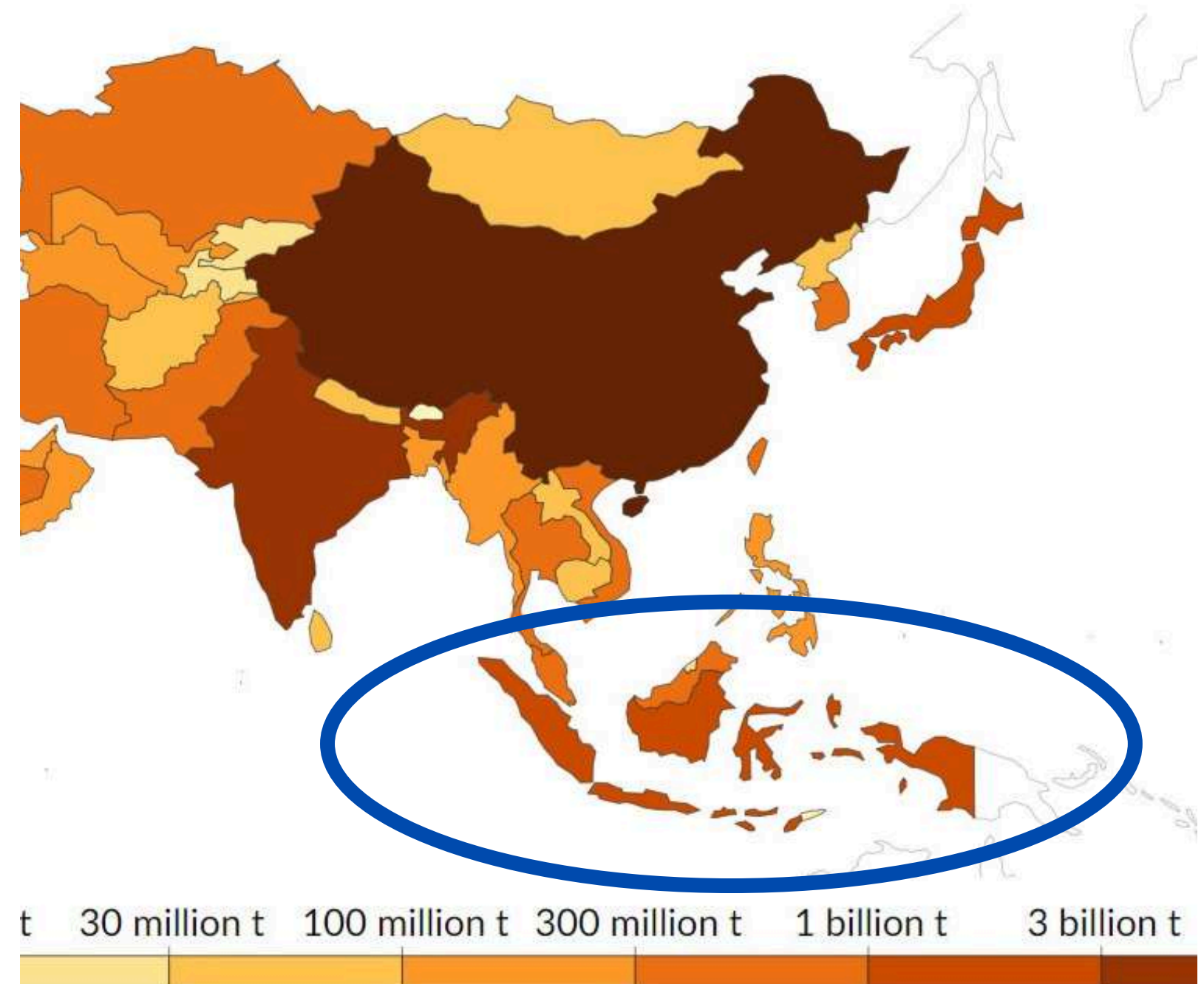
Green House Dash

Interractive dashboard for lowering green house gas emmision

Background

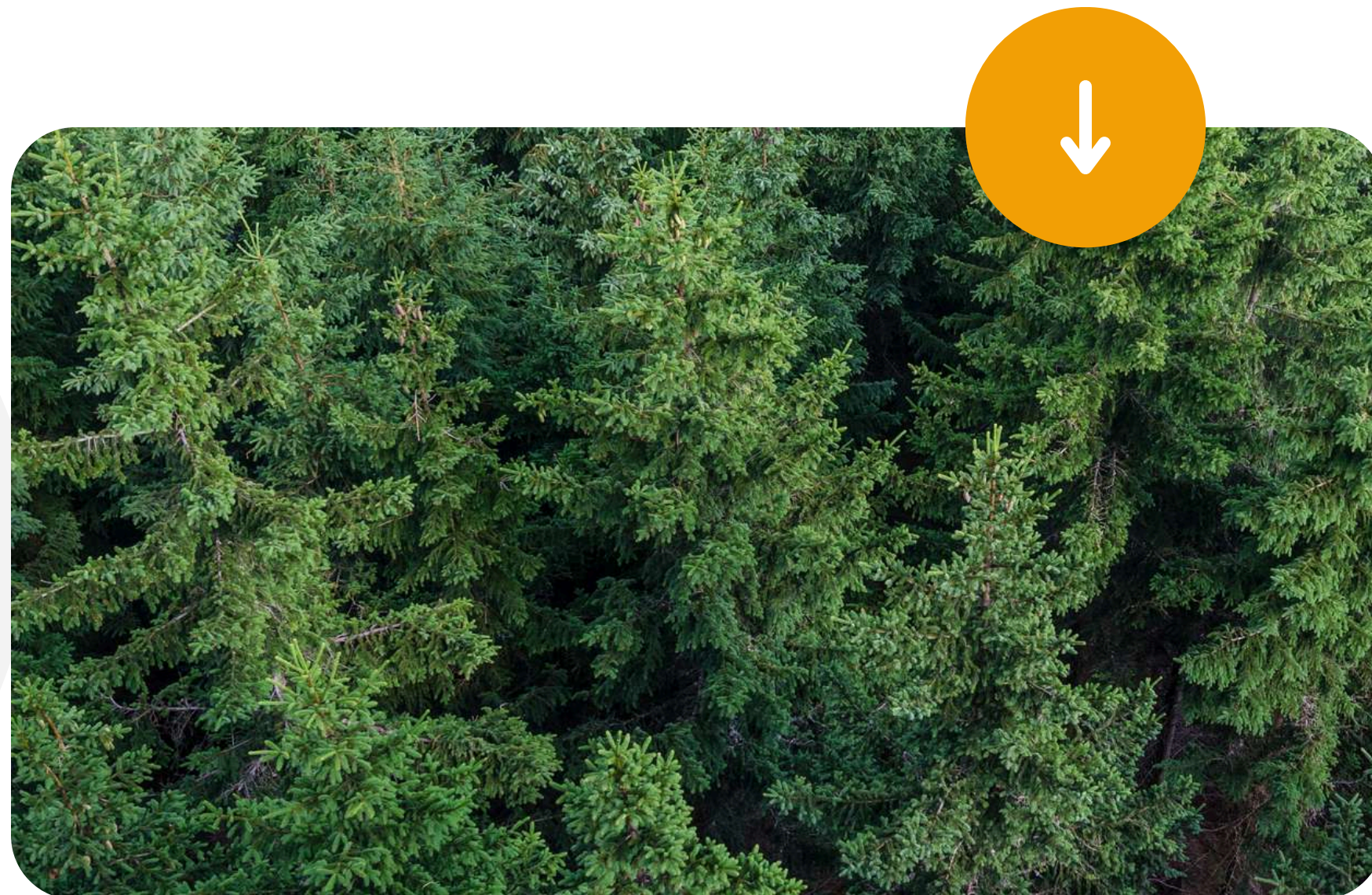
Indirect GHG emissions are now a critical concern due to their significant contribution to overall emissions, often surpassing direct emissions in key sectors. Stemming from complex global supply chains, manufacturing processes, and waste disposal, these emissions worsen climate change and environmental degradation, with far-reaching ecological, social, and economic repercussions. Addressing these emissions has become vital for sustainability, risk management, and corporate responsibility amidst growing regulatory pressures and consumer demands. In 2021, Indonesia ranked as the world's ninth-largest emitter, with energy sector emissions totaling approximately 600 million tonnes of carbon dioxide (Mt CO₂).

source: <https://www.iea.org/reports/an-energy-sector-roadmap-to-net-zero-emissions-in-indonesia/executive-summary>



source: <https://ourworldindata.org/greenhouse-gas-emissions>

Regulations



Indonesia itself has regulations for the regulation of GHG emissions for every company or factory established in Indonesia, namely **Presidential Regulation Number 71 of 2011 concerning the Implementation of National Greenhouse Gas Inventories**. It outlines the roles and responsibilities of the Ministry of Environment (KLH) and other ministries/agencies as well as local governments, in the preparation of GHG inventories. This Presidential Regulation also states that verification of the results of inventories and achievements in emission reductions from activities needs to be conducted

source: <https://transisienergi.id/regulasi-seputar-emisi-di-indonesia/>

Solutions



Automatic Calculator

Developing an automated calculator to calculate GHG emissions for each company, similar to the one shown in the YouTube video: [Link Youtube](#)



Creating Dashboard

Creating a dashboard for the GHG conditions of each company, which will subsequently assist the government in identifying companies that exceed the specified regulatory limits for GHG emissions. GHG data will be obtained from a database connected to the aforementioned calculator. The dashboard's outcome will be similar to this: [Link Dashboard](#)

How This Dashboard Works



User company will input their resources and activity which are the **indicator of GHG emissions**

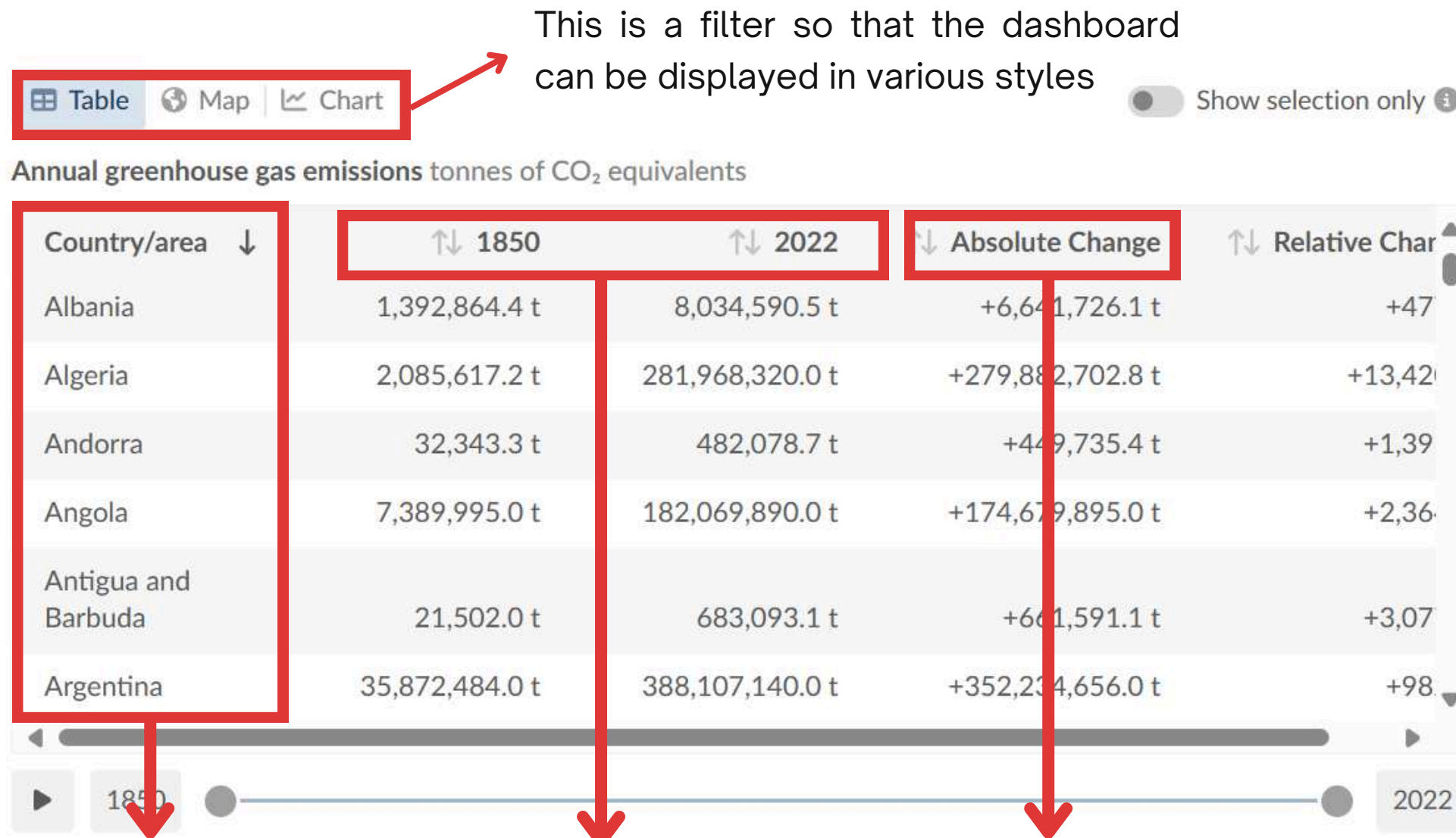


This app will calculate **the score of GHG emissions** produced by every company and saved the data to the Government **database**



The information retrieve from the database can be used for **decision making** and **regulation**

How This Dashboard will be Displayed



Left side will conduct type of company

This part for years, and also we make month filter in right corner.

This part is for relative change between those chosen year.

The idea of this dashboard is inspired by ourworldindata.org, one of the dashboard part is Table contains the **GHG score of the every company** in Indonesia. and it can be filtered from the **highest to the lowest** score.

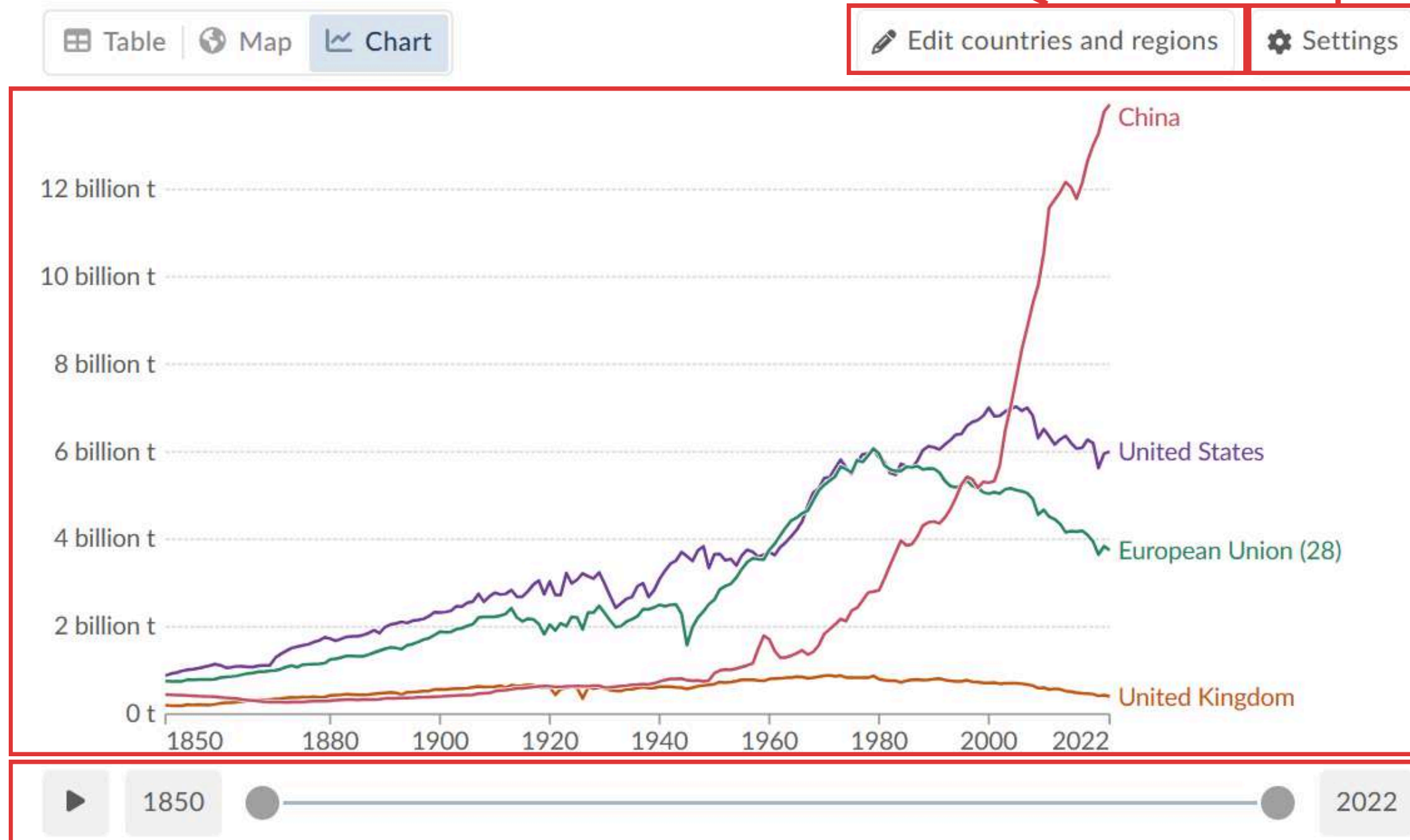
The new idea we want to add :

We will add a **monthly filter**, as reporting on GHG emissions is planned monthly, so in addition to annually, **GHG emissions can be compared each month**

How This Dashboard will be Displayed

At this field, you can filter and select every company or regions in Indonesia, and the chart will show

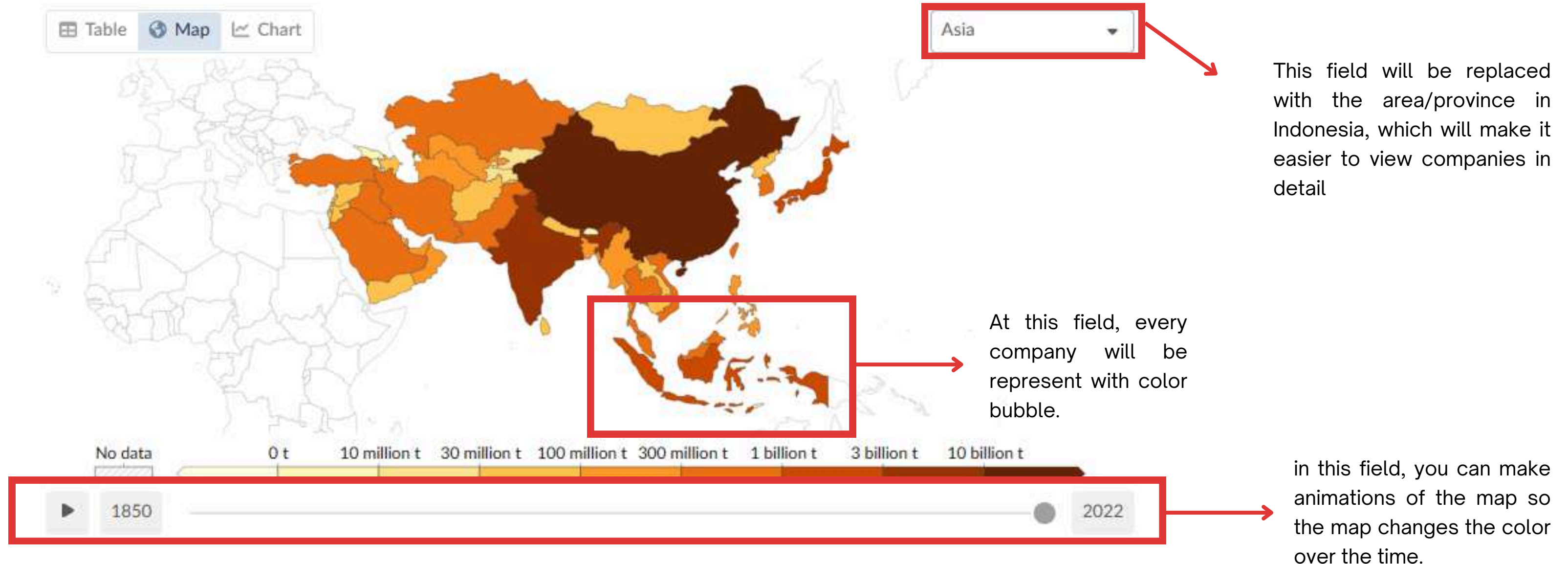
in this field, you can set how the chart shows the plot, splitted, summarized, colorized, etc.



This is example of the chart we will visualize, here it shows every country with CO2 scores, but in my dashboard, it can contain every specific region, smaller area, or even specific company in Indonesia. It can show the score at least monthly, or you can filter the dashboard the period time you want. So, it can compare every specific area or company.

in this field, you can make animations of the chart over the time.

How This Dashboard will be Displayed



The is example of mapping company by **GHG score**, the brighter color shows the lower GHG score, and the darker color shows the higher GHG score.

My Goals

Up to this point, Indonesia has yet to establish recorded monitoring mechanisms for handling GHG emissions. Therefore, I am initiating the implementation of a real-time dashboard intended for industrial companies in Indonesia to report their GHG emissions through a calculator that will automatically connect to the database of the real-time dashboard. This real-time dashboard can then be utilized by the government to monitor emissions generated by companies, thereby aiding in the realization of government programs in accordance with Presidential Regulation Number 71 of 2011 concerning the Implementation of National Greenhouse Gas Inventories

Salwa Putri Priyani

