

# Corpus-based Critical Discourse Analysis of China's National Image in Green Development: A Case Study of the White Paper China's Green Development in the New Era

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## ABSTRACT

Under Martin's Appraisal Theory, China's national image in the white paper China's Green Development in the New Era is studied, based on self-built corpus. The text is studied in terms of the distribution of attitudinal resources. According to the results, a positive national image is circulated in the white paper. Compared to the Chinese version, the English version focuses on external publicity functions, contributing greatly to China's international status, while the Chinese version concentrates on spreading the country's policies. Both versions have achieved the expected target for the communication of national image.

## KEYWORDS

Corpus; China; National Image; Green Development.

## 1. INTRODUCTION

Green represents the nature and life. A sound eco-environment is the basic foundation for a better life, and the well-being of the people. Green development is an idea that follows the rules of nature to promote harmonious coexistence between nature and human. It has become the consensus of all countries. Since the 18th CPC National Congress in 2012, under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, China has firmly held the belief that lucid waters and lush mountains are invaluable assets, committed to the idea of a global community of shared future, and actively participated in world environment and climate governance.

The White Paper is an official document of the government's position. Hu Kaibao (2017) pointed out that the English translation of political literature can directly spread the constructed image of China to foreign audiences. The English translation of the White Paper issued by the Chinese government aims to help foreign people know China's specific policies, and more effectively build up China's image. The White Paper *China's Green Development in the New Era*, published in 2023, is an epitome of national image communication. The paper will study the White Paper to explore the presentation of China's Green Development.

## 2. LITERATURE REVIEW

The theory of Critical Discourse Analysis (CDA), proposed by Fowler et al. and was formalized by Fairclough in his book *Language and Power*, originates from Critical Linguistic (CL) (Fairclough, 1989). At the core of Fairclough's theory are the concepts of discourse, ideology, and hegemony. Discourse refers to the way language is used in specific social contexts, while ideology presents the system of meaning that shapes people's understanding of the world. Hegemony, on the

other hand, stands for the process whereby certain groups exercise power over others through the manipulation of discourse. Fairclough's CDA approach is underpinned by three interrelated dimensions of analysis: description, interpretation, and explanation. The theory is based on Halliday's Systemic Functional Linguistics (SFL). SFL focuses on the relationship between language and its social functions. Halliday argues that language users select from a range of grammatical options to express their intended meanings. These options are organized into systems, such as systems of mood, modality, and theme, which work together to create meaningful texts. And it emphasizes the necessity of studying language within its specific social background and authentic application. Under SFL, Martin's Appraisal Theory is a framework that focuses on the analysis of speakers' or writers' attitudes or stances towards what they are saying or writing. (Zhu&Zhu,2019) At the core of the theory is the recognition that language serves not just as a tool for describing the world we live in, but also a mean for evaluating it. It identifies three categories of appraisal resources: attitude, engagement, and graduation. "Attitude" refers to the feelings of writers or speakers towards events. It is comprised of "affect", "judgment", and "appreciation". "Engagement" includes "monogloss" and "heterogloss". The former indicates that the information comes from the speaker himself while the latter refers to that from others. Graduation studies the changes of attitudes, including "force" and "focus".The three resources offer a powerful tool for analyzing the interpersonal dimension of texts and understanding how evaluative language shapes our understanding and experience of the world. This study will focus on the attitude resources.

The corpus-based approach has been widely used in discourse analysis. It involves the processes of analysis of linguistic data collected from a large and representative collection of texts, known as a corpus. It has made up for the drawbacks of critical discourse analysis being too subjunctive. In recent years, the combination of quantitative and qualitative approaches has been utilized by more and more researchers all over the world. Qualitative methods are mainly used to reveal the meaning, motivation and values in the discourse by analyzing the specific context or background. Quantitative method aims to clarify the trend, pattern, and correlations in discourse by collecting and analyzing large amounts of data. Both methods have their unique applications and values in CDA.

More and more studies highly related to China's National Image have been conducted in recent years. Domestic scholars' corpus-based critical discourse analysis is abundant, covering various topics concerning politics, economy, culture and so on. Scholars such as Yang Mei and Wang Ziwei (2023) studied the constructed national image of China in environmental news by *The New York Times* and found that the anti-China tone was unchanged. There are also foreign scholars delving into topics related to China. For example, Sangeen (2020) analyzed the image of China in Afghan media and found that China had a positive image. Foo, Lean and Salim (2020) studied the impact of One Belt One Road Initiative on international trade in ASEAN region. However, there are only a few studies with regard to the domestic political literature on the theme of China's Green Development and how does it spread China's national image overseas.

### **3. METHODOLOGY**

Here, we will describe corpus-based critical discourse analysis and main analysis steps employed in this study.

#### **3.1. Corpus-based Critical Discourse Analysis**

Corpus-based Critical Discourse Analysis is a method of studying the relationship between language use and social, cultural, and political contexts. By using such a method, scholars begin by constructing one or more corpora that contain textual data on a particular topic or domain. Through quantitative analysis and qualitative interpretation of these corpora, patterns, features and trends in language can be explored.

Principles of corpus-based critical discourse analysis can be concluded as follow: (1) **Systematic Principle**: it emphasizes the integrity of analysis to ensure the accurate reflection of characteristics in the discourse; (2) **Critical Principle**: it not only focuses on the superficial meaning of the text, but also deeply explores the social, political, and cultural factors behind it; (3) **Principle of Substantiality**: it conducts analysis based on actual corpus data to ensure the objectivity and reliability of results.

Critical Discourse Analysis with a self-built corpus is employed in this study. As an empirical research method, the corpus can provide quantitative and qualitative bases for critical discourse analysis. Therefore, the randomness and subjectivity of discourse analysis can be reduced. The method also enhances the credibility of the discourse interpretation. LancsBox 6.0 and UAM CorpusTool 3.3 will be adopted to help with the analysis of the material selected in terms of frequencies, collocations and so on.

### 3.2. Materials Selection

The White Paper, an official document, stands for the authority and position of Chinese government. It can be a representative material selected for the following study.

The State Council Information Office of the People’s Republic of China published both the Chinese and English versions of the White Paper *China’s Green Development in the New Era* on 19<sup>th</sup> January, 2023. The aggregate count of word tokens in the English version amounts to 10,266, which is large enough to serve as an observed corpus, and that for the Chinese version is up to 14,806. (Table 1) They would present something relevant to the circulation of China’s national image on macro and micro levels.

**Table 1.** Tokens of the Two Versions

Version	Token
The English Version	10,266
The Chinese Version	14,806

### 3.3. Aim and Processes of the Study

The study will mainly answer three questions: (1) what kinds of China’s national images does the English version present? (2) are there any differences between both English and Chinese version of the white paper in terms of the use of emotional words in China’s national image communication?

Therefore, the processes of the study are as follows: (1) graphs and other non-essential information will be deleted from the materials selected; (2) the Chinese version will be segmented according to parts of speech by using HanLP; (3) two parallel corpora will be built by using LancsBox 6.0, with GOP for the English version and COP for the Chinese one; (4) language features such as frequencies and collocations will be retrieved by LancsBox 6.0 with regard to quantitative analysis; (5) attitudinal resources will be grouped into different categories by UAM CorpusTool 3.3; (6) the use of modal verbs and emotional words will be searched for qualitative analysis.

## 4. RESULTS AND DISCUSSIONS

### 4.1. Quantitative Analysis

This part will mainly discuss word frequencies and the distribution of attitudinal resources in the English version of the white paper.

#### 4.1.1. The Analysis of Word Frequencies

By using LancsBox 6.0, word frequencies have been retrieved. The top ten high-frequency words in four categories of the white paper *China's Green Development in the New Era* are shown in Table 2.

**Table 2.** Word Frequency in the White Paper *China's Green Development in the New Era*

noun		verb		adjective		adverb	
China	155	have	250	green	133	also	18
development	141	be	197	eco-environmental	46	more	12
energy	69	promote	51	environmental	43	actively	11
water	54	make	36	more	27	steadily	10
protection	46	build	36	new	27	vigorously	7
resources	46	improve	36	economic	25	effectively	7
conservation	44	take	23	clean	21	as	6
percent	42	protect	21	urban	21	significantly	5
environment	36	develop	20	industrial	21	strictly	4
industries	34	work	18	sustainable	19	now	4

Nouns such as “development”, “energy”, “water”, “protection”, “resources”, “conservation” and “environment” are the most highly used words in the white paper, 141, 69, 54, 46, 46, 44, 36 respectively. They represent the comprehensive actions that China has taken to pursue green development, such as sewage treatment, and the grain for green project. Namely, great efforts have been put into green construction, and China has played a key role in environmental protection and energy-saving.

In terms of verbs, content verbs such as “promote”, “build”, “improve”, “protect” and “develop” occurs frequently. China dedicates to promote green and low-carbon ways of production and life, build a green industrial system, improve the system for market-based allocation of resources and environmental factors, protect ecosystems and develop the Yangtze River Economic Belt, etc. It is evident that China owns a positive national image in implementing the idea of green development. Additionally, China has made great achievements in promoting green development according to the adjectives and adverbs in the white paper.

With the help of GraphColl in LancsBox 6.0, words with the modifier “green” are retrieved.

**Table 3.** “Green-” Collocations

Collocate	Frequency
development	53 (67.95%)
and	13 (16.67%)
products	6 (7.69%)
transformation	6 (7.69%)

According to Table 3, content words such as “development”, “products” and “transformation” are always collocated with “green”. It reflects China’s constant pursuit for industry transformation and upgrading. China advocates the idea of a global community of shared future, actively participates in climate governance, and has made great contributions globally.

#### 4.1.2. 3.1.2 The Analysis of Attitudinal Resources

The distribution of the three attitudinal resources has been clarified by UAM CorpusTool 3.3. Manual annotation has been adopted during the process. The percentage of affect, judgement, and appreciation resources can be seen from Table 4 and Table 5.

**Table 4.** The Distribution of Attitudinal Resources

ATTITUDE-TYPE	N=783	
affect	63	8.05%
judgement	397	50.70%
appreciation	323	41.25%

According to Table 4, “judgement” accounts for 50.70%, followed by “appreciation” at 41.25%, while “affect” is only 8.05%. Obviously, the white paper, an authoritative document of the government’s positions, puts emphasis on factual information rather than subjective ideas. Additionally, the proportion of “appreciation” proves China’s significant contributions to global green development.

**Table 5.** Attitude-polarity

positive-attitude	negative-attitude	ambiguous
96.00%	1.43%	0.57%
100%		

It can be concluded from Table 5 that positive words or phrases take up for 96% while the proportion of the other two types is only 4%. China’s actions towards green development are positive. The great achievements prove China’s endless efforts to forge ahead a “green” road, showing a positive national image of China.

Here are some typical examples:

As China’s modernization advances and living standards improve, the popular demand (affect) for a beautiful environment is growing.

China is committed (judgement) to the idea of a global community of shared future.

It has fostered an institutional system that combines both constraints and incentives to coordinate industrial restructuring, pollution control, eco-environmental (appreciation) conservation, and response.

In example 1, the word “demand” is within the scope of inclination under “affect”. In example 2, the word “committed” belongs to judgmental resources, specifically “tenacity”. In example 3, “eco-environmental” is the appreciation for the government’s actions.

## 4.2. Qualitative Analysis

Here, we will discuss the details of three resources under attitude system.

### 4.2.1. Affect Resources

By analyzing affect resources, insights into the author's emotional positioning and the way emotions interact with other evaluative resources, such as judgments and appreciations, can be gained to construct the overall evaluative meaning of the text.

In the white paper, the distribution of affect resources is as follows (Table 6):

**Table 6.** The Distribution of Affect Resources

Affect	N=63	
un/happiness	13	20.63%
dis/satisfaction	11	17.46%
in/security	3	4.76%
dis/inclination	36	57.14%

According to Table 6, the proportion of dis/inclination is 57.14%, the highest among all categories. In the white paper, emotive verbs such as “will”, and content words such as “delight” are frequently used to express China’s willingness and positive attitudes towards green development. China is always on the way to propel the harmonious coexistence between human beings and nature.

Here are some examples in the white paper which show China’s positive attitudes:

International cooperation may encounter difficulties and setbacks, but China will (inclination) remain committed to improving global climate governance and taking solid actions.

In doing so, China will (inclination) continue to contribute to global efforts to tackle the grave challenge of climate change.

A beautiful countryside where the skies are blue, the lands are green, and the waters are clear brings people delight (happiness) with its scenic view.

In examples 1 and 2, phrases such as “will remain committed to” and “will continue to” demonstrates China’s determination to pursue a green development path. In example 3, word “delight” shows China’s government comply with the people-centered idea. The use of emotive words has shaped the national image of China’s people-oriented and green development.

#### 4.2.2. Judgement Resources

Through judgement, speakers and writers can convey their moral evaluations of human actions, thereby influencing the way listeners and readers perceive and understand those actions.

The proportion of judgement resources in the white paper is relatively high. By virtue of UAM CorpusTool 3.3, the specific distribution of each category is as follows:

**Table 7.** The Distribution of Judgement Resources

Judgement	N=397	
normality	33	8.31%
capacity	239	60.20%
tenacity	51	12.85%
propriety	39	9.82%
veracity	35	8.82%
unclear	0	0%

According to Table 7, capacity accounts for 60.2%, which is the highest. Capacity belongs to one of the social dimensions rather than social constraints. It is obvious that social valuation is used to judge the policies, strategies, and actions related to green development. It also proves China’s initiative in implementing green development strategy. Additionally, according to figure-2, the most frequently-occurred verbs are “promote”, “build”, “improve”, “protect”, and “develop” etc. They present that China are taking the lead to forge ahead in terms of green development. Here are some examples:

China integrates the philosophy of green development into urban and rural construction, and promotes (capacity) beautiful cities and beautiful countryside initiatives.

With priority given to environmental pollution control, China strives to improve (capacity) the living environment to build (capacity) a beautiful home featuring lush mountains, green fields, singing birds, and blossoming flowers.

Greater efforts have also been made to protect (capacity) and utilize traditional villages and carry forward their fine traditions, which have increased their cultural charm.

China has developed (capacity) a green technical equipment manufacturing system covering various sectors such as energy and water conservation, environmental protection, and renewable energy.

In examples 1,2 and 3, words “promote”, “improve”, “build” and “protect” show China’s willingness to seek a better living environment for the people. China is concerned with environmental issues. It stresses the importance of environmental quality, and spares no effort to improve the environment to benefit the people. In example 4, word “develop” proves China’s actions towards industrial transformation.

The second most important judgement resource is tenacity. To prove that, words or phrases such as “intensified efforts”, “concerted efforts” and “accelerate” can be easily found in the white paper. China has spared no effort to cope with climate change, and benefit people globally. Examples are as follows:

It has intensified efforts (tenacity) to protect and restore ecosystems, effectively expanded the capacity of the eco-environment, and promoted the rapid accumulation of natural wealth and eco-environmental wealth, leading to historic, transformative, and comprehensive changes in eco-environmental protection and providing strong support for the sustainable and healthy development of the economy and society.

Concerted efforts (tenacity) have been made to optimize the use of territorial space.

China has accelerated (tenacity) the building of a green, circular, and low-carbon economy.

In example 1,2, and 3, words “efforts” and “accelerated” are proofs of Chinese government’s actions towards environmental protection.

#### 4.2.3. Appreciation Resources

Through appreciation, speakers and writers can present their aesthetic preferences, judgments about quality, or evaluations of value, thus shaping the way listeners and readers understand and perceive those entities or ideas.

The detailed distributions of appreciation resources in the white paper are as follows:

**Table 8.** The Distribution of Appreciation Resources

Appreciation	N=323	
reaction	3	0.93%
composition	42	13.00%
social-valuation	278	86.07%

According to Table 8, social-valuation stands out (86.07%) while reaction and composition account for a little proportion. It is because the white paper puts emphasis on objective evaluation of events rather than subjective pattern. Social-valuation is more objective to convey factual information. As a promoter of green development, China has made judgement about its own actions. In the white paper, there are also large number of positive words or phrases to describe China’s contributions to green

development, which shows China’s sense of responsibility, and portrays China as an inclusive great country. Examples are listed below:

Following the principles of equity, common but differentiated responsibilities and respective capabilities, China has acted in accordance with the United Nations Framework Convention on Climate Change, actively participated in global climate negotiations in a constructive manner, and made historic contributions (social-valuation) to the conclusion and implementation of the Paris Agreement.

With a focus on major national eco-environmental functional areas, ECRLs and PAs, China has launched projects for holistic conservation and restoration (social-valuation) of mountains, rivers, forests, farmland, lakes, grasslands and deserts, taking comprehensive and systematic measures (social-valuation) to deal with problems by addressing their root causes.

In example 1, China is immersed in fulfilling international commitments, and has made great contributions to world climate governance. In example 2, China has shouldered the responsibility of environmental protection, and led global participation in it. By using positive appreciation words, China has been regarded as an inclusive and conscientious country, who takes active part in win-win cooperation.

### 4.3. Comparison of the English and Chinese Versions

In this segment, both versions will be compared in terms of adjective frequencies and collocations.

#### 4.3.1. The Comparison of Adjective Distributions in Both Versions

By using HanLP, the Chinese version is segmented according to parts of speech. Then, it is imported in LancsBox 6.0 to retrieve word frequency. The top 10 adjectives in both versions are as follows:

**Table 9.** The Comparison of the Top-10 Adjectives in the Chinese and English Versions

Chinese Version		English Version	
Adjective	Frequency	Adjective	Frequency
green	156	green	133
new	32	eco-environmental	46
global	34	environmental	43
continuous	32	more	27
active	32	new	27
low-carbon	19	economic	25
energy-saving	19	clean	21
sustainable	16	urban	21
clear	16	industrial	21
beautiful	16	sustainable	19

Adjectives “green”, “new”, “sustainable” and “clean” occur frequently in both versions. However, there are some differences. In the Chinese version, words such as “quan qiu”, “di tan”, “jie neng”, “ke chi xu” and “mei li” are among the top-10. Obviously, the government puts emphasis on the concrete actions that China are taking towards green development, and appeals to the public to join in the action. On the contrary, the achievements are the most stressed in the English version, for words such as “eco-environmental” and “environmental” are most frequently used.

### In the English version:

It has prioritized eco-environmental conservation and green development, promoted the comprehensive green transformation of economic and social development, and achieved modernization based on harmony between humanity and nature.

Wonders have been accomplished in eco-environmental protection and green development, and great strides have been made in building a beautiful China.

It can be concluded that the government is trying to call on the public to adjust to a low-carbon lifestyle in example 1. In example 2, industries are appealed to take part in green transformation. In the Chinese version, the aim of the white paper is to publicize the government's strategic decision on green development, and call on the public to join hands to achieve it. Conversely, great contributions or achievement that China has made are presented in the English version. It aims to spread China's national image globally. Both versions lay different focus.

#### 4.3.2. The Comparison of Adjective Collocations in Both Versions

The word "green" is the most frequently used in both versions. Therefore, it is selected for analysis of collocations in the two versions. The collocations of it in the Chinese version are as follows:

**Table 10.** The Collocations of the Word "Green" in the Chinese Version

Collocate	Frequency
development	77
Belt and Road Initiative	14
shopping malls	10
credit	7

In terms of collocations, there are great differences in the two versions except for the word "development". Words or phrases "Belt and Road Initiative", "shopping malls" and "credit" are frequently collocated with "green" in the Chinese version. However, in the English version, "product" and "transformation" are often collocated with it. It can further explain that the Chinese version focuses on instruct the public of the country's policies and strategies while the English version concentrates on the communication of a positive national image.

## 5. CONCLUSION

This study focuses on China's national image in the white paper *China's Green Development in the New Era*. Based on a self-built corpus, the distribution of attitudinal resources has been analyzed. In general, positive attitudes have been conveyed. By further subdivision, judgmental resources account for the most, followed by appreciation and affect resources. Among the judgement resources, capacity and tenacity take up a large proportion. Under appreciation resources, social-valuation far exceeds composition and reaction, and the positive concepts take up the dominant place. Within affect resources, the proportion of inclination is the highest, followed by happiness and satisfaction. In conclusion, the national images of openness, inclusiveness, people-orientation, win-win cooperation, and hard work have been circulated by the English version of the white paper respectively through the attitudinal system.

In addition, different emphasis has been identified through the comparison between the English and Chinese versions. The English version focuses on external publicity functions, aiming at the communication of China's positive national images. It contributes greatly to China's international status, and is a vehicle to make China's policies as well as strategies transparent to foreigners. The

core of the Chinese version is making the Chinese familiar with the country's policies, and strengthening national cohesion and confidence. Both two versions have its own merits and functions.

Various strategies and approaches to circulating national images have been found by studying the white paper on a lexical and syntax level. This study can aid in formulating new strategies of China's national image communication and offering guidance to some extent. Besides, the comparison between two versions provides a brand-new insight into country's internal and external publicity.

However, subjectivity can not be thoroughly avoided in terms of annotation of sentences in the analysis of attitudinal resources distribution. There might be margin of error to some extent. Additionally, this study is limited to the size of the sample. The subsequent research will collect more comprehensive samples and expand to other fields with regard to national image communication.

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