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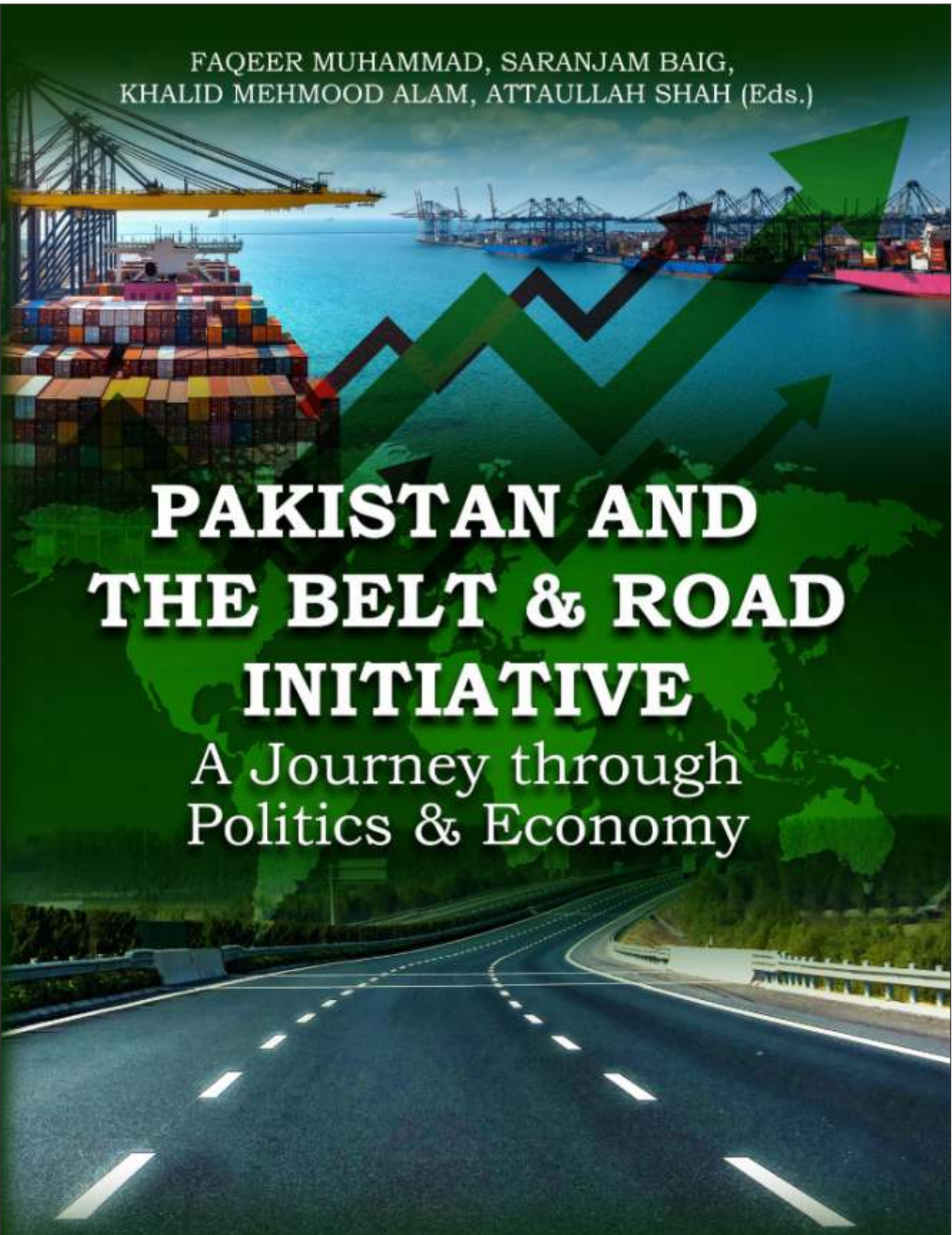

# PAKISTAN AND THE BELT & ROAD INITIATIVE

## A Journey through Politics & Economy

**CHINA STUDY CENTRE**
Karakoram International University
Gilgit-Baltistan, Pakistan

# 10

# Sustainable Development in the Region: Environmental Risks Related to SEZs-CPEC

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## Abstract

A budget approximately of $46 billion, China Pakistan Economic Corridor (CPEC), till date is one of the biggest projects that focuses on the economic, socio economic, and industrial development of Pakistan, especially the special Economic Zones. The project is a strategy to ensure intercity and interlinked country trade between China and Pakistan and also connecting both with central Asia. Although CPEC is a great idea, Special Economic Zones (SEZs) are those projects that ensure to bring in more trade and foreign investments in the country. But, where the project was such a big investment for industrialization, economic development, and growth of Pakistan, it also had some serious concerns which is related with environmental degradation. This chapter focuses on how mega projects may lead to environmental damages like cutting down of forests, loss of natural habitat of wildlife, effluent and GHGs emissions. The unlimited exposure of toxic effluent and GHGs emission in the environment is due to huge industries and power energy sector of CPEC, focusing on use of the natural reservoir, coal, to produce energy for Pakistan. If the issues are not addressed on time, the region might will observe worse consequences of environmental degradation, so that proper concerns to be made, and policies of environmental protection method of production be introduced in order to minimize the effects of environmental degradation and proceed in accordance with sustainable development in the region.

## Introduction

Global warming and climate change are among humans' most critical challenges. Human activities such as burning fossil fuels, deforestation, and

industrial operations have caused a significant increase in greenhouse gas emissions, raising global temperatures. This has resulted in various adverse effects, including more frequent and severe natural disasters, rising sea levels, melting ice caps, and shifts in weather patterns. The Sustainable Development Goal (SDG) 13, which focuses on Climate Action, emphasizes the urgent need for countries and industries to take decisive steps to mitigate the impacts of climate change. The goal highlights the gravity of the situation by issuing a CODE RED Warning and calling for immediate action to combat climate change and its consequences. The impacts of climate change are being felt globally, affecting people in every corner of the world. From extreme weather events to rising sea levels, the consequences of climate change are becoming increasingly evident. Every person, country, and continent will be impacted in some way by the changing climate. Climate change poses a serious threat to our world, and despite the warnings from scientists and experts, many are still not taking the necessary steps to address this issue. This lack of action has paved the way for a climate cataclysm that could have devastating effects on both the environment and human society.

Amongst the major contributors to climate change is the burning of fossil fuels for energy production, transportation, and industrial activities. This releases carbon dioxide and other greenhouse gases into the atmosphere, trapping heat and leading to global warming. Deforestation is another key factor, as trees play a crucial role in absorbing carbon dioxide from the air. As a result of these human activities, the Earth's climate is changing at an alarming rate. Climate change is a pressing issue that has the potential to undo years of development progress and cause significant disruptions to communities around the world. Without urgent action, the consequences of climate change could be devastating, leading to mass migrations, instability, and even conflicts. Another profound impact of climate change is its influence on food security and water availability. Changes in weather patterns, such as prolonged droughts and extreme rainfall events, can result in crop failures, food shortages, and water scarcity. This can lead to increased competition for resources, exacerbating inequalities and triggering social unrest.

Additionally, rising sea levels and more frequent extreme weather events, such as hurricanes and wildfires, pose a significant threat to infrastructure, livelihoods, and human lives (Aslam, 2021). Climate change is affecting everyone on the planet. There is a climatic apocalypse impending, but no one is ready to deal with it, even though it threatens life on Earth. The GHG emission is unexpectedly faster than anticipated, which is incorporating human damage on earth. To reduce global warming to reach 1.5°C above pre-industrial levels, there is a need to control emissions to approximately 50% by

2023, which is supposed to be an imaginary condition yet. Immediate efforts are required to avoid catastrophic risks and achieve a sustainable future for generations to come (The sustainable development goals 2023).

This chapter delves into SDG 13 by examining the CPEC projects, with a particular focus on its SEZ that have the potential environmental effects such as deforestation, loss of natural wildlife habitats, and the release of effluent and GHGs. The significant release of toxic effluent and GHGs into the environment is associated with the large industries and power sector of CPEC, which heavily relies on coal as a natural resource for energy production in Pakistan. Without timely intervention, the region may experience severe consequences of environmental degradation. It is imperative to address these issues promptly and implement environmental protection policies and sustainable production methods to minimize the effects of environmental degradation and uphold sustainable development in the region. In various matters concerning China's interests such as Tibet, Xinjiang, and other issues, Pakistan has consistently maintained a strong stance in support of China. China stands to benefit considerably from the China-Pakistan Economic Corridor (CPEC), particularly through the usage of the Gwadar port. This port will enable China to transport oil and gas from the Gulf nations via a much shorter route, as compared to the through the Malacca Straits. The intensity of mutual associations between Pakistan and China has become a permanent global virtue. Priory, they have been unusual friends, one being a socialist nation and the opposite being a Muslim-majority state. The two nations have formed a close connection based on shared common interests. This connection has resulted in a strong and trustworthy relationship, built on equality, brotherhood, and collaboration between China and Pakistan (Iqbal, 2017).

Table 1. The link between Pakistan's Vision 2025 and SDGs

| | Pillar | Links with SDGs |
|---|---|---|
| 1 | **People First:** Developing social and human capital and empowering women | SDGS 1 (poverty), 3, (health) 4 (education), and 5 (gender) |
| 2 | **Growth:** Sustained, indigenous, and inclusive growth | The target is virtually identical to SDG 8, and also to SDGs 10, 12, 13, 14, 15 |
| 3 | **Governance:** Democratic governance: institutional reform and modernization of the public sector | Again, the language is similar to that of SDG 16 |
| 4 | **Security:** Energy, water, and food security | Linked to SDG 2 (zero hunger), 6 (water security), 7 (energy security), and 11 (urban) |
| 5 | **Entrepreneurship:** Private Sector and entrepreneurship-led growth | This is linked to SDG 9 (foster innovation) |
| 6 | **Knowledge Economy:** Developing a competitive knowledge economy through value addition | SDG 9 (innovation), and 4 (education) |
| 7 | **Connectivity**: Modernizing transport infrastructure and regional connectivity | SDG 9 (infrastructure), and 17 (global partnership) |

**Source: Pakistan Vision 2025 One Nation-One Vision**

The relationship between Pakistan and China has always been built on mutual respect. They collaborate by leveraging their respective strengths in various areas. Despite their cultural differences, the primary reason for their alliance has been military cooperation, aimed at deterring their common adversaries. It is crucial to analyze the evolving dynamics of their relationship, as well as the factors contributing to its enduring strength and increasing potency over time (Tiezzi, 2015).

## CPEC-Special Economic Zone (SEZs) & Sustainability

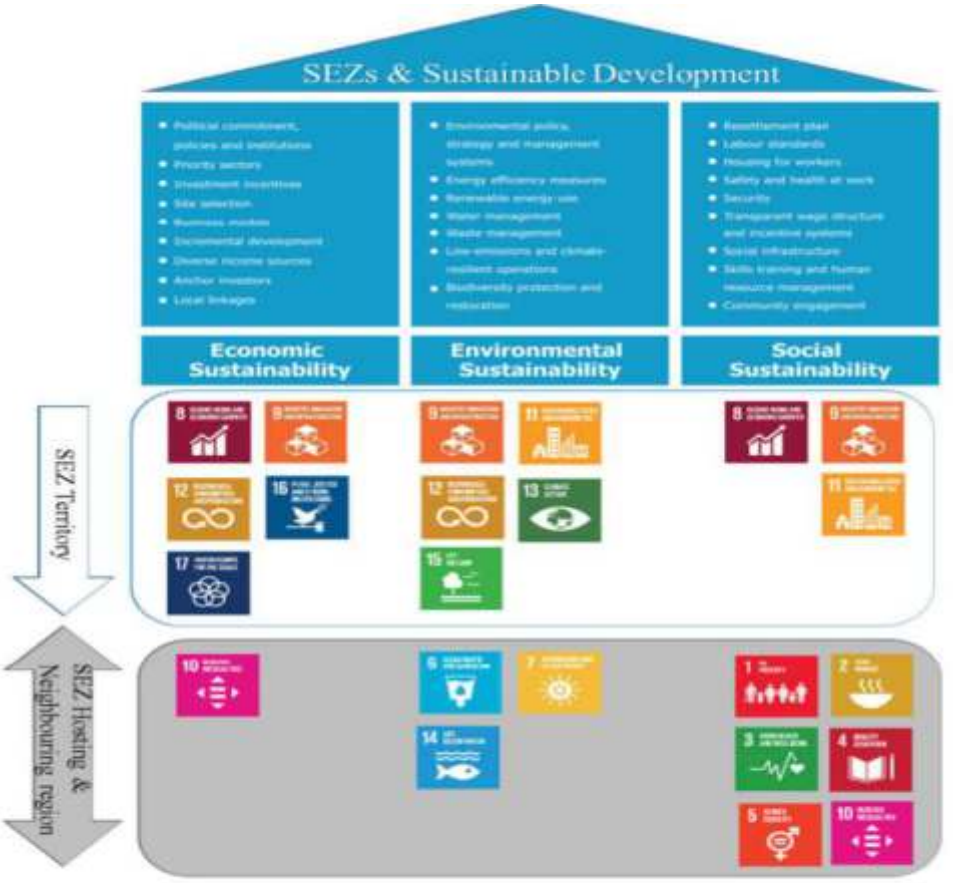
The investment from Chinese investors is attracted through establishment of the SEZ in Pakistan. Special Economic Zone (SEZ) is a particular area in a state that is expected for diverse financial protocols and other reasons in the same territory. The financial framework of Special Zones (SEZs) inclines to be favorable to enhance foreign direct investment (FDI) from overseas (Moin & Qadri, 2020). Special Economic Zones (SEZs) are characteristically created with a purpose to make certain rapid economic boom by way of indulging tax incentives to enhance overseas investment and stimulus technical development. Out of the many nations that taken into consideration using Special Economic Zones (SEZs), China needs to be the highly successful one in the use of Special Economic Zones (SEZs) to bring in more international capital. These SEZs (special economic Zones) are normally built so that it will

allow rapid economic increase in definite terrestrial areas (Akinci & Crittle, 2008).

Sustainable development and infrastructure-led advances are indicators of global progress. Sustainable development is expansion that meets the requirements of the existing, without compromising the capability of future generations to fulfill their very desires. The thinking has added attention over issues for social and ecological concerns attributable to the special consciousness on economic expansion. The CPEC has the potential to serve as an environmental corridor to oversee the development of local renewable energy trade, and connect Pakistan with China's national carbon market, which is currently an international concern, thereby establishing a local marketplace (Butt, 2021). CPEC projects are expected to overcome the Pakistan's energy issues and contributing to improve the standard of living of the people. The CPEC will connect Pakistani and Chinese industry and customers with 50 countries across the world (Ministry of Finance, 2017). Further, the benefit of the different projects (energy, railways tracks, roads) of CPEC additionally have social and environmental influences on the Pakistan (Hassan et al., 2022). The project's vision is to improve the quality of life for people in both China and Pakistan. Its aim is to create a gateway that fosters connectivity, mutual cooperation, investment opportunities, trade, economic growth, and interaction between the people and investors of both regions (CPEC Authority). In essence, the China-Pakistan Economic Corridor (CPEC) is a collection of infrastructural projects designed to bridge the trade gap between the two nations.

A Special Purpose Vehicle (SPV), or a subsidiary agency of the two companies i.e., Rashakai Special Economic Zone Development and Operations Company has come into being to implement and work for Special Economic Zone Projects of CPEC for Pakistan (Moin et al., 2022).

One of the predominant initiatives of CPEC is the establishment of the Economic Zone with aimed to developed industrial relationships and collaboration between China and Pakistan. China Pakistan financial corridor has a delegated framework that entirely helps and works for CPEC special economic Zone. The project is unfolded over 1000 Acres of land, and this will be evolved through CRBC in joint venture with KPEZDMC.




Source: Adapted by authors from the Report on Fostering Sustainable Development through Chinese Overseas Economic and Trade Cooperation Zones along the Belt and Road (2019).

Special economic zones (SEZs) or industrial parks may be an effective instrument to enhance industrialization if applied properly inside the proper context, as proven in several of the emerging countries, particularly those in East Asia. Further, countries have begun to put in force this tool for their industrialization system, particularly as a way of attracting foreign direct investment (FDI) mainly in the manufacturing sector, developing jobs opportunities, enhancing exports and foreign exchange, and so forth (Zeng, 2015). A leverage of first-time exemption from paying the custom obligations and taxes for all the capital and commodities imported into the nation, Pakistan, for the advantage, operations, and proceedings of a special economic region (it consists of both, the developer in addition to for the zone manufacturers). Except for all taxes imposed on the income for a duration of just about ten years. Special economic zones (SEZs) are to ensure the undertaking of applications which might be acquired from buyers to the FBI (Federal Board

of investment), or in addition as to be the secretary to the Board of Approval and the Approval committee.

Pakistan Economic Survey 2020-21

**Table 1: Special Economic Zones established across Pakistan**

| Year | Name of SEZ | Developer | Area (Acres) |
|---|---|---|---|
| | Value Addition City (VAC), Faisalabad, Punjab | FIEDMC | 214 |
| FY2019 | Oil Village SEZ (OVSEZ), Rawalpindi, Punjab | FOC-1 | 105 |
| | Rachna Industrial Park (RIP), Sheikhupura, Punjab | NIP | 215 |
| | Rahimyar Khan Industrial Estate (RIE), Rahim Yar Khan, Punjab | PIEDMC | 456 |
| | Rashakai Special Economic Zone (RSEZ), Nowshera, KP | KPEZDMC | 1,000 |
| | Vehari Industrial Estate (VIE), Vehari, Punjab | PIEDMC | 277 |
| | Bhalwal Industrial Estate (BIE), Sargodha, Punjab | PIEDMC | 427 |
| | Bostan Special Economic Zone (BSEZ), Pishin, Balochistan | Industries Depart. Bal. | 200 |
| | Hub Special Economic Zone (HUBSEZ), Lasbela, Balochistan | LIEDA | 406 |
| | Naushero Feroz Industrial Park (NFIP), Naushahro Feroze, Sindh | NIP | 80 |
| FY2021 | Allama Iqbal Industrial City (AIIC), Faisalabad, Punjab | FIEDMC | 2,800 |
| | National Science and Technology Park (NSTP), Islamabad, ICT | NUST | 58 |
| | JW-SEZ China-Pakistan SEZ (JWSEZ), Lahore, Punjab | JWSEZ Group | 231 |
| | Quaid-e-Azam Business Park (QABP), Sheikhupura, Punjab | PIEDMC | 1,536 |
| | Service Long March Tyres SESEZ, Jamshoro, Sindh | SLM | 50 |
| | Siddiqsons Tinplate SESEZ, Lasbela, Balochistan | STPL | 71 |
| **Total** | **21** | | **14,212** |

Source: Board of Investment

Even as the primary aim of CPEC is to make Pakistan develop economically, but the venture has a drawback too. The facet effects of CPEC which is one of the main elements, is environment. Notwithstanding being a developing nation, on the road of growth, Pakistan is ranked on tenth in the list of worst countries to reside in terms of climatic situations. The excessive use of fossil fuels has accelerated the emission of Carbon dioxide inside the environment, making things worse. In this sort of scenario, when the nation is already suffering environmentally, and is liable to climatic damages, this huge project is not completely favorable completely. China Pakistan financial corridor (CPEC) is a huge 2-sided substructure which has a purpose to revolutionize Pakistan's financial side. But if checked out factually, environmental factors have no longer been a priority for the project. The regular exploitation of natural assets for energy sector, is alarming for local communities, and land attainment for creation has brought on trouble for the already degrading weather of Pakistan. The corridor lacks implementation of safety for climatic, social, and cultural elements. CPEC is a matter of land connectivity. China and it is a part of Silk Road economic Belt for monetary incorporation of Eurasia.

**Ecology, Economy & Corridor**

The improvement in CPEC have ease the accesses of people to the Gilgit-Baltistan but it has adverse influence on the environment for example traffic congestion in emissions of gases. Moreover, these problems are expected to increase in future with completion of the under-construction projects under CPEC. The improvement in roads and construction of tunnels have has created many business opportunities (Goel et al., 2012). It is expected that, the Karakorum Highway alone is supposed to carry as much as 7000 trucks per day due to which rise in gaseous emissions in the air. Discharge of many harmful gases including Carbon Dioxide in the climate will deteriorate the air and causes global warming. The SEZ under CPEC are useful for the economy while need to undertake protective steps and measures to limit the environmental effects.

To counteract typical weather interchange, Pakistan is at the forefront and has implemented strategies in the direction of energy efficiency, renewable energy, and a reduction in CO2eq emissions (National Climate Change Policy, 2012). In Pakistan, weather affects agricultural manufacturing, raised unpredictability of water availability, raised up coastal loss, seawater spread, and elevated incidence of risky climate happenings (Pakistan Economic Survey, 2019). In 2019, the Pakistan authorities ensure the goal of at least 20% on-grid renewable power generation ability by 2025 and at least 30% by 2030 (Ministry of Energy, 2019). To acquire the climate and energy performance goals, the expression “on-grid” entails mini-macro grids. As per the international climate chance Index document (2020), Pakistan has lost 0.53% per unit GDP, suffered US$3792.52 million and witnessed 152 dangerous climate activities over the last 2 decades. Improving renewable energy from the Pakistani way is a prominent step acts in four fields: forestry, biodiversity, energy efficiency, and environmental policies, which are started through Government. These rules have been looked over underneath the power and climate change scheme concerning the goal of 2030. The electric energy generation sector of Pakistan particularly is based on fossil fuels. As of 2020, natural fuel and oil account for 33.1% and 22.56% of all primary industrial energy supply (MALIK, 2022).

With the help of CPEC Pakistan has set national energy and climate change strategies, such as renewable energy (Raza & Cucculelli, 2024; Vision 2025, 2014; Vision 2035, 2014). The aim is to be responsible for long-run decarbonization policies, as the Government of Pakistan has at this time espoused Ten Billion Tree Tsunami Programmer (amount of 7.5 billion rupees) to deal with the negative effects of global warming (Pakistan Economic Survey, 2019) (Pakistan Economic Survey, 2019).The world’s leading sources

of greenhouse gas releases from human doings are the burning of fossil fuels for electricity, agriculture, industry, heat, and transportation (Environmental Protection Agency (EPA)-United States, 2022).

As there is an increase in threats related to climate changes globally, Pakistan has taken initiatives and recent policies and frameworks have been introduced that commands and tells the importance of the need to transform and shift to use clean energy resources. The government has introduced a program of "Clean and Green Pakistan" that revolves around the idea of planting 10 billion Trees, use advanced tools for green financing, and restore eco-system funds. Furthermore, China has also stated that it has been refocusing on cleaner and beneficial to the environment projects. However, over the period, the use of coal, oil, and fuel has decreased as compared to the beginning, but still, there is a long way to go to ensure environmental sustainability.

Despite all the economic and social benefits of CPEC, there are still some disadvantages of the project, which must be discussed openly, as they are a threat to a better tomorrow. Pakistan ranks 10$^{th}$ in the list of most vulnerable to climatic changes. One of the biggest threats of CPEC is the road to end energy crises in Pakistan. The country is facing a lot of issues when it comes to energy production. To encounter this problem, CPEC has invested $33 Billion, and allotted 19 energy production projects. Out of these nineteen projects, three quarters are dependent on the oldest method of production: burning coal. The plants are in Sindh (Thar I and II), Baluchistan (Gwadar and Hub), and Punjab (Sahiwal and Salt Range), which means that every province is under the ultimate risk of global warming, due to increased CO2 emissions. The NEAP-SP, Green Industry Program, which was launched in the year 2006, by the Pakistan Environmental Protection Agency for the promotion of SMART program, with the assistance of the UNDP. The purpose of this step was to make the industries efficient enough to ensure systematic analysis and reporting of their environmental act. The main characteristic of this project must be the "countrywide reductions in the pollution levels" by the provision of flexibility to the corporations to select cost-effective environmental resolutions and promote pollution control actions by helping in the identification of governing and non- governing impairments. Many studies and research papers prove that CPEC envisions to upgrade Pakistan's economic growth by strengthening its construction sites, building new and modern transportation networks, introducing several projects that function on power energy, and Special Economic Zones. CPEC aims to build modern transportation networks that link seaports of Gwadar and Karachi to the Northern areas of Pakistan, and also extends to Western China and Central Asia. Pakistan Economic Corridor (CPEC) is a hope for better future of the

region with peace, growth, and economic development. CPEC is working on 19 projects, and one of those projects is the Special Economic Zones (SEZs).

The global energy crisis is a major threat to whole world in general and third world nations such as Pakistan in particular, where the crisis has become hurdle for industrial and financial development. Most governments recognize that energy independence and self-reliance are vital to establishing and maintaining prosperity and sovereignty. To solve global concerns, the system must transition away from fossil fuels and toward renewable energy and energy-saving technologies. Pakistan has enormous potential for capturing renewable energy, and its percentage of the electrical mix must be raised to attain energy security. Security concerns and circular debt are two major difficulties that must be solved if on-grid renewable energy is to be promoted through the private sector. Generators use diesel and petrol, both of which are made from fossil resources that are rapidly decreasing, and they also release harmful chemicals which contribute to environmental pollution and many diseases in human beings. Environmental issues/problems like global warming and climate change are driving to increased penetration of distributed RES to the next generation of the electricity grid. Greenhouse gases such as carbon dioxide, nitrous oxide and methane are discharged when we use fossil fuels. One of the utmost popular means of generating electricity without emissions or noise is through solar by transforming sunlight through PV system into electrical energy. Pakistan has huge prospect to produce wind and solar power and according to the World Bank, report the energy sectors is the main factor for the generation of greenhouse gases like $CO_2$ and methane.

Pakistan is currently confronting climate issues such as floods, droughts, and heat waves. No doubt CPEC projects have monetary benefits to Pakistan but it has serious environmental concerns for n Pakistan. New studies suggest and warn that the CPEC may have a direct and negative impact on Pakistan's water, air, and wildlife. These negative results likely to diminish the potential benefits that CPEC can provide. Also, a large number of the projects in CPEC are related to the energy sector which will deteriorate the environment as a result of the increase in energy consumption (Muhammad et al., 2020).

The China-Pakistan Economic Corridor (CPEC), which focuses on the special economic zone and industries, has a severe impact on the country's ecology due to widespread exposure and emissions of carbon dioxide. Currently, Pakistan is facing economic challenges and the environment degradation is new challenge and became a threat for sustainable development.

Another environmental risk of CPEC is deforestation. As a results of the CPEC infrastructure projects a massive cutting down of forests. In 2017, about 54,000 trees had been reduced in the district of Naushera, Abbottabad, Markanda, and Malakand with the intention to sustain the venture. A tree absorbs about 50 pounds of Carbon Dioxide per Anum, but with this degree deforestation, it'll affect weather negatively (Kouser et.al, 2020). The third enormous hazard is that Pakistan seashores are located inside the District of Gwadar, which is considered to be the greatest coastal area, and the mid-point of the China Pakistan Economic Corridor, which makes the beaches exposed to serious damages, since the largest coal-burning plant is located in Gwadar (Baloch, 2017).

Pakistan's climate is deteriorating with each passing day. Because of the dreadful climate circumstances, Pakistan is now recognized as one of the top 10 places to live. One of the most prominent causes of this horrible predicament is the massive emission of carbon dioxide into the environment.

The widespread use of fossil fuels in industry and energy production has polluted the air, exacerbating the situation. Pakistan is placed tenth in the list of the most prone to climatic changes, and this reality can readily be seen through the climate circumstances; unpredictable rainfall, floods, droughts, melting glaciers, and distributed heat waves (Ebrahim, 2021). The steady exploitation of natural resources is causing pollution, and if not taken care of right now, it may lead to diminished environmental sustainability, diffusely effecting the economic growth. Substantially, China has invariably been the largest investor of the coal energy sector around the world; investing up to USD 21 to 38 billion the investments but lacks the attention regarding the environmental issues (Isaad, 2021).

## Prominent Industries in the Plan

### *Textile Industry*

Industry has been an issue for the water, all the wastage of chemicals and machines dumped into lakes, sea, and alike. According to an observation, textile firms are responsible for 20% of water pollutants, and around 0.5 million tons of synthetic waste is dumped into ocean yearly. A hundred and a hundred and fifty liters of water is required for producing one kilogram of fiber. There are 223 textile firms in Pakistan, which produce round 640,000 tons of fiber in an annum that consistent with textile firms produce 2,870 tons per year and 8 tons per day. For producing 8 tons of fiber, it required 1.6 million liters of drinking water each day in which 0.5 million tons of microfiber dump off into the sea per 12 months.

### *Chemical Industry*

These industries automatically affect the environment by inflicting air pollution by emission of poisonous gases, dumping of chemicals into water, natural ponds, and lakes, and burying solid waste and dirty water undersoil, inflicting damage. The primary chemical compounds produced by using the 47 chemical industries in Pakistan include CO2, VOCs, and NOx and these 47 industries emit 220 million tons of poisonous gases into the air.

### *Agriculture and food processing Industry*

These two industries have been depending on utilization and burning of fossil fuels, coal, fuel, and woods. The emission of gases into the environment with the use of burning these things is a main issue of trouble from these industries. Steel Industry: Burning and melting of iron and steel requires lots of energy production. Steel production calls for an ample amount of COKE (a kind of coal) which is extraordinarily damaging to the environment and emits naphthalene that is notably poisonous and the reason of cancer. With a view to burning these excessive great metals, lots of greenhouse gases are emitted into the environment yearly. Around 2.8 million tons of greenhouse gases are emitted through steel and iron industry.

### *Ceramic Industry*

It's been concluded that the ceramic industry produces around 16Kgs of CO2 for each square meter of a ceramic tile, which then leads to enormous depletion of ozone layer. So, no longer only these industries are responsible for environmental risks within the country, but around the world.

### *Pharmaceutical Industry*

There are 650 pharmaceutical companies in Pakistan which emits 250,000 tons of harmful gases into the air and 384,000 kg solid waste into the water in a year. Even though compared to other industries, those firms do not affect the environment to a very high extent, but still, they are dangerous. The dumping of expired or unused drugs do now not have a proper technique, because of this they're dumped into water bodies or undersoil causing poison to transmit slowly throughout.

### *Cement Industry*

The cement industry is the third industry inflicting environmental pollutants through dumping around 450,000 tons of Carbon Monoxide, Sulfur Oxide, and Nitrogen in the surroundings. Paper industry: The preliminary system of creating paper consists of cutting down trees, and the actual system of manufacturing paper is liable for dumping carbon dioxide, nitrogen Dioxide,

and Sulfur Oxide in the climate, which then leads to troubles including acidic rain and GHGs (greenhouse gases) emissions.

**Measures taken by Industries in the Plan to Reduce Environmental Effects of SEZs**

The China and Pakistan relations have been further strengthened by recent visit of Prime Minister to China and with initiation of CPEC Phase-11. However, to counter environmental issues related to the SEZ following measure are suggested

- Limit the amount of waste to be dumped annually by an industry.
- Developing strict regulations related to environment and ensuring implementation of the regulations.
- A ban on cutting of forests and new policy for plantation of trees in the project areas.
- To overcome the water pollution the seawater should be converted into drinkable water by desalination of water.
- The industries should bound to ensure to plant trees and provide conducive environment for workers.
- Encouraging industries for environmentally friendly production and discouraging pollutant industries through fees and fine.

Special Economic Zones (SEZs) are that meager part of the world economies which are exclusive. These zones are geologically bordered areas that are created for the benefits of the manufacturing sector, through monetary guidelines and actions. After a precise analysis of the darks side of these special Zones, many nations took measures to make sure that they no longer cause any greater destruction to the environment. Below stated are a few steps taken through a sure nation for you to cut out the negative element. Step taken by China to reduce environmental effect of SEZs is associated with sound control. Further most important steps taken by the world nations as well. Lots of countries paid the right interest to create a balance between industrialization and socio-economic improvement. After understanding that special economic zones are a challenge to surroundings, government bodies have made sure to take right measures to avoid greater problems. Environmental concerns are important for any economic tasks, and the China-Pakistan Economic corridor (CPEC) mission is no exception.

**Climate Change Mitigation**

The CPEC needs to contain processes to reduce greenhouse gas emissions and diminish the effects of climate change. This will consist of the usage of renewable energy resources, green technology, and carbon offset projects.

***Water Management***

Powerful water management practices should be included in the project to preserve water sources, lessen water pollution, and limit the effect of water-extensive activities to nearby communities.

***Waste Management***

Effective waste control practices should be used to decrease the impact of waste on surroundings. This would consist of the use of recycling, composting, and different sustainable waste control tactics.

***Public Engagement***

The giant project needs to involve local groups and different stakeholders in decisions to make sure that their concerns and wishes are taken into consideration. This can also assist to construct public trust in the project and its outcomes.

***Monitoring and Evaluation***

The venture should have a powerful monitoring and assessment mechanism in vicinity to keep watch on its environmental impacts and ensure sustainability targets. This could additionally assist to pick out issues for adjustments as fundamental to economic developments.

Numerous modifications have been made on earth climate due to anthropogenic happenings even before the world industrial revolution and it is universally accepted that no nation can economically grow without taking in consideration the environmental damages associated with economic activities; therefore, the sustainable development is the core of economic expansion. It is significant to emphasize on economic integration, but also needs at the same time make environmental issue indispensable between China and Pakistan regarding CPEC via legal collaboration as an essential part of the national geopolitical policies to mark CPEC a long-lasting as well as a more harmless, protected, and sustainable project.

As China leads the coal production around the world which accounts for almost half of global consumption, and ultimately, observed as the major source of carbon emissions ( EIA, 2014). And it is observed that coal has

damaged the environment quality massively and causes threat to human health and future damages for the long-run; therefore, coal-based power projects in CPEC are intended to damage environment the long run.

Table 2: The 10 countries most affected from 2000 to 2019 (annual averages)

| CRI 2000-2019 (1999-2018) | Country | CRI Score | Fatalities | Fatalities per 100000 inhabitants | Losses in million US$ PPP | Losses per unit GDP in % | Number of events (2000-2019) |
|---|---|---|---|---|---|---|---|
| 1 (1) | Puerto Rico | 7.17 | 149.85 | 4.12 | 4149.98 | 3.66 | 24 |
| 2 (2) | Myanmar | 10 | 7056.45 | 14.35 | 1512.11 | 0.8 | 57 |
| 3 (3) | Haiti | 13.67 | 274.05 | 2.78 | 392.54 | 2.3 | 80 |
| 4 (4) | Philippine | 18.17 | 859.35 | 0.93 | 3179.12 | 0.54 | 317 |
| 5 (14) | Mozambique | 25.83 | 125.4 | 0.52 | 303.03 | 1.33 | 57 |
| 6 (20) | The Bahamas | 27.67 | 5.35 | 1.56 | 426.88 | 3.81 | 13 |
| 7 (7) | Bangladesh | 28.33 | 572.5 | 0.38 | 1860.04 | 0.41 | 185 |
| 8 (5) | Pakistan | 29 | 502.45 | 0.3 | 3771.91 | 0.52 | 173 |
| 9 (8) | Thailand | 29.83 | 137.75 | 0.21 | 7719.15 | 0.82 | 146 |
| 10 (9) | Nepal | 217.15 | 217.15 | 0.82 | 233.06 | 0.39 | 191 |

Source: Climate Risk Index of 2021.

According to Climate Risk Index of 2021 table above ranks of Pakistan stood 8$^{th}$ most affected among world's countries. China is moving away from coal centered energy and is employing firmer pollution-control regulations, Pakistan is originating such schemes now, despite its global obligations, and that too without stringently undertaking environmental valuations or without having a very good history of applying its environmental safety laws. If Pakistan does not proceed suitable deed to confirm the prevention of environmental degradation, its people could undergo significantly due to the causing adverse effects to the environment; the consequence of which could also influence the rest of the world. The CPEC projects need to undertake sustainable development practices that balance monetary, social, and environmental desires. This could make sure that the mission benefits the local communities and the surroundings, whilst also contributing to the country's monetary expansion.

## Addressing Climate Change: The Urgent Need for Increased Global Ambition

Climate change is a pressing issue that is affecting the world in numerous ways. With average global temperatures expected to rise beyond 3°C, the consequences for our planet and all its ecosystems are becoming increasingly dire. The impacts of climate change are clear, with severe storms, natural disasters, food and water scarcity, and the potential for conflict being exacerbated. In order to mitigate these detrimental effects, immediate action needs to be taken. The escalating effects of climate change are evident in the form of extreme weather events, which are becoming more frequent and intense. Hurricanes, droughts, floods, and wildfires are just some of the manifestations of this phenomenon, causing destruction to homes, infrastructure, and livelihoods. These disasters not only have immediate consequences but also long-term.

In today's world, the reality of climate change is becoming increasingly undeniable. The impacts of rising global temperatures are being felt across the globe, from extreme weather events to the loss of biodiversity. While there has been progress in the fight against climate change, with investments in renewable energy reaching record levels and countries committing to reducing their carbon emissions, much more needs to be done. The current trajectory of global warming is unsustainable, and urgent and ambitious action is required to limit the rise in temperatures (The sustainable development goals 2023).

## Suggested Citation

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