ASEAN DATA SCIENCE EXPLORERS

ASEAN FOUNDATION

UNDERSTANDING ASEAN COUNTRIES POWER CONSUMPTION AND RENEWABLE ENERGY GENERATE

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Brief Description

- Asia: Asia is the largest consumer of energy in the world, accounting for more than 40% of global energy consumption. Rapid economic growth in countries like China and India has contributed to the increasing energy demand in this region. Coal is a significant source of energy in Asia, followed by oil, natural gas, and renewable energy sources.

- North America: North America, primarily the United States and Canada, is the second-largest energy-consuming region globally. The United States is the largest consumer of energy in North America, relying heavily on fossil fuels such as oil, natural gas, and coal. However, there has been a growing emphasis on renewable energy sources in recent years.

- Europe: Europe is another significant consumer of energy, with countries like Germany, the United Kingdom, and France leading the consumption. The energy mix in Europe is diverse, including oil, natural gas, coal, nuclear power, and an increasing share of renewable energy. Several European countries have been actively transitioning to renewable energy sources to reduce carbon emissions.

- South America: South America's energy consumption is primarily driven by Brazil and Argentina. The region relies heavily on hydroelectric power, which accounts for a significant portion of the energy mix. Other sources include oil, natural gas, and biomass. There is growing interest in expanding renewable energy, particularly solar and wind power, across South American countries.

- Africa: Africa's energy consumption is relatively lower compared to other continents, but it is experiencing steady growth due to population increase and economic development. The energy mix in Africa varies across countries, with some relying on fossil fuels, while others have significant hydropower resources. Renewable energy sources, such as solar and wind, are gaining traction as countries seek to improve energy access and reduce dependency on fossil fuels.

- Oceania: Oceania, which includes Australia and New Zealand, has a high energy consumption per capita due to their industrialized economies. The region heavily relies on coal, natural gas, and oil for energy generation. However, there is a growing focus on renewable energy sources, particularly solar and wind power, to reduce greenhouse gas emissions.

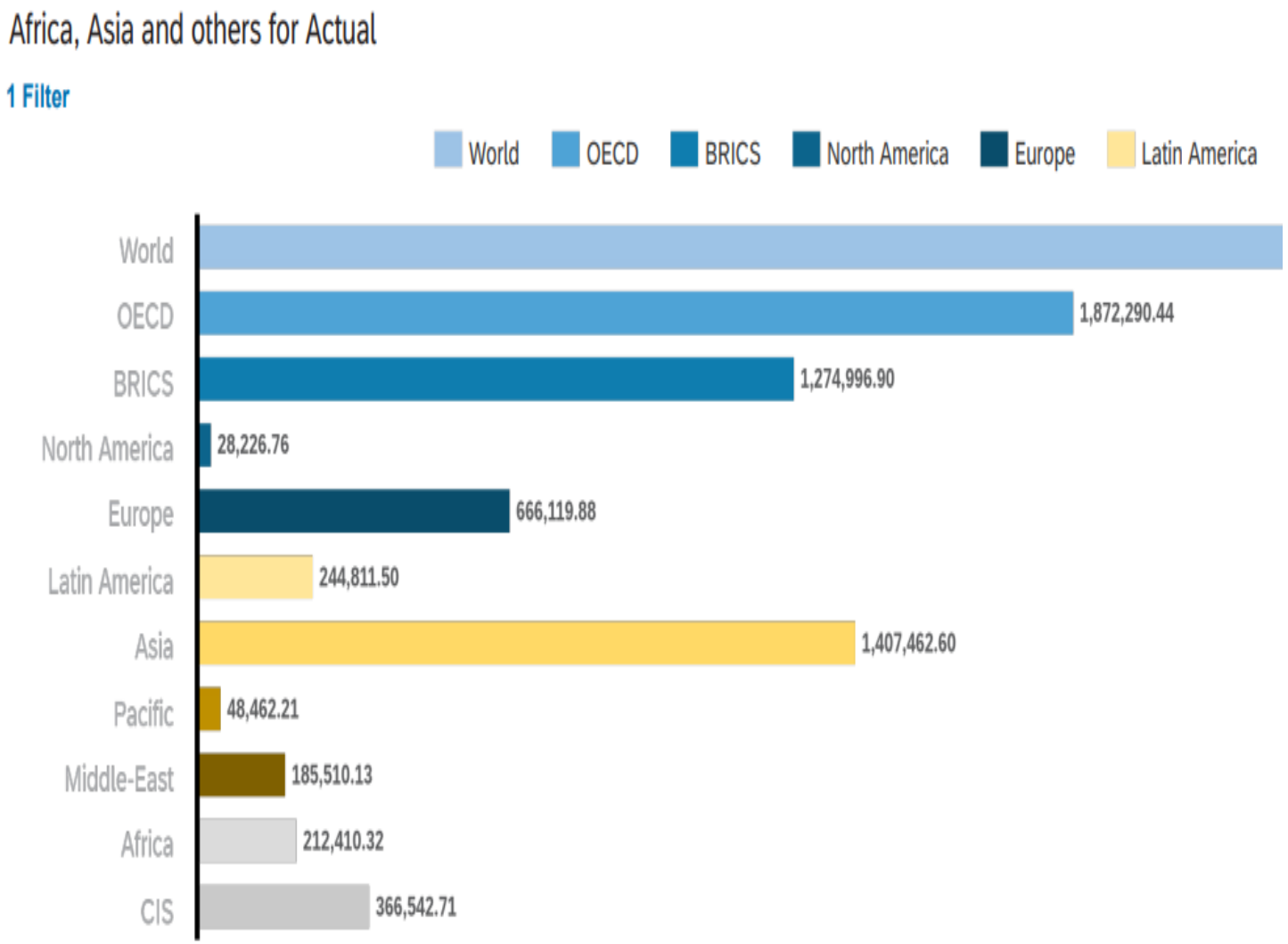
- It's important to note that energy consumption patterns can vary within continents and change over time as countries adopt different energy policies and technologies. Additionally, the transition towards renewable energy sources is gaining momentum globally, driven by the need to mitigate climate change and reduce reliance on fossil fuels.

OBJECTIVE

1. To find the usage of energy in Asia for 10 years.
2. To find the usage of renewable energy.
3. To find which renewable energy has been used most

Energy consumption

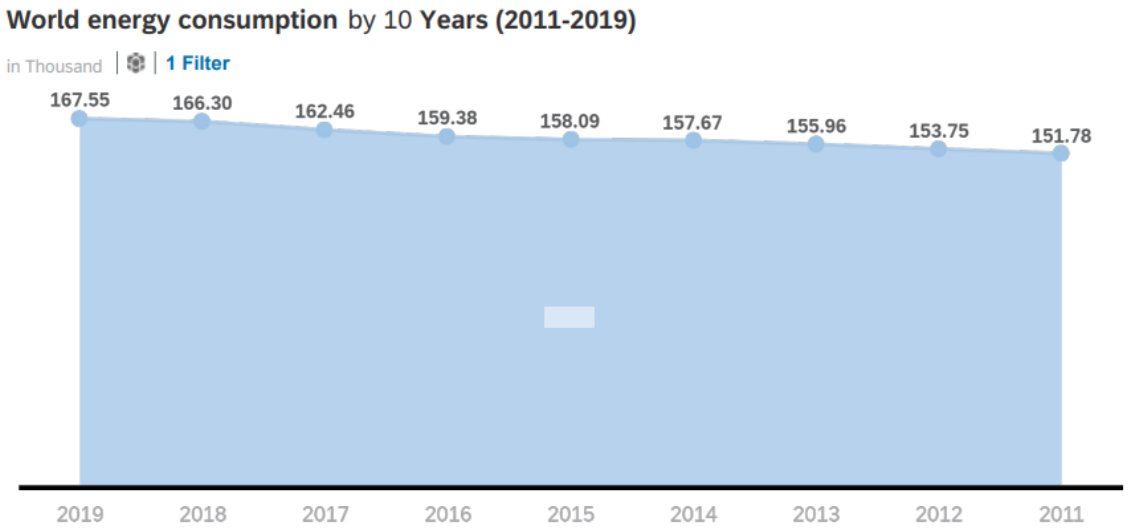
Overview of **Asia and other continental** for 30 **Years**



- This bar chart shows that world energy consumption for 30 years.
- The category was separated by continental and world groups.
- The values are aggregated values from 1990 to 2020.

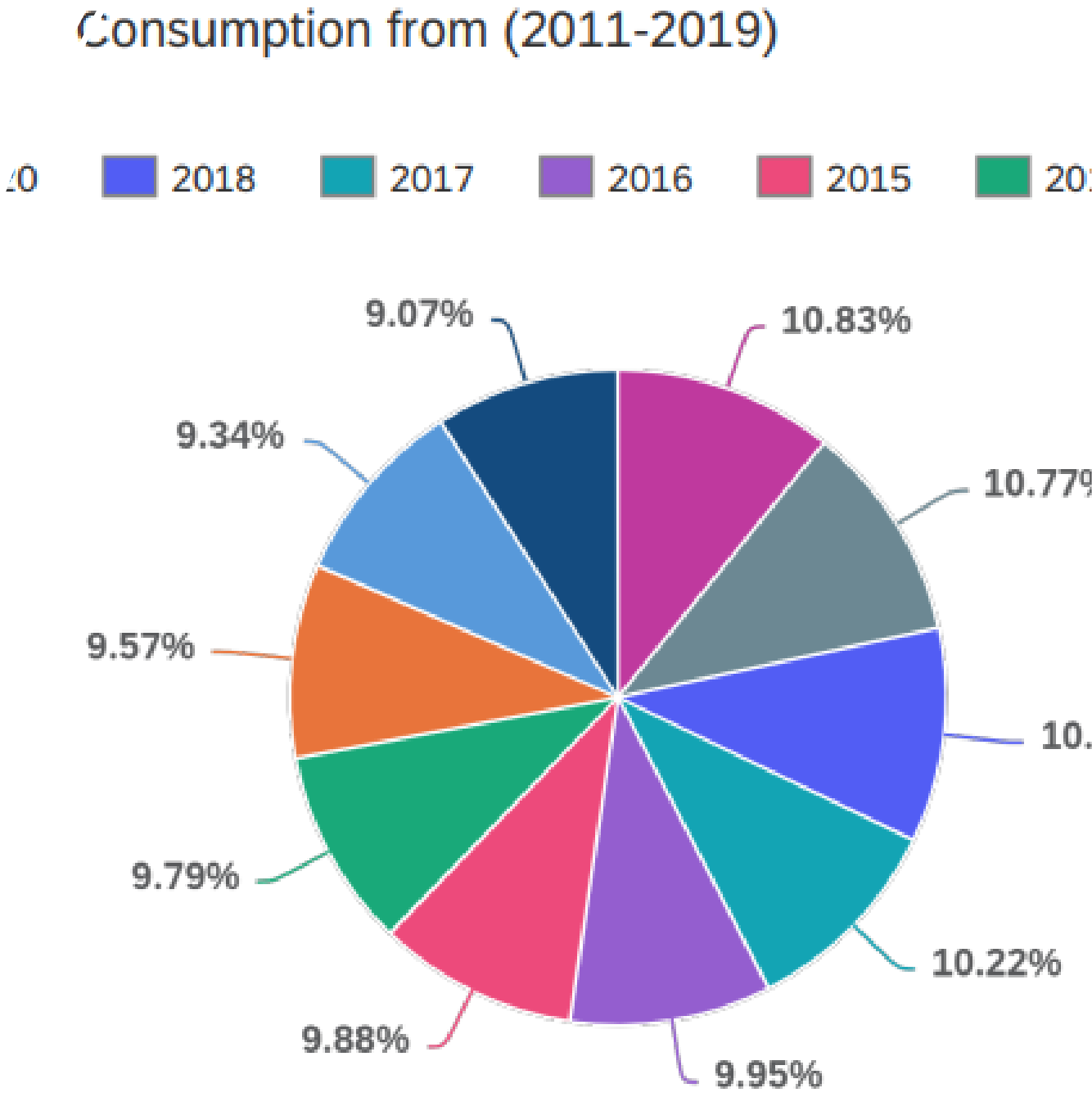
Timeline

- In last ten years the level of energy consumption by world countries are increased.
- From 2011 – 2019 the was increased from 151.78 to 167.55



Asia For 10 years energy Consumption from (2011-2019)

- The pie chart shows 10 years of data from 2011 until 2019.
- The chart describe in 10 years the level of energy consume by the Asia countries.



Renewable Energy

Total aggregate value of renewable energy for **Year 28**

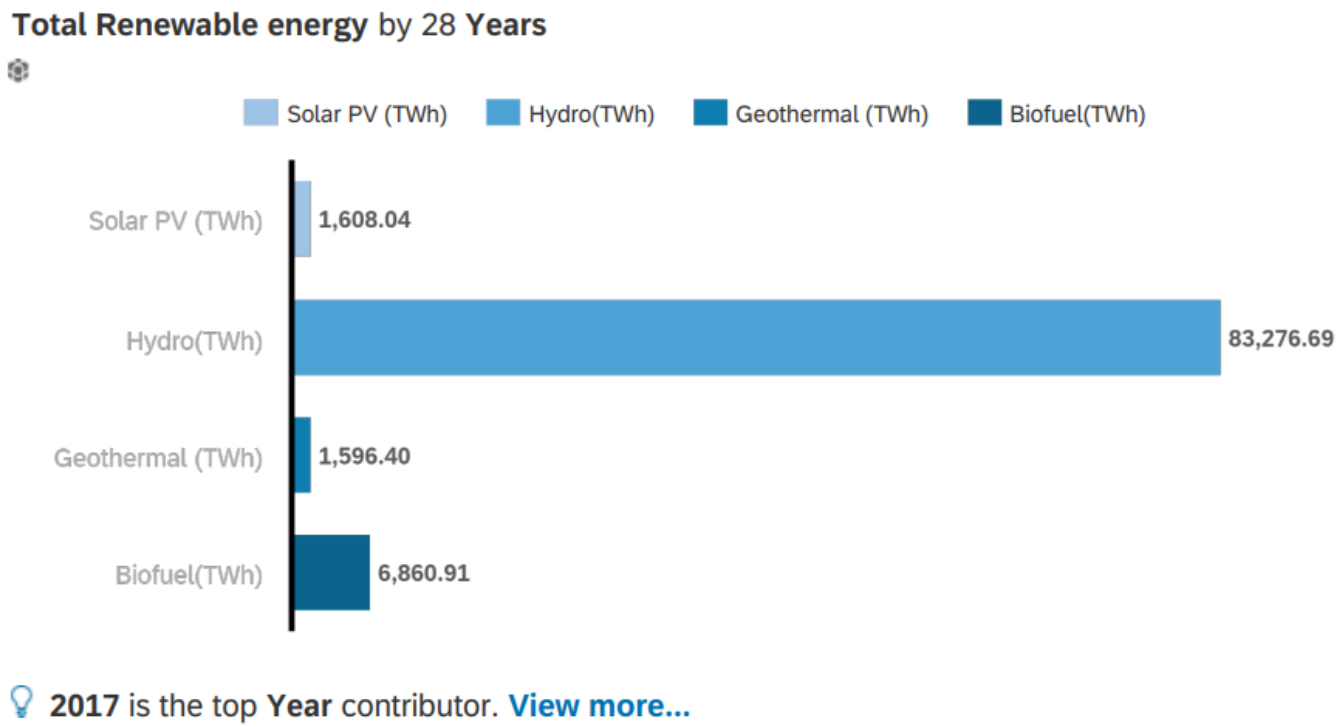
28

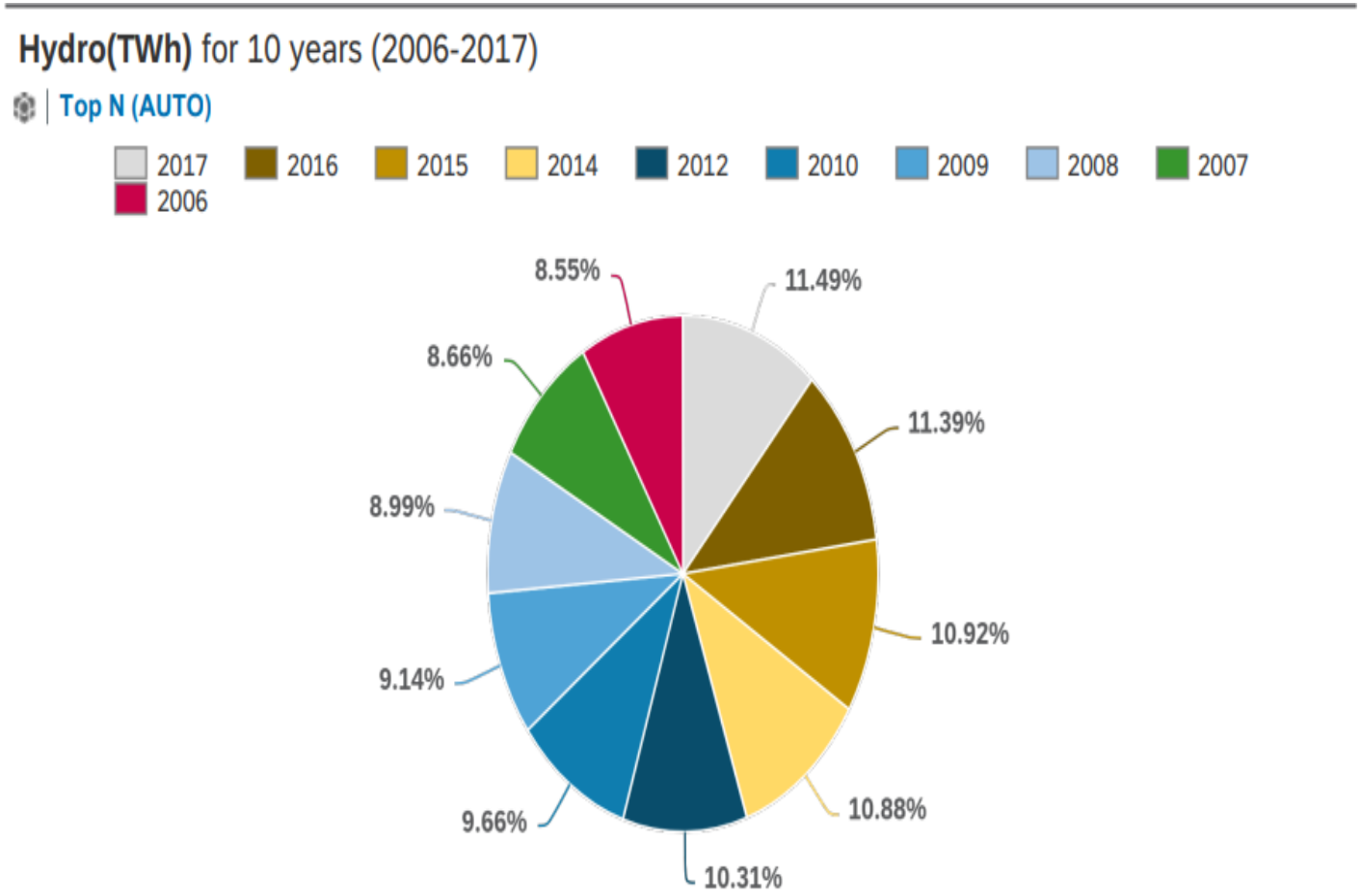
Geothermal (TWh)	**1,596.40**
Hydro(TWh)	**83,276.69**
Solar PV (TWh)	**1,608.04**
Biofuel(TWh)	**6,860.91**

- This table shows that nearly 28 years renewable produced in the world.
- Nearly 4 types renewable energy was produced the aggregated values was displayed in table.
- The data was taken from 1990 to 2017.

Total Renewable energy by 28 years

- Nearly 28 years data was taken.
- The aggregate value was taken from 1990 to 2017.
- Hydro energy was produced in higher amount from 1990 to 2017.





- This pie chart shows nearly 10 years of data from 2006 until 2017.
- Hydro was focused on the chart.
- Every year the amount of producing renewable energy was increased.
- Hydro power is high demand energy because of that every year the producing amount is increasing.

Recommendation

1. Hydro power plant should increase the number because this renewable energy is on high demand so that when increase this hydro power plant its more sufficient to supply energy.
2. Asean countries should increase the renewable energy power plant in their countries. To maintain the supply of power energy.
3. Asia population is higher compared to other continental so that every year the energy consumption also increase, asia countries should increase their renewable power plant.

Summary

From this findings we can say that Energy consumption will only increase in the upcoming years. With new inventions and technologies the source of the energy are changing to non-renewable energy to renewable energy. In next 10 years I hove we can change the graph with increment in renewable energy and decrease in non-renewable energy.

THANK YOU