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Abstract

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Key Words: Corpus, CPEC (China-Pakistan Economic Corridor), ECDA (Ecological Critical Discourse Analysis), Ecosophy, SDGs (Sustainable Development Goals)

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Abstract

This research explores the Ecosophy of discourse produced around the China-Pakistan Economic Corridor (CPEC). The study starts with building a corpus of texts, taken from the official website of the CPEC. The list of 18 key words was made, based on three United Nations (UN) Sustainable Development Goals (SDGs) out of 17 goals. Theoretical framework of Stibbe's (2015) ecocritical discourse perspective is used to develop the Ecosophy of the CPEC, while analytical framework is based on three UN sustainable development goals outlined in 2015. Corpus linguistics as a methodology is used to undergo quantitative and qualitative analysis. In quantitative analysis, collocates were analyzed by identifying Mutual Information (MI) score. The highest MI score (11.26013) is gained by the collocation named CPEC-Deforestation and the lowest is of CPEC-Water (0.87352) which show that the infrastructure project of the CPEC caused deforestation and less affected water.

Keywords: [Corpus](#), [CPEC \(China-Pakistan Economic Corridor\)](#), [ECDA \(Ecological Critical Discourse Analysis\)](#), [Ecosophy](#), [SDGs \(Sustainable Development Goals\)](#)

Introduction

The economic giant with massive infrastructure, a developmental project, and a game changer, the China-Pakistan Economic Corridor (CPEC) is a source of economic boost for South Asian region in general and Pakistan in specific (Tehran Times,

2019). The project has been sounded by various quarters as equally critical for leaving a negative environmental impact and potential hazards for local communities (Khalid et al., 2018). Keeping in view the negative impact of high-level infrastructure development in Pakistan through CPEC, Pakistan harnesses its economic activities by



running projects like CPEC to enhance not only infrastructure development, energy security, trade facilitation, job creation, and foreign investment. The considerations where development and safety of environment are kept parallel come under an umbrella term called sustainability. The benefits of sustainable development in these large-scale projects include debt sustainability, environmental sustainability, and equitable distribution of resources and jobs (Schneider, Kallis & Martinez-Alier, 2010). This article focuses on environmental sustainability here referred to as Ecosophy and how CPEC fulfills the parameters of it, by doing eco-critical discourse analysis. This research involves corpus analysis to identify the Ecosophy of the project. Initially, the idea of Ecosophy was proposed by Naess (1989), who offers its unique perspective by exploring the relationship between human beings and their natural environment. Ecosophy is "a philosophy of ecological harmony or equilibrium" (Peters, 2003), which offers a framework for understanding the complex interplay between economic development and environmental sustainability. This research article also explores the Ecosophy of the CPEC by examining the impact of CPEC's development on the environment, its potential for sustainable development, and its implications for the local communities. The article seeks to contribute to the ongoing debate around the CPEC and offers a more nuanced understanding of its impact on the region.

The concept of ecosophy was established by two eminent philosophers Naess (1989) and Guattari (2005) followed by Stibbe (2015) where dominant anthropocentric worldview was introduced which they believed that human beings are responsible for environmental degradation because they exploit Nature for their own benefits. At the same time, they also promoted a shift towards more ecocentric perspective that recognized the intrinsic value of Nature, which is pro-environmental. This research deliberates focus on Stibbe's ecosophical view that situates human well-being on environmental equilibrium and sustainability even if human beings continuously are exploiting Nature. Stibbe (2015), in his work "Ecolinguistics: Language, Ecology, and the Stories We Live By," introduces the idea of ecosophy, which combines "ecology" and "philosophy." It emphasizes the need to transform our worldviews, values, and relationships with the environment through language. He

emphasizes that Ecosophy involves a deep connection and attunement to Nature and seeks to promote ecological consciousness and sustainable ways of living through linguistic and discursive practices.

Stibbe's concept of Ecosophy, this research explores the impact of the CPEC on environment and environment related areas by identifying specific language patterns and linguistic devices that further help compile an Ecosophy of the CPEC. Ecological Critical Discourse Analysis (ECDA) is an approach that has been used to explore these linguistic devices and patterns to construct the Ecosophy of the CPEC discourse. This approach applies ecological and environmental perspectives to discourse analysis. Humanly, we understand the importance of language, for instance, the imagination of absence of language creates a dark spot in life (Saleem, Khan & Naeem, 2019). As language plays a pivotal role in the development of an idea and propagation of a concept such as an anthropocentric and ecocentric. This paper examines how language and linguistic devices such as nouns, verbs and adjectives contribute to constructing and disseminating ecological and environmental ideologies such as anthropocentric and ecocentric. By identifying the linguistic devices such as verbs, nouns, adjectives, and adverbs, anthropocentric and ecocentric ideologies are explored which further helped in developing the Ecosophy of the project of the CPEC. Hence, ECDA analyzes texts that includes all the documents available on the official/governmental website of the CPEC in Pakistan.

Research Questions

1. What kind of significant collocates does CPEC have with environmental areas present in the discourse produced around CPEC?
2. How are linguistic devices found in significant collocates used to construct the Ecosophy of the CPEC?

Literature Review

The existing scholarship on the CPEC, with special focus on its impact on environmental areas of Pakistan, explores the concept of Ecosophy as a framework for understanding the complex interplay between economic development and environmental sustainability. The CPEC has been

criticized for its potential environmental impact, with concerns raised about the impact of the project on local ecosystems and biodiversity (Ali & Butt, 2021). One of the primary concerns is the project's impact on water resources in the region, which is already under stress due to climate change and population growth. Other environmental concerns include the project's impact on air pollution and climate change, as the increased traffic and industrial activity associated with the CPEC could lead to higher levels of greenhouse gas emissions and air pollution (Khalid, Ahmad & Ullah, 2022). The construction of dams, reservoirs, and canals as part of the CPEC project can exacerbate this problem, as it could lead to increased water usage and diversion, affecting downstream areas and the livelihoods of local communities (Ahmad, Shi & Zaman, 2023). Constructing roads, railways, and pipelines for the CPEC could lead to habitat fragmentation and loss, significantly impacting the region's biodiversity. The extraction of natural resources, such as coal and oil, to fuel the development of the CPEC could also have significant environmental consequences, including deforestation, habitat destruction, pollution, and greenhouse gas emissions (Tabassum, 2020).

The previous literature is reviewed from the angle of how various factors such as infrastructure development, emission of gases, air and water pollution, traffic flow and construction are badly impacting environment and ecology of the region due to the CPEC. Another way examines the previous studies by analyzing CPEC from discursive point of view. Afzaal et al., (2019) examined the discourse of three Pakistani English newspapers and found out their ideological construction through corpus-based analysis. They summarized the findings of their research by claiming that positive discourse has been produced about CPEC through positive lexical choices. Similarly, Asif et al., (2019) also explored the impact of the CPEC on local culture and languages along its route whereas in another research, Faraz and Asghar (2021) evaluated metaphoric expressions used for the CPEC like 'a silver bullet', 'a Trojan Horse' and 'developmental basket' and found many conceptual metaphors based on the lexical realizations. In this research, the researchers have investigated the impact of the CPEC on environment and ecology differently for instance by exploring those linguistic

devices and language expressions that represent anti-environmental and pro-environmental ideologies by looking at the statistical significance of the word CPEC with keywords used to show the relationship with each other. This research may contribute to how linguistic patterns and devices help expose the effects of economic development of this mega project on the environmental well-being.

Methodology

This research uses corpus linguistics as a methodology (Stefanowitsch, 2020) allowing us to combine quantitative and qualitative analysis. A corpus analysis of the discourse produced around CPEC has explored eco-environmental areas relevant to the 13th, 14th and 15th SDGs inside the texts taken from the official website of the CPEC. For the quantitative analysis, the search terms based on the above given three SDGs are used as collocates with the word CPEC and then are ranked highest and lowest with regard to the statistical significance represented by their Mutual Information score mentioned as MI score value in this research, which actually shows how closely a certain search term has occurred in the corpus of texts taken from the official website of CPEC of Pakistan.

There are ten kinds of texts available on the official website of the CPEC. They are referred to be as official sources of data collection in this article because these texts are taken from the official website of the CPEC. The data includes documents and their quantity: CPEC Appraisal (01), Policy Briefs (02), Long Term Plan (01), Environmental Impact Assessments (04), Fact Books CPEC (02), Magazines CPEC (03), Press Releases CPEC (180), Review CPEC (01), working Papers (02) and Reports CPEC (09).

After downloading these 10 texts, 26 text files were made so that after cleaning and management, they can be run on the AntConc software using version 3.5.7. Collocation analysis is done to see the impact of the CPEC on eco-environmental areas based on 13th, 14th, and 15th SDGs. To see the co-occurrence of these areas, Mutual Information (MI) score values (Anthony, 2011) are noted to evaluate the Ecosophy of the economic project of the CPEC. According to Stubbs (1995), MI score is a statistical measure that shows two things in numbers; one is the strength of words with each other, and the

other is the semantic prosody or positive/negative profile of words occurring together. Related to this research the interpretation is that highest the score means closely occurs that area with CPEC but the positive or negative effect due to infrastructure development of the CPEC is determined by consulting 5 words on the left and 5 words on the right of the search term. Meanwhile, the output files and screenshots of the corpus are also consulted to quote here as examples. The examples are given in the form of concordance lines/screenshots inside the analysis part. The keywords

manually selected relevant to the three above given SDGs included 18 search terms that in turn helped presenting them as significant collocates as given in the analysis below. It is to be noticed that the quantitative analysis is done based on the score value such as higher the score value is more is the statistical significance of the CPEC is with that area. Qualitative analysis is done by collecting linguistic devices such as nouns, adjectives and verbs occurring with the search terms and interpreting them in line with pro-environmental or anti-environmental semantic prosody.

Analysis and Discussion

Table 1

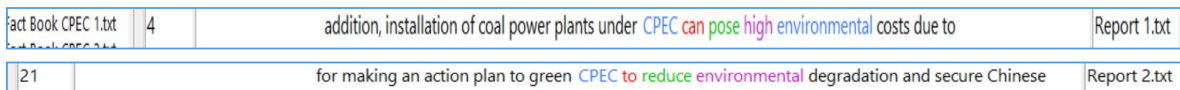
Significant Collocates	MI Score	Significant Collocates	MI Score
CPEC-Environment	2.24520	CPEC-Human	2.98431
CPEC-Climate action	6.75739	CPEC-deforestation	11.26013
CPEC-Biodiversity	4.11779	CPEC-Ecosystems	4.48774
CPEC-Pollution	2.86084	CPEC-Habitat	0.97174
CPEC-Nature	1.51256	CPEC-Wetlands	5.60322
CPEC-displacement	5.40322	CPEC-Aquatic Life	8.49556
CPEC-Wild life	6.51402	CPEC-Water	0.87352
CPEC-Sustainability	4.01826	CPEC-Climate Change	2.32194
CPEC-Environmental degradation	3.91517	CPEC-CPEC activities	4.19987

According to the analysis, the co-relation of the CPEC with ‘environment’ shows a significance value (MI score) of 2.24520 as compared to its association with ‘human’ as 2.98431 which implies that CPEC has more significance for human

resource development while the environment is being exploited as a resource rather than saving it. In the examples given below, it can be seen that the coal projects can have a high toll on the environment along the CPEC route.

Figure 1

CPEC-Environment



In screenshot 1, the use of linguistic devices such as ‘pose’, ‘high’ and ‘costs’ tends to develop anthropocentric ideologies which promote the destruction of the environment due to the coal projects for the benefit of human development. Similar evidence of CPEC on the environment has been found in the output files and given here in the example below.

Road and transportation under CPEC have a ‘significant’ ‘negative’ effect on the environment of the area, as the existing literature has exposed that

road and transport ‘negatively’ *affects* the environment. Transportation produces carbon, makes noise and *mitigates* the natural environment, congestion and traffic in the region, which ‘causes’ ‘stress’, ‘frustration’ and ‘diseases of the lungs’, heart and many other body parts. (R1)

On the contrary, in screenshot 2 given above, it is suggested to reduce environmental degradation by greening the project. The use of linguistic devices such as ‘green’, ‘action plan’ and ‘reduce’ tend to

produce ecocentric ideologies which promote the safety of the environment at the same time.

Figure 2
CPEC-Human

Corpus Files	Concordance	Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Appraisal CPEC.txt	Concordance Hits 7						
Bloomberg brief.txt	Hit	KWIC					File
CPEC- Long term plan	1	! these girls and boys will be the human capital for CPEC, clearly unable to match					Magazine 1.1
EIA 1.txt	2	under CPEC 5. Urban development in Pakistan under CPEC 6. Job growth and human resource development This					Appraisal CF
EIA 2.txt	3	with the New Norm of a Controversial CPEC 21 Making the case for Human Resource Development					Magazine 1.1
EIA 3.txt	4	Muzammil Zia Policy Head: Job Growth and Human Resource Development, CoE-CPEC Shuja Waqar Research					report 5.txt
EIA 4.txt	5	Shuja Waqar Research Assistant: Job Growth and Human Resource Development, CoE-CPEC Issue , Working paper					report 5.txt
Fact Book CPEC 1.txt	6	Muhammad Muzammil Zia Policy Head: Job Growth & Human Resource Development under CPEC CoE CPEC Issue ,					Working-Paj
Fact Book CPEC 3.txt	7	sis Shujaa Waqar Research Assistant: Job Growth & Human Resource Development under CPEC CoE CPEC Dr.					Working-Paj

In the example given above, human resource development is emphasised. This implicates the growth of human capital and human development and by using linguistic devices such as ‘human capital’, ‘growth’, and ‘human resource development’ through CPEC promotes human

activities against Nature, generating anthropocentric ideologies.

As we see the highest MI score is gained by ‘deforestation’ with the word CPEC constituting 11.26013.

Figure 3
CPEC-Deforestation

Corpus Files	Concordance	Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Appraisal CPEC.txt	Concordance Hits 1						
Bloomberg brief.txt	Hit	KWIC					File
CPEC- Long term plan	1	due to the anthropogenic activities such as deforestation of the forests, a threat to the					Magazine 2.1

For the collocate CPEC-Deforestation, the following screenshot shows the use of linguistic devices such as ‘anthropogenic’, ‘activities’ and ‘threat’ generating anthropocentric ideologies. One example taken from the text of Fact Book (FB) is given below.

climate change. Deforestation also leads to soil erosion impacting watersheds and watershed management. Pakistan has lost a huge forest cover due to this. (FB)

People living in the neighbourhood of forests start using the natural resources for their livelihoods leading to deforestation, which is one of the major causes of environmental degradation and

The collocates CPEC-Aquatic life has gained an MI score value of 8.49556 which according to the analysis displays the worst effect of the CPEC on aquatic life and water ecosystems as mentioned in the following concordance lines.

Figure 4
CPEC-Ecosystem

Corpus Files	Concordance	Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Appraisal CPEC.txt	Concordance Hits 14						
Bloomberg brief.txt	Hit	KWIC					File
CPEC- Long term plan	1	water and adversely impacts the air, water ecosystem and human life. Therefore, activities undertaken					Report 1.txt

The linguistic devices such as ‘adversely’, ‘impacts’, water ‘ecosystem’ generate anthropocentric ideologies inside the association of CPEC and

ecosystem. Another concordance screenshot showing collocates CPEC-Ecosystems also exposes Pakistan’s ecosystems as fragile.

Figure 6

CPEC-Ecosystem

9	in a common culture, religion, language and ecosystem in order to form a sub-region (working Pap
10	animals are reported for that site. The ecosystem is described as fragile. The acoustic environment	EIA 2.txt
11	with only some wild vegetation growing sparsely, ecosystem is fragile; Due to low rainfall and	EIA 3.txt
	have been reported in the area. Overall ecosystems of the area is described as fragile	EIA 2.txt

This collocate produces an anthropocentric Ecosophy by using linguistic devices like ‘fragile’ and ‘described’ which portray a negative picture of

the ecosystems of Pakistan under CPEC. The next significant association is found between CPEC and climate action as shown in the figure below.

Figure 7

CPEC-climate action

Corpus Files	Concordance	Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Appraisal CPEC.txt	Concordance Hits 2						File
Bloomberg brief.txt	Hit	KWIC					
CPEC- Long term plan	1	ks. In 2016, China issued the "Forest Stewardship Action Plan for Climate Change Adaptation (2016–2020)", making d					Report 2.txt
EIA 1.txt	2	modern energy for all; to take urgent action to combat climate change and its impacts;					Report 2.txt
EIA 2.txt							
EIA 3.txt							
EIA 4.txt							

The MI score value between CPEC and Climate action is 6.75739 which generates ecocentric ideologies/Ecosophy by using the linguistic devices of ‘urgent’, ‘action’, ‘combat’ and ‘plan’ for climate change.

Similarly, the collocate CPEC-Wild life has gained an MI score of 6.51402 which includes animals and wild plants as shown in the figure below.

Figure 8

CPEC-Wildlife

25	the locals and could also scare the wildlife in the area. Mansehra will have four	EIA 4.txt
26	pletion and excessive hunting. The common project wildlife is classified as follows: Information on wildlife	EIA 2.txt
27	shelter for wild animals and birds. The wildlife of the area has not been studied	EIA 2.txt
28	he observations by local inhabitants, hunters and wildlife officials, it is estimated that there has	EIA 2.txt
29	tourists, therefore, it is suggested to build wildlife parks as build in GB "Yolk Park"	Magazine 2.1
30	there has been 50 to 80% decrease in the wildlife population over the last decade. Many reasons	EIA 2.txt
31	, A 2011, Effects of roads and traffic on wildlife populations and landscape function: road ecology	EIA 4.txt

The use of linguistic devices such as ‘shelter’, ‘build’ and ‘parks’ to save wildlife generates ecocentric ideologies while ‘decrease’ and ‘effects of roads and

traffic’ on wildlife population generate anthropocentric ideologies or Ecosophy.

Figure 9

CPEC-Wetlands

1	to the marine life. Similarly, the connecting wetlands with the CPEC activities may face destruction	Magazine 2.1
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The collocate CPEC-Wetlands has acquired an MI score of 5.60322 which shows the bad effect of CPEC on connecting wetlands by using linguistic

devices of ‘activities’, ‘face’ and ‘destruction’. These words produce anthropocentric ideologies thus generating anthropocentric Ecosophy.

Figure 10

CPEC-Displacement

Corpus Files	Concordance	Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Appraisal CPEC.txt	Concordance Hits 6						File
Bloomberg brief.txt	Hit	KWIC					
CPEC- Long term plan	1	arge-scale infrastructure development under CPEC, displacement of communities may also exacerbate the environmen					Magazine 2.1
EIA 1.txt	2	different plausible assumptions about the rate of displacement of furnace oil -based electricity generation, rat					Appraisal CF
EIA 2.txt	3	an casualties, destruction of properties, and the displacement of people generates opposition to the CPEC					Working Pap
EIA 3.txt	4	that the CPEC may lead to widespread displacement of the locals. "Of the 73,000 square kilometers,					report 7.txt
EIA 4.txt	5	pulation density (directly re-lates to population displacement), pro-ductive land under the route, loss					Policy brief 5
Fact Book CPEC 1.txt							
Fact Book CPEC 3.txt							
Magazine 1.txt							

Similarly, the collocate CPEC-Displacement has taken a 5.40322 score value which shows anthropocentric Ecosophy by using expressions like 'exacerbate', opposition, 'widespread', 'locals', and 'lead' to the displacement of people and communities due to the CPEC.

Similarly, the area of biodiversity has gained an MI score value of 4.11779 which implicates CPEC as a potential threat to the biodiversity along the CPEC route according to the example given below.

Figure 11
CPEC-Biodiversity

Hit	KWIC	File
1	may be a possible loss of endangered biodiversity along the CPEC corridor due to habitat	Magazine 2.1
2	land management, and then moved on to biodiversity and climate change (with a focus on	Report 2.txt
3	of the forests, a threat to the biodiversity and endangered species by over exploiting, causin	Magazine 2.1
4	for any specific concerns related to the biodiversity and livelihood. SEA of CPEC must include	Magazine 2.1
5	e destruction and thus the dependent livelihoods, biodiversity, and migratory birds may face the impacts.	Magazine 2.1
6	res are adopted for conserving natural resources, biodiversity and safeguarding the livelihoods of local communi	Magazine 2.1
7	n the natural resources, including forest, water, biodiversity and the concerned ecosystems along the CPEC	Magazine 2.1
8	and obvious impacts on water, air and biodiversity and the resulting risks to these would	EIA 4.txt

The linguistic devices used for biodiversity such as 'concerns', 'risks', 'threat', 'loss' and 'endangered' biodiversity develop anthropocentric ideologies hence producing the anthropocentric Ecosophy of the CPEC.

The collocate CPEC-Sustainability has gained a 4.01826 MI score which promotes sustainability in the CPEC as described in the screenshot given below.

Figure 12
CPEC-Sustainability

Hit	KWIC	File
1	goal is inextricably linked to education for sustainability, CPEC is an opportunity to collaborate across	Magazine 1.1
2	abad. Shahid, J 2015, 'Environmental and economic sustainability of CPEC assured', Dawn, 08 June 2015, viewed 29 July	EIA 4.txt
3	be detrimental for policy and the execution sustainability of the CPEC project."3 iii. Federal government'	Review CPEC
4	ivities undertaken in the garments industry under CPEC should promote environmental sustainability. 78 Engagement	Report 1.txt
5	should also be adopted to ensure environmental sustainability under CPEC portfolio are as follows: • Under	Magazine 2.1

The linguistic devices used in this association such as 'promote', 'education', 'assured', 'ensure' and 'environmental' sustainability produce ecocentric ideologies and Ecosophy. An example taken from the text file of Environmental Impact Assessment 1 (EIA1) shows the adverse effects of CPEC on environmental sustainability.

It is expected that the CPEC will generate 'substantial adverse effects' for environmental sustainability in Pakistan, which is a 'very serious matter'. (EIA 1)

Another collocate of CPEC-Environmental degradation gaining a 3.91517 MI score shows that this association depicts anthropocentric Ecosophy as well as ecocentric Ecosophy

Figure 13
CPEC-Environmental Degradation

Hit	KWIC	File
1	action plan to green CPEC to reduce environmental degradation and secure Chinese investment. 26 O. H	Report 2.txt
2	"Action Plan to Green CPEC" to reduce environmental degradation and secure Chinese investment. 27 techni	Report 2.txt
3), the destruction of property as well as environmental degradation caused by various CPEC energy and	Working Pap
4	dress CPEC specific issues related to pollution, environmental degradation, climate change and biodiversity loss. • C	Magazine 2.1
5	dress CPEC specific issues related to pollution, environmental degradation, climate change and biodiversity loss. • :	Policy Brief (
6	medium, and Project activity has no probable environmental degradation in the Project area. The comprehensive	EIA 1.txt
7	their economic growth from consumption (and the environmental degradation it causes), while in developing countries,	Report 2.txt
8	services to local communities, it can cause environmental degradation on an unprecedented scale to many	Report 2.txt
9	hide, once manufactured and sold, contributes to environmental degradation. The assembly of motor vehicles itself	Report 1.txt

The anthropocentric ideologies are represented by using linguistic devices such as ‘caused’, ‘unprecedented’, ‘developing countries’ and ‘motor vehicles’ while ecocentric Ecosophy is generated through the use of words like ‘reduce’, ‘address’ and ‘no probable’ environmental degradation. An example taken from the Report 1 (R1) is given below.

It is expected that the CPEC will also lead to industry relocation from China to Pakistan. While this is good news, as it would lead to more

investment and greater employment opportunities, there is a need to *look for any environmental concerns* due to the ‘relocation of dirty industry’ and accordingly the government should think through any necessary safeguards regime. (R3)

The co-occurrence of pollution with CPEC has an MI score value of 2.86084 with CPEC which implicates the worsening effect of CPEC causing air and water pollution. The examples are given in the screenshot below.

Figure 14
CPEC-Pollution

Hit	KWIC	File
1	e consumption of natural resources, including air pollution, a worsening of water quality, excessive heavy	Report 2.txt
2	. Environmental Objectives No major environmental pollution accident; All purchased equipment and products me	EIA 1.txt
3	for dirt, dust, industrial residues, atmospheric pollution, algae, moss, bird droppings, etc. The ground	EIA 3.txt
4	Plan on Prevention and Control of Air Pollution" and an "Action Plan on Prevention and	Report 2.txt
5	restation, soil and water degradation, industrial pollution, and bad city planning are issues of	Report 2.txt
6	It can be concluded that rural water pollution and drinking water, urbanization infrastructure,	Report 2.txt
7	pollutants in the city, causing serious air pollution and haze. After a period of serious	Report 2.txt
8	oil spills) • Fire incidents, road accidents and pollution are hazards for all tehsils Gwadar district	Magazine 2.1
9	emissions than fossil fuel sources Emits some pollution as gas/liquid waste Can be used	EIA 2.txt
10	1986). Soil erosion might not only cause water pollution as mentioned earlier but could also lead	EIA 4.txt

The given screenshot presents an anthropocentric Ecosophy of the project by using linguistic devices of ‘serious’, ‘cause’, ‘soil erosion’, ‘emissions’, ‘and worsening’ quality of air and water due to the infrastructure development. Another collocate

CPEC-Climate change gaining 2.32194 MI score depicts ecocentric ideologies by using linguistic devices of ‘dialogues’ ‘policies’, ‘seminars’, ‘raising’, ‘address’ and ‘compatible investments’.

Figure 15
CPEC-Climate change

Hit	KWIC	File
1	However, this revival of economic growth through CPEC can be hampered by climate change, and	Policy Brief (
2	raising through dialogues and seminars about the climate change issues along CPEC alignments should be	Policy Brief (
3	designing policies and recommendations to address climate change with respect to CPEC portfolio so	Policy Brief (
4	Policy Brief / Recommendations CPEC & CLIMATE CHANGE – PAKISTAN TOWARDS A CLIMATE COM	Policy Brief (
5	Corridor (CoE-CPEC) with the title of "CPEC & Climate Change-Pakistan Towards a Climate Compatible	Policy Brief (
6	ate-compatible investments in the country through CPEC new projects. Ministry of Climate Change, along	Magazine 2.1

One anthropocentric ideology can also be seen in the first concordance line that uses ‘revival of economic growth’ and ‘hampered’ by climate change.

The collocate CPEC-habitat acquires a 0.97174 MI score value in the official discourses on CPEC which generates a combination of anthropocentric as well as ecocentric ideologies.

Figure 16
CPEC-Habitat

Corpus Files	Concordance	Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Appraisal CPEC.txt	Concordance Hits 10						File
Bloomberg brief.txt	Hit	KWIC					
CPEC- Long term plan	1		guests to see lions in their natural	habitat at close range.	In addition, the park'		EIA 2.txt
EIA 1.txt	2		Topography Agriculture Landscape Soil Noise level	Habitat Biodiversity Construction Processes	Staking NE LA		EIA 4.txt
EIA 2.txt	3		UN agencies like the UNEP and UN	HABITAT, by establishing special funds.	Second, encourage		Report 2.txt
EIA 3.txt	4		biodiversity along the CPEC corridor due to	habitat fragmentation, deforestation, diversion	of rivers		Magazine 2.1
EIA 4.txt	5		hreatened biodiversity, to mitigate the impact of	habitat fragmentation. Ecotourism may be considered as a			Magazine 2.1
Fact Book CPEC 1.txt	6		to the movement of wildlife and cause	habitat fragmentation (Forman and Alexander 1998). Animal			EIA 4.txt
Fact Book CPEC 3.txt	7		ter (1983). Land-use change and Transport policy.	Habitat International, Vol 7(3/4): 67-77. Hamid, Omar (8.			Working Pa
Magazine 1.txt	8		the most obvious seems to be the	habitat-loss due to vegetation-depletion and excessive			EIA 2.txt
Magazine 2.txt	9		are flies, mosquitoes, fleas and sand flies.	Habitat management is the key to prevention of			EIA 2.txt
Magazine 3.txt	10		favorable conditions for the recovery of lost	habitat of the flora and fauna. The dwarf			EIA 2.txt

Anthropocentric ideologies are produced by linguistic devices such as 'cause', 'impact', 'loss' and 'fragmentation' while ecocentric ideologies are generated by 'habitat management' and 'recovery' and 'mitigation' as shown in the figure above.

Figure 17
CPEC-Water

Corpus Files	Concordance	Concordance Plot	File View	Clusters/N-Grams	Collocates	Word List	Keyword List
Appraisal CPEC.txt	Concordance Hits 722						File
Bloomberg brief.txt	Hit	KWIC					
CPEC- Long term plan	5		the most direct and obvious impacts on	water, air and biodiversity	and the resulting risks		EIA 4.txt
EIA 1.txt	6		minimize any negative impacts on soil, ground	water, air and biological	resources of till! project		EIA 2.txt
EIA 2.txt	7		. Indus river is the major source of	water. Along with that	numerous amount of rivulets		EIA 4.txt
EIA 3.txt	8		smearing and therefore reduce efficiency. Turbid	water also leaves a film	on the panels		EIA 3.txt
EIA 4.txt	9		district. Mansehra population has access to piped	water and about 21% population	uses groundwater drawn f		EIA 4.txt
Fact Book CPEC 1.txt	10		r bodies through drainage system, contaminate the	water and adversely impacts	the air, water ecosystem		Report 1.txt
Fact Book CPEC 3.txt	11		ification of impacts on physical (including land,	water, and air), biological/ecological,	and socio-econo		EIA 2.txt
Magazine 1.txt	12		and Faisalabad have the advantage of clean	water and better law	and order, are relatively		Report 1.txt
Magazine 2.txt	13		ion pit filling for reclamation; purchasing local	water and electricity	to make it possible for		Report 2.txt
Magazine 3.txt	14		es are unfavorable for dietetic hygiene, drinking	water and environmental sanitation,	they may increase t		EIA 2.txt

Another significant collocate CPEC-water has gained an MI score of 0.87352 and developed an anthropocentric Ecosophy which uses linguistic

devices such as 'negative impacts', 'contaminate', and 'unfavourable' water quality for hygiene and health.

Figure 18
CPEC-Activities

EIA 4.txt	3		(local and Chinese) • Environmental standards for	CPEC activities (including infrastructure	development) to be agre		EIA 4.txt
Fact Book CPEC 1.txt	4		life. Similarly, the connecting wetlands with the	CPEC activities may face	destruction and thus the		Magazine 2.1

The collocate CPEC activities possess a 4.19987 score value which develops anthropocentric Ecosophy by using words like 'face', and 'destruction' of the environment due to CPEC activities.

The overview of findings and conclusion section provides the ecosophical nature of the project of the CPEC.

Findings and Conclusion

This section presents the key findings of this research to conclude the study done on the ecosophical analysis of the discourses produced

around CPEC. To address first research question, there are found to be eighteen significant collocates relevant to environmental areas in the discourse produced around the CPEC. The highest MI score (11.26013) is gained by the collocation of CPEC-Deforestation while the lowest is gained by CPEC-Water (0.87352). This show how CPEC had affected deforestation so much. On the contrary, CPEC has affected water affairs least. Similarly, aquatic life comes on the second number in terms of its association with CPEC gaining 8.49556 MI score followed by another collocation CPEC- Climate action having 6.75739 MI score on fourth number. So, the analysis table 1 shows the association of the

CPEC with all other areas showing MI scores which implicates that the highest score shows close occurrence or proximity of the area of impact and lowest score shows low impact and weak proximity. If we see the concordance screenshot in the analysis section, we may see the co-occurrence of words with search terms, and it can be found out that how certain linguistic devices portray good or bad realities (Shokouhi & Moazed, 2016) of environment of Pakistan under CPEC.

Ecosophy as described by Stibbe (2014) is a philosophy of judging a discourse produced around anthropocentric or ecocentric ideologies. If the discourse is pro-environment, the ideologies are ecocentric while ideologies if about environmental destruction and degradation, produce anthropocentric ideologies. According to the working definition of eco-centric and anthropocentric ideologies used for this research, anthropocentric ideologies are more prevalent in this discourse than ecocentric ideologies because in all 18 areas, anthropocentric ideologies can be seen whereas in the areas of climate change, climate action, habitat fragmentation, pollution and sustainability, ecocentric ideologies can also be seen. To address the second research question, it can be noticed that linguistic devices also play a significant role in the representation of these ideologies (van Dijk, 2005) by showing semantic prosody encapsulating relevant positive or negative

choices (Lukin & Rivas, 2021) of the search term. For instance, words such as negative, effect, costs, threat, anthropogenic, worse, adversely, fragile, destruction, face, pose, high, human capital, human growth, degradation, impacts, exacerbate, opposition, widespread displacement of people, concerns, risks, loss, endangered, substantial, adverse, serious, unprecedented, dirty industry, soil erosion, emissions, worsening, hampered, fragmentation, unfavourable and contaminate produce anthropocentric ideologies. Similarly, words as linguistic devices such as urgent, action, combat, plan, build, parks, shelter, decrease, ensure, assured, promote, reduce, address, dialogues, policies, raising, compatible, green, recovery and mitigate have generated ecocentric ideologies when used with search terms after establishing their positive semantic prosody. To conclude the findings, there are six verbs, seventeen nouns, 11 adjectives and one adverb with negative connotation semantic prosody tend to develop anthropocentric Ecosophy of the CPEC. At the same time, ecocentric Ecosophy is developed by 4 adjectives, 7 nouns and 10 verbs with positive connotation semantic prosody. So, the Ecosophy of the CPEC is anthropocentric which according to Kopnina et al., (2018) is the belief that human beings have supremacy to exploit Nature for their own benefits and other beings are the source of their survival.

References

- Afzaal, M., Hu, K., Chishti, M. I., & Khan, Z. A. (2019). Examining Pakistani news media discourses about China–Pakistan Economic Corridor: A corpus-based critical discourse analysis. *Cogent Social Sciences*, 5(1). <https://doi.org/10.1080/23311886.2019.1683940>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Ahmad, S., Shi, G., & Zaman, M. (2023). Resettlement delays in the Dasu Hydropower Project: assessing impacts on the affected people and communities. *International Journal of Water Resources Development*, 39(4), 663–680. <https://doi.org/10.1080/07900627.2022.2128078>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Ali, A., & Butt, K. M. (2021). Sustainable Development of Chitral: A CPEC Perspective. *South Asian Studies*, 36(01), 193–206. https://pu.edu.pk/images/journal/csas/PDF/15_36_1_21.pdf
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Anthony, L. (2011). AntConc (Windows, Macintosh OS X, and Linux). Recuperado de: <https://www.laurenceanthony.net/software/antconc/releases/AntConc344/help.pdf>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Asif, M., Zhiyong, D., Ullah, I., Nisar, M., Kalsoom, R., & Hussain, M. A. (2019). The study on China-Pakistan Economic Corridor (CPEC) as a language and culture changer in Pakistan. *Journal of the Punjab University Historical Society*, 32(1), 35–49. https://pu.edu.pk/images/journal/HistoryPStudies/PDF Files/3_v32_1_2019.pdf
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Faraz, H., & Asgher, J. (2021). A Trojan Horse, a Game Changer, a Silver Bullet and What Not! A Study of Metaphors in the Discourses of China-Pakistan Economic Corridor (CPEC). *International Review of Social Sciences*, 386–399. [Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Guattari, F. (2005). *The three ecologies*. Bloomsbury Publishing.
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Khalid, I., Ahmad, T., & Ullah, S. (2022). Environmental impact assessment of CPEC: a way forward for sustainable development. *International Journal of Development Issues*, 21(1), 159–171. <https://doi.org/10.1108/ijdi-08-2021-0154>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Khalid, S., Shahid, M., Natasha, Bibi, I., Sarwar, T., Shah, A. H., & Niazi, N. K. (2018). A review of environmental contamination and health risk assessment of wastewater use for crop irrigation with a focus on low and high-income countries. *International journal of environmental research and public health*, 15(5), 895. <https://doi.org/10.3390%2Fijerph15050895>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Kopnina, H., Washington, H., Taylor, B., & J Piccolo, J. (2018). Anthropocentrism: More than just a misunderstood problem. *Journal of Agricultural and Environmental Ethics*, 31(1), 109–127. <https://doi.org/10.1007/s10806-018-9711-1>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Lukin, A., & Rivas, L. I. (2021). Prosody and ideology. *Language, Context and Text*, 3(2), 302–334. <https://doi.org/10.1075/langct.20006.luk>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Næss, A. (1989). From ecology to ecosophy, from science to wisdom. *World Futures*, 27(2–4), 185–190. <https://doi.org/10.1080/02604027.1989.9972135>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Peters, D. (2003). Planning for a sustainable Europe? A case study of European Union transport infrastructure investment policy in the context of Eastern enlargement (Doctoral dissertation, Rutgers The State University of New Jersey, School of Graduate Studies). [Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Saleem, M., Khan, J., & Naeem, M. (2019). The Origin of language: An Analysis of Theories from Qurānic Perspective. *Tahdhib-al-Afkar*, 6(2), 01–16. [Google Scholar](#) [Worldcat](#) [Fulltext](#)

- Schneider, F., Kallis, G., & Martinez-Alier, J. (2010). Crisis or opportunity? Economic degrowth for social equity and ecological sustainability. Introduction to this special issue. *Journal of cleaner production*, 18(6), 511-518. <https://doi.org/10.1016/j.jclepro.2010.01.014>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Shokouhi, H., & Moazed, R. (2016). Linguistic representation of ideological strategies in two Iranian newspapers written in English. *Australian Journal of Linguistics*, 37(2), 127-155. <https://doi.org/10.1080/07268602.2017.1239520>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Stefanowitsch, A. (2020). *Corpus linguistics: A guide to the methodology*. Language Science Press.
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Stibbe, A. (2014). An ecolinguistic approach to critical discourse studies. *Critical discourse studies*, 11(1), 117-128. <https://doi.org/10.1080/17405904.2013.845789>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Stibbe, A. (2015). *Ecolinguistics: language, ecology and the stories we live by*. <https://ci.nii.ac.jp/ncid/BC05506708>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Stubbs, M. (1995). Collocations and semantic profiles. *Functions of Language*, 2(1), 23-55. <https://doi.org/10.1075/fol.2.1.03stu>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Tabassum, S. (2020). Deforestation in Pakistan CPEC an auxiliary exacerbation. *Journal of Contemporary Studies*, 9(II), 59-72.
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Van Dijk, T. A. (2005). Discourse analysis as ideology analysis. In *Language & peace* (pp. 41-58). Routledge.
[Google Scholar](#) [Worldcat](#) [Fulltext](#)