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Comparison between a Hard-Power Country (USA) and a Soft-Power Country (South Korea) with a Focus on the Environment & Climate Change

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Abstract

A gradual increase of power is leading to environmental issues and climate crises. This study aims to compare the extent of climate change and environmental degradation in two countries - one of which is hard power, and the other, a soft power. The basis for comparison is economic, political, and social factors and frameworks in the respective states. In this context, hard power is defined as using military strength to influence other nations and persuade them to follow your will. At present, the USA has made its military the strongest, and it is unrivalled. Specifically, this essay investigates how the USA encounters several environmental issues making it one of the substantial emitters of greenhouse gases, and what are the initiatives taken by the state to resolve the climatic problem, despite being the military giant. In this context, South Korea has been used as an example of Soft power policy, which tops the list for tourism and its cultural richness. The authors of the paper have tried to determine how its soft power strategy distorts its environment. The major findings of the essay are that respective states of power are a large part of their environmental degradation, through irresponsible tourism in Korea and extensive military use in America. However, while Korea's damage to the environment is more internal, American hard-power has led to environmental degradation in many parts of the world.

Keywords: *Soft power, Hard power, Military, Culture, Environment, International Politics, Nation-building, Korean Wave*

1.0 Introduction

As of November 2020, 194 nations and the European Union have pledged to the Paris Agreement. Following the agreement, these nations are seeing an increase in climate-related regulations within their borders. Private firms, which contribute a large part of the total worldwide pollution levels, are transitioning from the profit-oriented bottom line to a more holistic triple bottom line. They are now setting CO2 reduction targets, aiming for Net Zero emissions and even pledging a proportion of their profits to social responsibility (known as Corporate Social Responsibility). These instances serve as examples of how different nations and economies have reacted to the rapid onset of climate change. Many countries which had earlier denied the existence of climate change, are now being forced to face and combat it.

It is interesting to note the response of different nations on an issue that may threaten the safety of the entire human race. On the one hand, we can take the example of Bhutan. This carbon-negative country in South Asia was one of the first to become carbon negative and pledged to remain carbon neutral by prioritising environmental concerns over economic concerns. This is due to the awareness that Bhutan's changing climate would prove disastrous not just as an ecological issue but would also deprive its predominantly agricultural population of their livelihoods. Despite factors like high population growth rate, unchecked rural to urban migration, and the skyrocketing demand for fuelwood that may threaten its promise of Carbon Neutrality, Bhutan unlike many other Himalayan countries, has kept its environmental quality in check. It has one of the lowest AQIs worldwide and is mostly on track towards achieving its climate goals. **(*Bhutan | UNDP Climate Change*)**

On the other side, we have a pool of nations to study from - after a simple glance, it may seem that these countries are in a competition of which of them can cause the highest amount of climate-related damage in the least amount of time. One contender in this competition is the United States of America, which had even opted out of the Paris Agreement during Donald Trump's presidency. Even developing nations like India that have primarily been at the lower end of the emissions spectrum seem to be interested in participating. The Indian Government recently introduced a controversial amendment to the Environmental Impact Assessment Bill, which puts an end to the Environmental Impact Assessment (EIA) requirement for many industries. It also plans to introduce ex-post-facto clearance for many projects & skip public consultation entirely - the reason given for this was that the government sought to increase economic development. However, the impact of such an amendment would be drastic, given that many projects could be highly polluting and could harm public health or living standards. Moreover, it puts forth the image that environmental impact can mostly be ignored as long as economic growth is achieved.
In this essay, the authors attempt to compare the extent of climate change and environmental degradation in two countries - one of which is hard power, and the other, a soft power. The basis for comparison would be the economic, political, and social factors and frameworks in the respective countries.

1.1 Power

Power is the ability to influence the outcomes of events. A country can conduct its affairs without the interference of other countries. Simply put, power implies having the means to influence these global affairs. (*Power*, n.d.) Hence, it is considered an attribute or possession of a State in terms of capabilities. According to Karl Deutsch, Power is defined as being involved in a conflict, resolving it, and removing obstacles.

Power is said to be dynamic, implying that international relations between countries are ever-changing. Joseph Nye (2004) likened power to love, that is, "easier to experience than to define or measure, but no less real for that." (Heywood, 2014, pp. 1–3)

1.1.1 Soft Power

Soft power defines the ability to influence other nations by persuading them to follow or agree to norms that produce certain desired behaviours. It is the ability to shape the preferences of others by reinforcing positive attraction - to their culture and ways of life. Soft power operates through culture and political ideals. An example of this policy is South Korea, which uses its cultural richness to attract other countries.

The rigorous education system in South Korea and their establishment of a highly motivated and educated populace helped spur the boom in technology and rapid economic development. Today, South Korea is inviting visitors to experience its unique culture and engage with the local population–which is a genuine effort in strengthening global ties at the individual level. Its culture is flourishing globally, and cultural exports are pulling in audiences worldwide. Today, people who haven’t engaged with South Korean culture in some way may be few and far between. Instead of using a carrot and stick, soft power relies on positive associations with a nation's culture, foreign policy, and political virtues to attract others to its cause.

Cultural exports have gradually given rise to the economy. South Korea gave importance to the technology, beauty, and entertainment industries, which helped upgrade its economy. However, during this transformation into a developed economy, its priorities have shifted. The South Korean economy, now highly developed, is facing massive and destructive environmental issues.

According to Ipsos' data, 70% of Koreans consider air pollution the most significant environmental concern in their nation, followed by waste management at 51%, implying that South Korean citizens are aware of climate change's adverse effects. South Korea is trying to understand whether this air pollution results from their production economy or has been carried into the nation by the wind from neighbouring countries. (*Shvetsova and Lee, 2020)*

1.1.1.1 Korea's Soft Power

South Korea has adopted soft power to influence other states. Hallyu is the term used for the South Korean cultural economy which exports music, pop culture, and drama. It finds its roots in the Chinese word meaning Korean wave. Hallyu has been widespread, starting from Japan and China and swiftly taking over the world and it has been no less than a blessing for South Korea. (Journal of Tourism Insights, 2020) To put this in context, in 1953, it was the world's poorest country, and in 1965, its GDP was less than Ghana's. In the present day, however, it has managed to turn its fortunes to develop into one of the largest economies in the world. In 2020, its GDP was around 1.59 billion US dollars, which is the fourth-highest in Asia and the 10th highest globally.

According to the UNESCO Institute for Statistics, the global trade of cultural goods amounts to $16.4 trillion (2017), and the Korean Government is eyeing a significant part of that pie. The Government of South Korea has been intelligent and active in managing its soft power by organising various cultural programs and conducting campaigns. *(2020)* Since 2012, the government has declared the 3.0 Hallyu Generation and has promoted culture through drama and pop music. South Korea is the only country to have a Ministry of Culture. As of 2021, it has set 32 Korean Culture Centers up worldwide, from Spain to Argentina to Turkey.

Interest in Korean culture is also flourishing because of the consumption of Korean content through Netflix and YouTube. The success in exporting K-Drama and K-pop led to a gradual yet continuous increase in the tourism economy. Hyundai Research Institute revealed that Korean Cultural Wave led to an increase in business between South Korea and Japan worth 4 billion USD. (Economic Times, 2019)

The seven-member Korean boy band BTS is perhaps the most successful manifestation of the Korean wave, becoming an international sensation in 2013 and the most popular boy band worldwide in 2018 with two albums featured in the Billboard Top 200. In 2021, they became the first-ever Asian artist to be nominated for the prestigious Grammy awards. They hold several Guinness records and titles, such as the most-viewed YouTube video in 24 hours. Estimates state that they alone bring over 3.6 billion USD into the South Korean economy annually. As per data of 2017, 800,000 tourists visited South Korea because of BTS. (*Journal of Korea Culture Industry,2019)*

Korean brands have also begun to eat into Japan's old monopoly in exporting technology and innovation. Brands such as Samsung and LG are revolutionising the electronics industry. Hyundai and Kia have been forerunners in the automobiles industry. The traditional South Korean skincare routine for glass skin has taken over global markets, leaving western brands reeling far behind. It became the world's fourth-largest exporter of beauty products. Amore Pacific, the largest beauty company in South Korea, ranks 7th on the Women's Wear's Daily list of top 10 global beauty companies. On a collective level, the acceptance of Korean culture, technology, and brands in the international market has improved its overall perception.

1.1.2 Hard Power

Joseph Nye observes hard power as second-largest to use the "carrots and sticks" of economic and military strength to make others follow your will. (*The Benefits of Soft Power*, 2004) That is the ability of one nation to influence others with military Power and Economic Power. An example of hard power is the United States of America.

Military Power has been the USA's traditional currency in international politics. The mammoth US military was active even during the Cold War, and at present, no country can match the Hard Power of the USA. However, even with its immense military influence to prioritise their economic and political interests, the US faces several environmental issues which lead to monetary losses worth trillions of dollars. The United States is one of the largest emitters of greenhouse gasses in the world. It is the second-largest contributor to global CO2 emissions, at 6,870 million metric tons in 2014 alone. (*Climate Change Indicators: U.S. Greenhouse Gas Emissions,2021)*

1.1.2.1 USA's Hard Power

Once a hegemon, always a hegemon. Hard Power reflects the military strength of a powerful country. A large part of the US' Power arises from its superior military dominance. American weapons can reach any part of the world and cause massive amounts of destruction within moments. It has developed its military forces to the extent that no State can directly challenge the country.

The Regular Army (USA) is its most extensive military branch, and in the fiscal year 2020, its projected end strength was 480,893 soldiers. The Army National Guard (ARNG) had 336,129 soldiers, and the American Army Reserve (USAR) had 188,703 soldiers. The combined strength of the American Army in 2020 was 1,005,725 individuals. (*Yale French Studies, 1953)* Additionally, the US military has tremendous technological prowess and manages to harness computers and space-based platforms for surveillance and communication effectively. The US Army owns 24,000 square miles of land, which if it were one state would alone be the 42nd largest state in the nation. (*Army Signal Corps Organization for Research and Development,1960)*

After several diplomatic failures to liberate Kuwait following its invasion by Iraq, the UN-mandated liberation of Kuwait by force was a dramatic decision. A massive coalition force of 660,000 troops from 34 countries fought against Iraq and defeated it under the United Nations' "Operation Desert Storm." However, it was primarily US-led as 75% of the coalition forces were a part of the US military. (*Dennis, 2020).* This war is better known as the First Gulf War, which established the US hegemony as a Hard power.

The US spends over two billion dollars on its military every day. Their commitments would be cheaper if they did not have to deal with threats. However, that is not the case. The US has to prepare itself to respond to a Russian attack on NATO's eastern flank, a North Korean attack on South Korea, a Chinese invasion of Taiwan, or an Iranian attempt to close the Strait of Hormuz. Moreover, it may even have to respond to multiple crises at once. Additionally, the United States has defence-related business interests abroad, exporting more than $142 billion worth of weapons to nations worldwide since 1992.

From 2015 to 2019, the US had exported 76% more weapons than Russia and transferred arms to 96 countries. (*USA and France dramatically increase major arms exports; Saudi Arabia is largest arms importer, says SIPRI | SIPRI,2020)*

2.0 Background

While the differences in the states of power of South Korea and the United States are established, other political, economic or historical factors may also have an impact on the extent of climate change and environmental policies in the two countries. These factors have been discussed in this section in detail, and the authors have tried to provide a background to both countries and highlight their similarities and differences.

2.1 Historical Background

In the context of historical background, the authors of the paper have tried to compare both nations based on their evaluation after tragic incidents. After the civil war and 9/11 attack, the USA drastically rewrote its history. As time moved, South Korea became economically advanced after the suffrage was executed due to the Korean war and famine.

2.1.1 USA'S Historical Background

A sovereign country in North America is called the United States of America. It comprises 50 states. In 1778, The United States of America signed the treaty of Paris and was declared an independent nation. This treaty turned the 13 American colonies into states. George Washington became the United States' first president on April 30, 1789, tasked with creating a working government.

However, there was an internal conflict in the USA - the South held a pro-slavery identity that supported the expansion of slavery into western territories. In contrast, the North mostly had abolitionist sentiments and opposed the institution's westward expansion. The American Civil War started in April 1861. The South claimed the Right to leave the United States, also called the Union, and form its Confederacy. Then-President Abraham Lincoln led the Northern States and was determined to stop the rebellion and keep the country united.

In 1862, he issued the preliminary Emancipation Proclamation, which freed all slaves in the Confederate states. Alexander Hamilton believed that these 13 states needed to rethink the Confederation. In 1887, a meeting was held in Philadelphia. Most diplomats did not think that the Article of Confederation worked well - some wanted to possess more power while others wanted fewer people to vote. (*U.S. A. History in Brief, 2010)*

The United States changed after the Civil War - their frontiers became less wild than before. Cities also grew in size and number. More factories, steel mills, and railroads were built. Immigrants arrived in the United States with dreams of building lives. However, farming was still America's primary occupation. American farmers produced enough grain, meat, cotton, And wool to ship the surplus overseas. By 1900, the United States had seen growth, civil war, economic prosperity, and economic hard times. Americans still believed in religious freedom. Public education was accessible, and the free press continued. In 1914, Germany, Austria-Hungary, and Turkey fought Britain, France, Italy, and Russia. Other nations joined the conflict, and the war reached across the Atlantic Ocean to affect the United States. After World War II, the United States and Great Britain had long-term disagreements with the Soviet Union over the future of Europe, most of which had been freed from Nazi rule by their joint effort. Each wanted to establish governments friendly to its interests there. On September 11, 2001, everything changed. Foreign terrorists crashed four passenger aeroplanes into the two World Trade Center towers in New York, the Pentagon in Washington, DC, and a rural field in Pennsylvania.

The United States has dramatically changed from its beginnings. Its population of 300 million people represents almost every national and ethnic group in the world. Moreover, progress continues in economics, technology, culture, and society, and Americans live in an interdependent, interconnected world. The United States still is connected to the values of its early days. Among these is a belief in individual freedom and democratic government and the promise of economic opportunity and progress for all people. The United States' work keeps its values of freedom, democracy, and opportunity secure and vital in the 21st century.

2.1.2 South Korea's Historical Background

The account of South Korea formally commences with its establishment on 15 August 1948. South Korea and North Korea are completely different nations, despite still being on the same peninsula. Korea was administratively divided in 1945, at the end of World War II.

Through a Governor-General who was usually a military man from the Japanese army or navy, Japan ruled Korea. The Japanese surrendered on August 15, 1945; the Korean people received The news of their liberation with jubilation and dismay. They were delighted that they were freed from the Japanese yoke but dismayed because their country was divided along the 38th parallel into Two military occupation zones. After August 1945, nation-building proceeded in the northern half of Korea under Soviet auspices. (*Kim, 2008)* In February 1946, North Korea established a de facto government that was completely alienated from the political activity in the South.

The Korean-peninsula remains one of the most protracted and volatile conflict zones in the world. Tensions between South and North Korea had increased again in June 2020, culminating in the demolition of the joint liaison office by North Korea on its side of the border. According to a new book, "South Korean Popular Culture and North Korea", South Korea's government "targeted the export of popular media culture as a new economic initiative, one of the major sources of foreign revenue vital for the country's economic survival and advancement." The Republic of Korea has excellent resources of soft power and actively uses them. The modern concept of "soft power" of the Republic of Korea is based on disseminating traditional cultural values and pop culture. South Korea places a great emphasis on the "soft power" of culture, which helped shape a positive image and create its South Korean attractive brand worldwide. (*Julia,2018)* In this paper, the "soft power" of the culture of South Korea is considered using the example of cyber-sports and the phenomenon of "Korean wave" or "hull." Under Japanese rule (1910 – 1945), Koreans were exposed to their colonial rulers' culture, education and technology and had few opportunities to expand their horizons.(*Asia for educators, Columbia University)* After the Korean War, US influence dominated most sectors, including higher education, for many decades. Today's younger generation (the richest in Korea's history) has more choices regarding where to travel and to study and is exercising that choice.

2.2 Political Background

In the following section, both nations have been differentiated based on their political background. Voting rights, Party system, branches of the federal government, rule of law, human rights, powers of the executive, judiciary, and legislature have been examined in the subsequent passage in detail.

2.2.1 The political background of the USA

The United States is a federal constitutional democratic republic, in which the president, Congress, and judiciary share powers stocked to the central government, and the federal government shares autonomy with the state governments.

The United States is a federal republic country. The seven basic principles of the constitution are checks and balances, federalism, individual rights, limited government, popular sovereignty, republicanism, and separation of power. (*The Editors of Encyclopaedia Britannica, 2020, October 30*) January 7, 1789, was the date set by which states were required to choose electors for the country's first-ever presidential election.

Citizens above the age of 18 years are eligible to vote. However, only half of the population generally exercises their voting rights. The two major parties in the USA are The Democratic Party and The Republican Party. Some smaller parties also exist, such as the Green Revolution Party and Liberation Party. The three branches of the federal government consist of the legislature, executive, and judiciary. The legislature is bicameral - The House of Representatives and The Senate being the two houses. Members of the House of Representatives face an election after every two years, and the strength of members is 435. The Senate comprises 100 members, two members from each state for a tenure of six years. Executive power is vested in the president, who serves a four-year term and can be reelected only once. Various agencies operate under the president, making up a vast bureaucracy that carries out the day-to-day tasks of implementing and enforcing laws and regulations.

The US derives a tremendous amount of power from its network of foreign relations. Some of its strongest allies are Israel, South Korea and the Philippines. For the past century, the US has entered into trade negotiations based upon the belief that open markets foster democracy, supporting the maintenance of world peace (World Trade Organisation, 2018)

It also belongs to many global organisations such as the North Atlantic Treaty Organisation (NATO) and has veto-power United Nations Security Council (UNSC).

The state department is an essential part of the State's government because of the following reasons:

- It represents the United States overseas and conveys U.S. policies to foreign governments and international organisations through American embassies and consulates in foreign countries and diplomatic missions;
- Negotiates and concludes agreements and treaties on issues ranging from trade to nuclear weapons;
- Coordinates and supports international activities of other U.S. agencies host official visits, and performs other diplomatic missions;
- Leads interagency coordination and manages the allocation of resources for foreign relations; and
- Promotes mutual understanding between the people of the United States and the people of other countries worldwide. (*Bureau of Public Affairs, 2008 June)*

There are more than 190 countries worldwide, and with 180 of them, the USA maintains diplomatic relations. Technology has made a web of global interconnectedness.

The USA Department of State's foreign policy goals consist of promoting the United States, understanding American values and policies, supporting US diplomats and government officials and advancing global interests like human rights and democracy.

2.2.2 The political aspects of South Korea

After the division of the Korean Peninsula, two separate governments stabilised into both nations. The political history of South Korea is marked by alternating periods of autocratic and democratic rule.

South Korea also developed a democratic political system with fair elections and peaceful transfer of power between ruling parties. Its principles are based on the sovereignty of the people, with the authority of the state emanating from its citizens: separation of powers among the three branches of government, the rule of law, and the responsibility to promote citizens' welfare, and the attainment of peaceful unification of Korea. Human rights and freedom of speech of the citizens of Korea are protected.

The Minjoo Party and The Liberty Korea Party are some major political parties. The president is the state's chief, head of the government, and commander-in-chief of the armed forces. Every five years, Korean citizens above the age of 20 elect the president in a nationwide, direct, equal, and secret ballot. The president is the head of the executive branch and represents the nation. (*Baqir,2001)* South Korea also has a widespread network of diplomatic relations. It has been a member of the United Nations since 1991 and is also a founding member of the 21 members robust Asia-Pacific Economic Cooperation (APEC).

In October 1953, after the Korean War, South Korea also signed the US-ROK Alliance with the United States of America. This alliance has helped deter further armed confrontations with North Korea and supported South Korea economic growth. Additionally, it has helped establish a robust and mutually beneficial trade network between the two nations based on exchanging goods and services, relief material and military cooperation. (*The National Bureau of Asian Research, 2017)*

The Republic of Korea (South Korea) is a democracy that has appropriate protections for most political, civil, and socio-economic rights. However, discrimination can be severe against at-risk groups, including women, lesbian, gay, bisexual, and transgender (LGBT) persons, racial and ethnic minorities like refugees and migrants, and companies that lack legal obligations to respect human rights. The government also maintains unreasonable restrictions on freedom of expression, association, and assembly. (*World Report, 2020)*

2.3 Economic Background

The following subsections present a detailed overview of the US and South Korean economies, in an attempt to establish the differences and similarities between the two economies, as well as highlight the different economic problems and scenarios these countries face.

2.3.1 An overview of the US economy

The United States is a mixed economy that combines features of a planned economy and a market economy. The US economy is also an example of a capitalist economy. Simply put, private players in the market determine what to produce based on the market forces of supply and demand. However, there still exists a certain degree of government regulation. (*The American Economy—An Overview | Encyclopedia.Com*, n.d.) The American economy is one of the largest and the most efficient in the world - it contributes to over 20% of the total worldwide economic output, even though labour force participation is only 5% of the world population.

The early stages of industrialisation in the US took place in the 1790s, and by 1890, the number of non-farm workers in the US had overtaken that of farm-workers. (*What Caused the American Industrial Revolution?*, 2020) Technological advancements also lead to an increase in labour productivity. American companies have been at the forefront of technological innovation and play a large part in boosting the US economy by helping businesses produce goods at lower costs and increasing labour efficiency. However, the American private sector is also responsible for 46% of the US's total carbon emissions (*Sides, 2017*), a classic example of an environment vs economy tradeoff.

Since the 1970s, the American federal and state governments have reduced restrictions and deregulated some industries, allowing them to set their industry standards & hence increased competition between private players. (*Outline of the U.S. Economy*, n.d.) This cut-throat competition among private players causes them to minimise their costs - due to this; they do not increase investment in the often expensive green and sustainable technology. This cost minimisation effectively leads to corporations taking the cheaper way out - which may not be the most environmentally sustainable alternative. (*The American Economy—An Overview | Encyclopedia.Com*, n.d.)

America has a GDP per capita of $65,100, making it one of the world's wealthiest economies. According to GDP estimates for 2018, American households held over $98 trillion of wealth & over $118 trillion in assets. *(Pulliam, 2019)* America's rise as a world leader is attributed to its highly trained, productive labour force, abundant natural resources, and technology innovations. The economy is divided into three broad categories—agriculture (including other general activities such as mining, utilities, and construction), manufacturing, and services. The service sector is the most important of the three, accounting for more than 68% of the total GDP in 2018. Additionally, it is less damaging to the environment than other industries, such as manufacturing. On the other hand, manufacturing's GDP share was 11%, while agriculture, mining, utilities, and construction accounted for 8.1% of GDP. The United States is also one of the top exporters of agricultural goods worldwide. (*Changing the Lens: GDP from the Industry Viewpoint*, 2019) In 2020, 1.31% of the US workforce was employed in agriculture, 19.71% in industry, and 78.98% in services. *(Statista, 2020)*

Current U.S. government spending is $4.829 trillion, which amounts to 20.7% of their GDP. Around two-thirds of federal spending goes toward paying the benefits required by Social Security, Medicare, and Medicaid. For the fiscal year 2021, the emergency fund amounts to $74.3 billion. Its largest component is Overseas Contingency Operations that pay for wars. Including this in the total defence budget, adds up to $934 billion. To put things in perspective as to how much the US prioritises its military and defence, Health and Human Services ($96.4 billion) are just above one-tenth of total military spending. (*How Congress Really Spends Your Money*, 2020)

2.3.2 An overview of the South Korean economy

South Korea is based on a mixed economy framework, much like the United States of America; majorly, private players in the free market produce goods and services. Additionally, the private sector is regulated through government interventions and economic policy.

South Korea has experienced an enormous economic transformation in the past 60 years. The reason behind this transformation is its special attention to technological innovation. It was vital for South Korea to undertake these innovations due to its small geographical size and insufficient natural resources.

It grew from being a predominantly agro-based economy to an industrialised economy and is ranked as the 4th most enormous Economic Power in Asia and the 10th largest economy worldwide as of 2021. (*The Economic Context of South Korea - Economic and Political Overview - Nordea Trade Portal*, 2021) Presently, the country invests more in research and development (R&D) as a share of GDP than all other world economies. (*S. Korea's R&D Spending to GDP Ratio Highest in the World*, 2018)

The industrial sector represents 33% of the GDP and employs 25% of the workforce (2020), while agriculture contributes to only 1.7% of the total GDP & employs 4.8% of the entire workforce. The service sector is the most prominent in South Korea, which accounts for 56.8% of GDP and employs 70.2% of the labour force. (*The Economic Context of South Korea - Economic and Political Overview - Nordea Trade Portal*, 2021) The Korean Government is also addressing changes in the global economic and trade environment. For example, it has taken part in the Doha Development Agenda negotiations. In agriculture, Korea seeks to reduce tariffs and subsidies, even as it maintains a developing country's status. The Government also signed a free trade agreement with Chile in February 2003. It is also a member of the Asia-Pacific Economic Cooperation (APEC) and the Asia-Pacific Trade Agreement. Additionally, Korea aims to promote cultural exchanges with other countries to enhance mutual friendship and understanding. Through diplomatic and other missions abroad, Korea hopes to continue to introduce Korean art and culture abroad.

Another essential objective is to promote exports and attract foreign investment by strengthening trade relations with major trading partners, including the United States, Japan, China, and the EU. It has established its economy as a worldwide exporter, which amounts to more than 35% of its GDP.

3.0 A comparison of climate-related policy implementations in the USA and South Korea

In an effort to battle the adverse effects of climate change, countries worldwide have implemented certain policies & legislations. The first step towards their implementation is acceptance - that climate change is a reality & will have adverse effects on health and the environment if not combatted. These implementations are hence, directly affected by how aware policymakers are about the negative effects of climate change.

In this section, the USA is compared to South Korea on the effectiveness of these policies and their implementation.

3.1 The Paris Agreement

The Paris Agreement is a legally binding document signed by 194 nations along with the European Union. Its goal is to limit global temperature rise and global warming to 2 degrees. Countries that have pledged to this agreement are required to undertake ambitious plans of action to limit climate change and hope to eradicate its adverse effects. Its framework also provides financial, technical and capacity, city-building support to countries that require it. (*The Paris Agreement*, n.d.) Both the US and South Korea are pledged to this agreement. However, the US withdrew from the deal during Donald Trump's presidency and recently rejoined after Joe Biden's election.

3.1.1 South Korea

Under the Paris Agreement, South Korea pledged to reduce its domestic greenhouse gas emissions by 32.5% and reduce the rest using international offsets or domestic forestry. South Korea's long-term targets have been labelled highly insufficient in reaching the goal of limiting global temperature rise to 1.5 degrees. If South Korea's current environmental policy were to be adopted by countries worldwide - the global temperatures would rise by 3-4 degrees. (*South Korea | Climate Action Tracker*, n.d.) It is projected that without a more vigorous policy implementation aligned with the 2050 net-zero target, South Korea would fall short of reaching its 20% renewable energy share by 2030. As a result of this, the country will heavily rely on fossil fuels and not decrease carbon emissions. (*South Korea | Climate Action Tracker*, n.d.)

3.1.2 USA

After the Trump administration announced the USA's withdrawal from the Paris Agreement, 25 US governors stepped up and formed the US Climate Alliance to support the treaty. The US Climate Alliance currently represents 24 US states and Puerto Rico. It has taken up many initiatives to reduce carbon emissions and achieve the goals of the Paris Agreement. Is aiming to encourage clean, renewable, and more efficient energy sources.

In Washington, Governor Jay Inslee signed legislation to improve thousands of commercial buildings' energy efficiency. (*7 Ways U.S. States Are Leading Climate Action*, 2019)

In June 2018, the US Climate Alliance planned to address short-lived climate pollutants (SLCP), including methane, black carbon, and HFCs. (*SLCP Challenge*, n.d.) Dealing with this problem is an essential aspect of advancing their Paris Agreement goals of limiting the global increase in temperatures to 1.5 C and minimising other climate change risks. Other initiatives undertaken by this Alliance include the Natural and Working Lands Challenge (NWL) and the Appliance Efficiency Challenge. (*NWL Challenge*, n.d.)

While the formation of the US Climate Alliance is a step in the right direction, it does not change the fact that the United States' withdrawal from the Paris Agreement and its previous administration's ignorance towards climate change has had an undesirable influence on environmental policy. It could be labelled as a one step forward, two steps back situation. Besides, pre-withdrawal, the USA's Paris Agreement Goals were labelled as critically insufficient. If such goals were set worldwide, global temperatures would increase by more than 4 degrees, alarmingly higher than the limit of 1.5 degrees set by the Agreement. It is estimated that the Trump administration's climate policy could also increase carbon emissions. Joe Biden, the current - elected president of the US, has rejoined the climate agreement; however, even so - the US will need to double down its efforts to catch up with other countries that have taken up bold and ambitious initiatives despite their lower overall footprints.

3.2 Green Finance

Green finance is a relatively new, however rapidly transitioning concept in today’s world and is bound to face revolutionary change in the coming years. Through green finance initiatives such as green banks and green bonds - the private sector funds their climate-related activities and green projects in a sustainable way - in other words, green financing helps overcome barriers to investment in climate-related projects.

3.2.1 South Korea

South Korea fully launched its green finance scheme in 2009. However, it is currently in the initial stage in Korea. Due to which banks are unwilling to invest or loan in green technology for profit because of high uncertainty in the sector. As green finance policies, the Republic of Korea introduced the environmental information disclosure system and the emission trading scheme (ETS) in 2013 and 2015.

The environmental information disclosure system aims to increase the private sector's transparency to increase consumers and investors' knowledge about the industry's sustainability practices. This will help in encouraging responsible investing and consumption. ETS was introduced to reduce greenhouse gas emissions of companies through the capital market mechanism. (*Green Finance in the Republic of Korea: Barriers and Solutions*, 2018)

3.2.2 USA

Countries have created public Green Banks and Green bank-like entities in recent years to overcome investment barriers and leverage the impact of available public resources. In simple terms, a green bank pushes investment and credit towards low carbon, energy-efficient projects. These have been established at the state level (California, Connecticut, Hawaii, New Jersey, New York, and Rhode Island in the United States) and at the country level in the United States.

The New York Green Bank (NYGB) was launched in 2014 and is a state-level green bank in the US whose mission is financing and accelerating clean energy growth in New York through collaborations with the private sector. It is a critical component of the US Clean Energy Fund (CEF). NYGB's target clients are experienced and achieve success in clean energy markets but face constraints on the capital limit to accelerate clean energy deployment. It hence increases the availability of capital for clean energy projects, supports these projects through the provision of commercially viable technology, and helps reduce the need for government support. In March 2020, the NY Green Bank received over $4.1 billion in investment proposals and had potential investments worth $757 million. (*New York Green Bank – Green Bank Network*, 2020)

Another state-level green bank established in the US is the Rhode Island Infrastructure Bank. This bank was established in 1989 by the Rhode Island General Assembly as the Clean Water Finance Agency and was rebranded to the Rhode Island Infrastructure Bank in 2015.

Till now, the bank's green-energy offerings have created emissions reductions equivalent to the annual carbon footprint of 5,100 American homes. They have also created more than 62,000 jobs and provided over $2.2 billion in lending. (*Rhode Island Infrastructure Bank – Green Bank Network*, 2020)

3.3 Green Transport

At present, the transport sector worldwide is responsible for a large amount of carbon emissions and SPM. The biggest environmental concern being the use of fossil fuels such as petroleum, which leads to high carbon concentration in the environment. The development of green transport essentially requires the development of more fuel-efficient methods of transport or switching to cleaner fuels or forms of energy. Moreover, decreasing road congestion is also an important part of decreasing pollution caused by transport. Green transportation and the development of eco-friendly transport methods are essential to combat climate degradation - simply because transport is something which is used by a majority of the population & if used irresponsibly, could lead to vast amounts of air pollution.

3.3.1 South Korea

The aim is to develop green transport in Korea by reducing car use and promoting more efficient cars. The "National Intermodal Transportation Network Plan (07-19)" will establish a transport system that maximises each mode of transportation's features and advantages to increase efficiency and, hence, decrease emissions. South Korea aims to develop its plan of green transport through the following ways:

- Conversion to energy-efficient modes of transport
- Encouragement of walking and cycling
- Promotion of green transport technology
- Provision of low-carbon green transport

Seoul is a Korean City that has adopted green transport initiatives due to the increasing congestion & transport-related air quality degradation. It focused on the expansion of the metro and bus network. Moreover, to reduce road congestion, the total length of all the roads in Korea was doubled, and the length of paved roads increased 540 per cent from 1998 to 2010.

Moreover, the South Korean Government is pushing the uptake of EVs through subsidies and tax rebates to have 430,000 EVs on the road by 2022. (*Korea's Leap Forward in Green Transport*, 2015)

3.3.2 USA

The transportation sector generates 28% of the total emissions in the largest share of greenhouse gas emissions. Greenhouse gas emissions from transportation primarily come from burning fossil fuel for our cars, trucks, ships, trains, and planes (*Sources of Greenhouse Gas Emissions*, 2020).

The SmartWay Transport Partnership, launched in 2004, is a green transportation initiative between the U.S. Environmental Protection Agency (EPA) and the freight industry, designed to reduce greenhouse gases, non-renewable resource consumption, and transportation costs. Since 2004, SmartWay partners have saved 120.7 million barrels of oil, reduced CO2 emissions by 51.6 million metric tons, reduced NOx emissions by 738,000 tons and eliminated 37,000 tons of particulate matter. (*The EPAs Green Transportation Initiative | PLS Logistics Services*, 2015)

3.4 Dependence on fossil fuels & promotion of green energy

3.4.1 South Korea

South Korea's green industries' strategies revolved around two fundamental ideas: greening the nation's existing industries and creating new green industries that provide environmental goods and services (*Korea's Green Growth Experience: Process, Outcomes and Lessons Learned*, 2016). While industrial greening is being adopted, private sector participation is yet to happen on a large scale. The "Green Innovation" agenda targets the industrial sector's greening by adopting sustainable and innovative technology. An example of such innovation is the steel industry, which aims to become globally competitive by enhancing its energy efficiency by adopting technology to reduce energy consumption and reuse waste heat and develop steel goods to minimise energy use.

Eco-Industrial Parks exist to strike a balance between industrial growth and ecological conservation. Ulsan Mipo and Onsan Industrial Park is an eco-industrial park developed in South Korea which helps support around 1,000 companies & employs nearly 6,00,000 people. Firms in Ulsan Mipo and Onsan have invested around $520 million in energy efficiency, waste management, and other eco-friendly improvements. With the help of Eco-Industrial Parks and government support, companies in the park reduced their carbon emissions in 2015–2016 by 665,712 tons, reused 79,357 tons of water, and saved 279,761 tons of oil equivalent in energy. (*Eco-Industrial Parks Emerge as an Effective Approach to Sustainable Growth*, 2018)

As a part of its Five-Year Plan, implemented in 2009, Korea committed 2% of its GDP through 2013 to create a foundation to sustain a green growth economy for generations. The investments include goals such as the development of the world's first nationwide "smart grid" system by 2030, increasing the country's renewable energy to 11% of energy supplies by 2030, and reducing its greenhouse gas emissions by 30% by 2020. Today, Korea is showcasing green growth in action and is aiming to be a leader in green technology. It is building a digitally-connected city that comprehensively intertwines physical and technological infrastructure on 1,500 acres. Korea is also focusing efforts on outreach and green, sustainable technology to other countries, such as Sri Lanka. (*Korea's Global Commitment to Green Growth*, 2012)

The Eighth long-term plan for electricity supply and demand is an extensive document setting targets of increased production from renewable energy sources and natural gas while reducing the country's reliance on coal and nuclear sources. The Plan sets an objective of 20% share of electricity production obtained from renewables by 2030, while natural gas would reach 18.8 %, and both coal and nuclear decreasing to 36.1 % and 23.9 % respectively. (*n.d.*)

The Renewable Portfolio Standard (RPS) has been in place since 2012 and is the primary policy that promotes renewable energy. South Korean climate-and-energy policy has been viewed through the lens of "green growth," in which the use of clean technologies fuels economic development. However, South Korea has been criticised for not meeting up to their proposed plans with action. The present ruling party in South Korea pledged a net-zero emissions target by 2050. However, their current proposed method does not include any projects that had been in the manifesto.

3.4.2 USA

The US Industrial sector is responsible for approximately 22% of its total emissions. (*Sources of Greenhouse Gas Emissions*, 2020) Greenhouse gas emissions from industry primarily come from burning fossil fuels for energy and greenhouse gas emissions from specific chemical reactions necessary to produce goods from raw materials.

Many private sector companies are taking steps to reduce emissions by increasing their reliance on clean, renewable energy sources. Apart from reducing carbon footprint, clean energy is also profitable for these companies due to their decreasing costs. Industries are also investing in technology & innovation to increase efficiency and reduce carbon emissions.

In 2019, renewable energy provided about 11.4% of total U.S. energy consumption. The electric power sector accounted for about 56% of total U.S. renewable energy consumption in 2019, and about 17% of entire U.S. electricity generation was from renewable energy sources. (*Renewable Energy Explained - U.S. Energy Information Administration (EIA)*, 2020) Renewable growth may accelerate in 2021 as the new administration rejoins the Paris Climate Accord. The Biden administration aims to invest $2 trillion in clean energy, and fully decarbonise the power sector by 2035 to achieve a larger goal of net-zero carbon emissions by 2050. *(Glueck & Friedman, 2020)* The federal tax incentives for qualifying renewable energy projects or equipment include the Renewable Electricity Production Tax Credit (PTC), the Investment Tax Credit (ITC), the Residential Energy Credit, and the Modified Accelerated Cost-Recovery System (MACRS)

3.5 Adverse Climatic Effects of USA's Hard Power

The climate emergency we are tipping in today results from our collective failure to adhere to limits. A recent study surfaced a startling fact: The US Department of Defence has a larger annual footprint than most countries. Research performed by the social scientists from Durban University and Lancaster University disclosed that the US military plays a considerable role as a climate polluter, which consumes more liquid fuels and emits more carbon- dioxide is equivalent to any other nation. It is the largest polluter of both- world and the nation. (*USA military consumes more hydrocarbons than most countries – with a massive hidden impact on the climate,2019)*

In 2014, the Pentagon's environmental program's former head said that her office has to contend with 39,000 contaminated areas spread across 19 million acres just in the US alone. (*Ecowatch, 2017)*

The US has conducted nuclear weapons tests more than all other nations combined. Its military action in Iraq has resulted in the desertification of Iraqi territory and the crippling of the agriculture industry. The researchers provided an independent public assessment of the US military's greenhouse gas emissions. It stated that if the US military were a nation-state, then it would be the 47th largest greenhouse gas emitter in the world. As Dr Patrick Bigger said: "The US military has long understood it is not immune from the potential consequences of climate change. It recognises it as a threat multiplier that can exacerbate other threats, yet has not ignored its contribution to the problem." (*Science Daily, 2019, June)* The key findings of the report are as follows:

- In 2017, the US military purchased about 269,230 barrels of oil a day and emitted more than 25,000 kt- co2e by burning those fuels. (*Science Daily,2019)*
- The Air Force is the largest emitter of Greenhouse gas.
- The US Navy and Air Force are the largest purchasers of the fuel.

The US military is responsible for emitting millions of tons of carbon dioxide during the war and contributed to the Afghan environment's immediate destruction. Deforestation has accelerated, and US armed forces are blamed for sickening Afghan civilians by releasing toxic pollutants into the air. Fossil fuel emissions have been the primary reason for climate change. The war inflicted types of environmental harm that we have never seen before.

70% of all energy gets absorbed by shifting and utilising troops and equipment worldwide, involving the burning of vast fuel and diesel quantities. Military equipment is not remembered for its fuel efficiency, and it is evaluated that the country's remaining fleet of 60,000 humvees only gets four to eight miles per gallon of diesel. Military real estate also leaves a substantial carbon footprint, and in FY2017, the Department of Defense spent $3.5 billion heating, cooling, and providing electricity to 560,000 buildings at 500 installations. (*The impact of climate change will hit urban dwellers first – Can green infrastructure save us? 2019)*

The US also owns its fair share of nuclear weapons, which only aggravate the climate crisis. Atomic weapons destroy the climate even when they are not used. Moreover, a few hundred weapons could nearly stop all rain over India and central China, and reduce global precipitation globally by 15%-30%. (Reporter, 2020)

3.6 Adverse Climatic Effects of South Korea's Soft Power

Tourism, which is the third-largest export sector, is a fast-growing industry that accounts for 10.4% of the global GDP through its direct, indirect, and induced effects and represents one in ten jobs on the planet. Due to the investment and economic benefits and the opportunities provided, tourism has become a priority sector for many countries, especially developing nations. It represents a large revenue source.

South Korea has gained attention as an emerging travel destination for food lovers, shoppers, and business people. Since 1990, the number of visitors has gradually increased. According to statistics, 17,241,823 visitors arrived in Korea in 2016. 85% of visitors came from East Asia and the Pacific region; 6.5% from the United States; and the rest are from other parts of the world. (*The Impacts of Tourism on Seoul, Korea, 2017*.) Travelling and relaxation have been the primary purpose of travel. Moreover, South Korean companies have been an attractive factor for business people and youngsters looking for jobs.

The environmental impacts of tourism are substantial. They include the depletion of local natural resources as well as pollution and waste problems. Tourism puts enormous stress on local land use and can lead to soil erosion, increased pollution, natural habitat loss, and increased pressure on the land's endangered species. Tourism consumption leads to emissions produced by hotels, aeroplanes, or theme parks.

4.0 Comparison of the quality of climate/environment in both countries

In the following section, the authors of the paper attempt to draw out a comparison between hard power and soft power in terms of the extent of climate change & climate degradation in their respective countries.

The parameters thus chosen are the air quality & pollution in the two countries, loss of life as well as economic losses due to climate-related natural disasters and losses of lives due to other climate-change effects such as increasing temperature.

4.1 Climate Change and Air Quality

Industry and manufacturing in South Korea skyrocketed in the 1970s, keeping economic growth as the primary goal; environmental conservation took a backseat. Over half of the air pollution in South Korea results from emissions from industrial sites and power plants present within the country; however, the rest of this air pollution originated from other countries. Moreover, due to rapid industrialisation in South Korea, the country's water quality has degraded, and water shortage has been a severe problem in Korea since the 1990s. From 1912 to 2008, the Korean Peninsula's average temperature has increased by 1.7°C, and rainfall has increased by 19 per cent. There exists a high concentration of PM2.5 in the South Korean air. (*Reducing Disaster Risk in Cities — the Republic of Korea's Experience*, 2017) A ranking released in February 2017 shows South Korea had the second-worst air quality in the OECD. According to the study, South Korea's atmosphere is more than twice as polluted as the other nations' average. In 2019, the concentration of carbon dioxide (CO2) amounted to around 417.9 parts per million, up from about 371.2 parts per million in 1999. The concentration of CO2 has continued to increase as the years passed. (*South Korea - Air Pollution Control*, 2020)

Scorching summer temperatures have become a common occurrence in the United States in the past ten years, and they are only expected to increase in the future. The USA experienced above-average temperatures during 2020, and ten states across the Southwest, Southeast, and East Coast had their second-warmest year on record. (Lindsey, 2021) The annual average temperature of the United States rose since the 20th century; moreover, more than 95% of the areas have seen an absolute increase in temperatures. Cold, extreme temperatures have become less severe in the past century. However, the USA saw an increase in the hot temperatures in many areas. There is no observed pattern here, as there was also a decrease in temperature in almost all locations east of the Rocky Mountains. (n.d.-a)

4.2 Climate-Related Disasters

The Republic of Korea is prone to many natural hazards, including typhoons, floods, droughts, landslides, snowstorms, tsunamis, and earthquakes. Heavy rainfall and hurricanes are the most frequent and destructive. Climate change is further aggravating these challenges, as studies have proved an increase in precipitation and increased pressure in typhoons.

Over the past five years, the most deadly weather events in the United States include the Hurricanes Irma and Harvey and the 2020 wildfires in California. The largest number of reported injuries in 2019 from climate-related disasters are a result of tornadoes (545), extreme winter weather (441), and thunderstorms & strong winds (239). (*Weather-Related Deaths and Injuries*, 2020) In 2020, the USA saw seven tropical cyclones, thirteen severe storms, one drought, and one wildfire. The 22 events cost the nation a combined $95 billion in damages. Moreover, since 1985, the USA has sustained nearly 285 climate-related disasters, which have faced a monetary loss of more than $1.875 trillion. (*2020 U.S. Billion-Dollar Weather and Climate Disasters in Historical Context*, 2021)

4.3 Climate-Related Deaths

Climate-related deaths amount to around 1,50,000 every year. This figure includes deaths from extreme weather conditions, changes in temperature and rainfall conditions, which may also influence transmission patterns for diseases, such as diarrhoea and malaria. (World Health Organisation, 2018) Around 16,000 people die in South Korea every year due to air pollution-induced illnesses such as lung cancer and chronic respiratory diseases. However, compared to G20 levels, this is still a lower number. This figure tends to nearly 78,000 in the USA and is the 8th highest number in the G20. In the USA, the primary reason for climate-related deaths is extreme heat and induced heat strokes.

5.0 Conclusion

Through these above comparisons, the authors wish to draw certain conclusions on the extent of climate change in both countries and their causes. A nation's ability to influence other countries through its cultural, political, economic, and military capabilities which define its power are analysed and compared for the respective countries.

With this essay, the authors have tried to map out the tremendous environmental degradation caused by the US armed forces at both global and national levels, which is a form of its hard power and the environmental degradation caused by the South Korean tourism sector, which is a form of its soft power.

The authors find that the US Air Force is the largest emitter of greenhouse gases, and its navy is the biggest purchaser of fuel. The South Korean Government has been active in managing its soft power, due to which significant growth was seen in the tourism industry. Since 1990, the number of visitors has gradually increased, which has impacted South Korea's environment substantially. The USA and South Korea, while differing in the ways they handle internal affairs and international relations, face very similar climate-change scenarios. In South Korea, there is no ignorance about the fact that climate change is real, and the people wish for a policy change. Moreover, the administration exhibits a want to eradicate this problem but does not seem to be taking any action. In the USA, however, there is ignorance among the masses and their recent administration, which has led to a rollback on climate-related policies and increased investment in activities that would lead to further climate degradation. Both countries' climate goals have been labelled as insufficient, implying that their plans to tackle climate change must see an immediate improvement.

It is also observed that their respective states of power add a large part to their environmental degradation - through irresponsible tourism in Korea and extensive military use in America. However, while Korea's damage to the environment is more internal, American hard-power has led to environmental degradation in many parts of the world. These superpowers will also face the harmful effects of these activities in the long run, if not immediately. Hence, they must find a way to offset this climate degradation and tackle these problems at the root. An example of such a policy could be the introduction of ecotourism in Seoul, South Korea.

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