

A Corpus-based Discourse Study of Sustainability in the Chinese English-language Press Across 2013 and 2024

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Abstract

Sustainability is a major global concern in this era of heightened climate change awareness, yet its discursive production in China's official media remains underexplored. Therefore, this article conducts a diachronic corpus-based study of the discourse of sustainability represented in *China Daily*. The corpus is divided into two periods: from 2013 to 2018 and from 2019 to 2024. The findings from the data of these two periods indicate that China has consistently been an active participant in sustainability, with the economy serving as its key engine. Compared to the first period, in which domestic sustainability issues were the main concern, the second period gives greater prominence to international sustainability. During this transition, China's focus has gradually shifted from domestic reform to a global orientation, and its image has evolved from an active practitioner to a regional leader in sustainability issues. It is suggested that China may further integrate social and environmental dimensions to present a more holistic narrative of its understanding and actions in sustainability.

1. Introduction

Sustainability is far more than a jargonistic buzzword scattered throughout societal and organisational discourse (Else, et al. 2022). It has emerged as a foundational principle for global development, particularly as human beings are confronted with the complex and multifaceted challenges arising from the climate crisis. Indeed, understanding and effectively narrating sustainability is a key component to achieving the United Nations' 2030 Agenda and its seventeen Sustainable Development Goals (SDGs). Against this backdrop, the current investigation focuses on the discursive representation of sustainability in the Chinese English-language media outlet *China Daily* (hereafter CD). The study employs a corpus-based discourse approach along with topic modelling to explore the major focuses of CD's discourse on sustainability and its diachronic trajectories over time. This exploration is significant as it

contributes to a clearer understanding of China's interests and priorities as well as the nation's evolving role in global sustainable development.

While numerous studies have examined sustainability in international contexts (e.g., Ghosh and Boykoff 2019), research on Chinese media coverage remains relatively limited. Previous studies have investigated various stages of Chinese sustainability communication (Zhang, et al. 2022; Liu, et al. 2018) but have focused upon the period up to, and including, 2015. None of the existing research covers the pivotal period since the 18th National Congress of the Communist Party of China. By examining sustainability news reporting throughout this defining era, this study illuminates both China's contemporary and evolving perspective and self-portrayal regarding sustainability.

Three research questions will be addressed: (1) What are the main topics reported by Chinese media between 2013 and 2024? (2) What are the diachronic changes in the representative topic words? (3) What are the diachronic changes in China's image in the coverage of sustainability?

2. Literature review

Sustainability can be traced back to the German word *Nachhaltigkeit* (sustainability), which dates to the 17th century, when European countries faced a timber crisis caused by excessive deforestation (Grober 2007). However, the original notion of *sustainability* has gradually evolved into that of sustainable development in the late 20th century due to the worsening global climate, the limitations of environmental resources, the pervasiveness of social injustice resulting from global disparities (Huang 2024). Besides these immediate environmental and social pressures, the modern focus on sustainability can be attributed to the efforts of the United Nations since the 1970s. In the widely known 1987 Brundtland Report, *sustainable development* was defined as “development that meets the needs of the present generations without compromising the ability of the future generations to meet their own needs” (1987, 43). In 2015, the United Nations launched Agenda 2030 to formulate action-focused 17 SDGs, thereby providing a common framework for evaluating the sustainability of global development (Fleurbaey, et al. 2018). Presently, sustainability and sustainable development are seemingly used interchangeably in academic discussions and prevailing discourse (Ngai 2020). In terms of content, sustainability has been summarized as people, planet, and profit within the so-called “three pillars framework” (Purvis, Mao and Robinson 2019), though this framing was subsequently criticized (Adams 2006)

In the past decades, sustainability has been extensively studied across diverse disciplines, as it is visible in the domain of economy (Xu and Song 2025; Munteanu, et al. 2024), arts (Power 2021), technology (Drucker 2021) and notably, communication and discourse studies (Näyhä

and Wallius 2024; Angst and Strauß 2023). In these domains of communication and discourse, sustainability is considered a social construct constantly negotiated through discursive practices across various modes, genres, and registers. Considering the influence of news media to normalise, reproduce, and perpetuate ideological ways of speaking and being (Van Dijk 1988), the present study interrogates how a major media outlet in China discursively constructs sustainability and how the representation of sustainability has shifted in recent history.

3. Data and method

3.1 Corpus data

To build the sustainability corpus, we used *sustain** to extract all relevant articles from *China Daily* (CD) through the electronic database LexisNexis. CD is a national English-language daily newspaper, and it is the only Chinese newspaper that effectively enters the international media landscape (Zhu and Wang 2021, 125). The time frame under analysis is from 01 January 2013 to 31 December 2024. The data collection focuses on the decade following the 18th National Congress of the Communist Party of China.

After cleaning the corpus to remove duplicate articles, the final corpus is comprised of 35,336 newspaper texts and 1,047,563 tokens (Table 1). To explore the diachronic changes of sustainability representation in CD, the corpus is further divided into two periods: period 1 (January 1, 2013 - December 31, 2018) and period 2 (January 1, 2019 - December 31, 2024). This division is made for the following reason. The first was a more active period of publication, while the number of publications stabilised in the second (Figure 1). Thus, this division enabled investigation of an initial period of heightened attention with a second period of stability in order to highlight diachronic change in the discourse space.

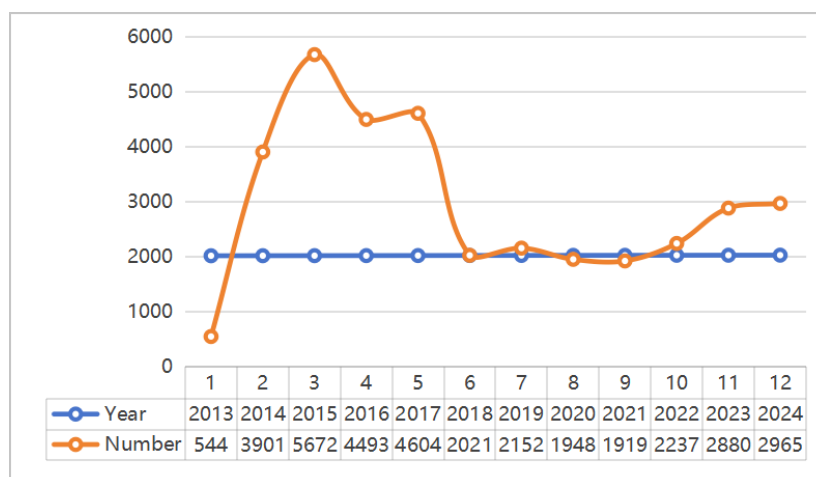


Fig. 1: The number of reports per year

	Period 1 01/01/2013–31/12/2018	Period 2 01/01/2019–31/12/2024	Total
News texts	21,235	14,101	35,336
Tokens	493,879	553,684	1,047,563

Tab. 1: Details of the corpus

3.2 Methodology

We adopt a corpus-based discourse approach that combines quantitative and qualitative analyses (Baker, et al. 2008). The application of corpus tools is particularly prevalent and productive in news discourse research (Li and Zhao 2025; Nguyen and Clancy 2025; Elsoufy 2024; Wei 2023; Huan and Deng 2021). In terms of national image interpretation, discursive news values analysis (DNVA) is applied because discursive news values are intertwined with ideology (Bednarek and Caple 2017; Van Dijk 1988), and ideology helps shape the national image (Liu 2002). In this study, we apply the DNVA framework proposed by Bednarek and Caple (2017), which includes eleven news values: Aesthetic Appeal, Consonance, Eliteness, Impact, Negativity, Personalisation, Positivity, Proximity, Superlativeness, Timeliness, and Unexpectedness (Dahl and Fløttum 2017, 125).

Additionally, the current study integrates *topic modeling* and corpus analysis techniques of *collocation* and *concordance*. Topic modeling refers to a family of generative probabilistic models, among which the most commonly implemented is Latent Dirichlet Allocation (LDA) (Jaworska and Nanda 2018). Therefore, the built-in LDA model in the KH Coder is employed for topic generation in the present investigation (Liu 2023). Collocation identifies the frequent co-occurrences of words, while concordance presents all instances of word co-occurrences (Baker 2006). Both methods enable researchers to detect additional linguistic features that may not be captured by standard content analysis (Touri and Koteyko 2015).

To clarify, our analysis was composed of three steps. First, we used the KH Coder tool to identify prominent topics within the sustainability corpus. In the second step, lexical items deemed salient, meaningful, and representative of the discourse were selected for further analysis through corpus techniques of collocation and concordance analysis. The data were then analyzed through the lens of the DNVA framework (Bednarek and Caple 2017).

4. Major findings

4.1 Main topics

The topic modeling process identified 8 representative topics on sustainability between 2013 and 2024. These include Topic 1: Innovation-driven development, Topic 2: Environmental protection, Topic 3: Inclusive economic growth, Topic 4: Market-oriented industrial development,

Topic 5: Global cooperation, Topic 6: International agenda, Topic 7: China's commitment, and Topic 8: China's action. These eight topics are reflected in the 20 most relevant keywords, presented in the following sections in the form of word clouds in which the size of each keyword indicates its prominence in the topic. In terms of content, the eight topics can be categorised into four groups: “development orientation” (Topic 1 and Topic 2), “economic reform” (Topic 3 and Topic 4), “international solution” (Topic 5 and Topic 6), and “China's contribution” (Topic 7 and Topic 8). In general, the CD's reporting on sustainability discusses domestic economic restructuring as a driver of sustainable development while also engaging with the international sustainability consensus and agendas. The following discusses each topic category.

4.1.1 Development orientation

The first topic category, “development orientation,” is related to the modern understanding and application of sustainability, which emphasizes the balance between economic growth, social development, and environmental protection (Huang 2024). This category comprises two topics: Topic 1: Innovation-driven development, and Topic 2: Environmental protection, as shown in Figure 2.

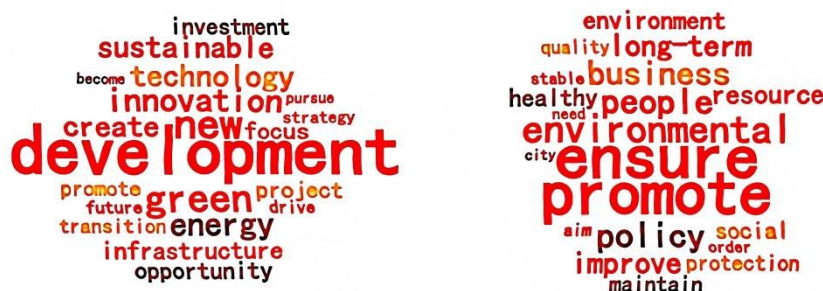


Fig.2: Word clouds of the topic category *development orientation*

As the word cloud reflects, Topic 1, Innovation-driven development, reflects a discourse of development propelled by technological innovation and green transformation, as evidenced by topic words such as *development*, *new*, *green*, *innovation*, and *technology*. It is a topic that highlights “sustainable” development (Zhou, et al. 2021, 174), which demonstrates that the “quantity-based” unsustainable development model should be replaced by “quality-based” green development (He 2024). That is, the discourse advances innovation to empower sectors developing new-quality productive forces, such as new energy, to become engines of economic growth. Topic 2, Environmental protection, emphasises the necessity of environmental protection for maintaining social stability and promoting long-term human well-being, as

demonstrated by topic words such as *environmental*, *environment*, *protection*, *ensure*, *promote*, *healthy*, and *stable*.

4.1.2 Economic reform

The second topic category, economic reform, presents the economy as China's sustainability engine, encompassing Topics 3: Inclusive economic growth, and 4: Market-oriented industrial development, as indicated in Figure 3.



Fig. 3: Word clouds of the topic category *economic reform*

Topic 3: Inclusive economic growth outlines a vision of a sustainable economy that is both structurally balanced and globally beneficial. This is reflected in key topic words such as *economic*, *economy*, *growth*, *balanced*, *inclusive*, *world*, *share*, and *help*. Domestically, China's economy shifts from high-speed growth to high-quality growth, with its transition to development narratives such as “new normal” (Zhang 2023, 95). Thus, the country strives to build an *inclusive* and *balanced* economy through a series of economic reforms. Internationally, China is further aligning with the global economic system (Zhang, et al. 2025), actively fulfilling its commitment to advancing global economic growth and ensuring that its achievements are shared with the international community.

Topic 4, Market-oriented industrial development, focuses on practical industry actions, financial flows, and the economic mechanisms that support sustainability objectives. This topic is evidenced by topic words such as *market*, *industry*, *government*, *company*, *sector*, *role*, *boost*, and *support*. In the context of high-level economic system reform (Zhang, et al. 2025), there is a need to build a fair and sustainable economic system that fully leverages the market's fundamental role in resource allocation. In this framework, the government is expected to take the role of ‘facilitator’ to stimulate the internal driving force and innovative vitality of business entities, thus cultivating a high-level market system mechanism (Chi 2012). Under this

mechanism, various market entities can be supported and served, including companies, sectors, and industries. These governmental aims are evident in the CD discourse.

4.1.3 International solution

The third topic category, international solutions, revolves around two topics related to global responses to sustainability: Topic 5: Global cooperation and Topic 6: International agenda (Figure 4).

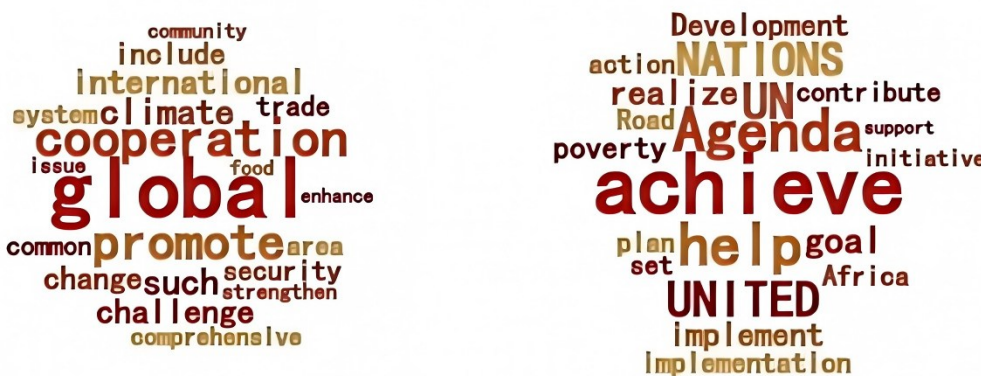


Fig. 4: Word clouds of the topic category *international solution*

Topic 5: Global cooperation indicates a discourse that frames sustainability as an objective requiring worldwide collaborative efforts. It is represented by topic words such as *global*, *international*, *community*, *cooperation*, *enhance*, *promote*, and *strengthen*. Nowadays, international relations are becoming increasingly complex due to unprecedented changes in the global economic and political landscape and the lasting impact of the COVID-19 pandemic (Yang and Wang 2023). However, as human beings are confronted with severe global challenges such as climate change and food security, the discourse in CD projects global cooperation as the only way to preserve long-term sustainability for future generations.

Topic 6: International agenda, reflects a discourse that centres structured international frameworks and action plans established to advance global sustainability, which is represented through keywords such as *UN*, *United*, *Nations*, *set*, *Agenda*, *initiative*, and *plan*. As previously noted in Section 1 and Section 2, Agenda 2030 set by the United Nations provides a common framework for evaluating the sustainability of global development and its multidimensional achievements (Biggeri, et al. 2023) and includes the aforementioned SDGs, which serve as guidelines to address environmental and social problems that have emerged in the Anthropocene (Fleurbaey, et al. 2018). The discourse also reflects initiatives such as China's Belt and Road Initiative (BRI). The initiative involves 20 of the world's 27 low-income countries,

as well as 45 of the world's 55 low- and middle-income countries. It is regarded as the most ambitious infrastructure project and the largest project of the century (Schulhof, et al. 2025). These frameworks lay a foundation for global action, enabling coordinated, effective efforts across the international community. It is, thus, unsurprising that the CD discourse of sustainability would aim to highlight these significant international and national initiatives.

4.1.4 China's contribution

The fourth topic category, China's contribution, consists of Topic 7: China's commitment and Topic 8: China's action (Figure 5), both of which indicate a discourse that emphasises China's role in the promotion of sustainability.

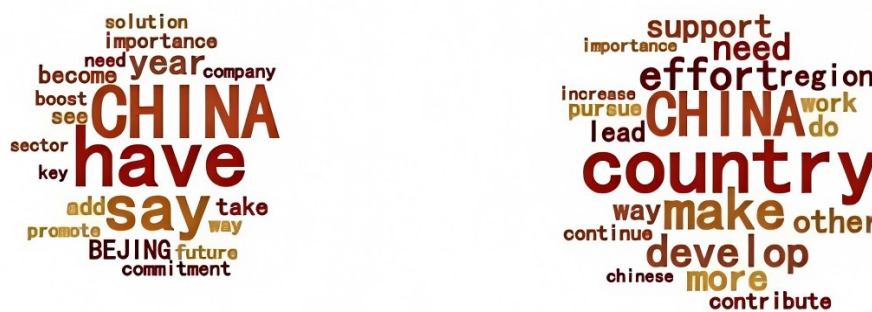


Fig. 5: Word clouds of the topic category *China's contribution*

Topic 7: China's commitment refers to China's commitment to sustainability at the macro level, which is evidenced by keywords such as *China*, *Beijing*, *have*, *say*, *add*, and *commitment*. For instance, as early as March 2016, China's 13th Five-Year Plan committed to actively implementing the Agenda 2030 and promptly aligning with its SDGs, so as to achieve higher-quality, more sustainable development (Biggeri, et al. 2023).

In connection to Topic 7, Topic 8: China's action presents China's practical actions to support sustainable development at home and abroad. It is demonstrated through words such as *China*, *effort*, *support*, *contribute*, *country*, *other*, and *nation*. Generally, the discourse suggests China not only pursues efforts in domestic sustainable development but also leads and contributes to the sustainable development of other developing countries and regions. For instance, it has promoted the high-quality development of the BRI and fostered new drivers of sustainable development by forming more than 3,000 cooperation projects and creating hundreds of thousands of jobs for countries along the route (Xiao 2025, 44). Again, the discourse of *CD* constructs China as active agent of international sustainability.

4.2 Analysis of selected topic words

Informed by the macro analysis of topic modelling and their associated topic words, three representative topic words were chosen for detailed analysis: *sustainability*, *environment*, and *economy*. Firstly, the topic word *sustainability* was picked for its clear representativeness of the research topic. Additionally, the topic word *environment* in Topic 2 and the topic word *economy* in Topic 3 were selected because they represent two main dimensions of sustainability. As noted in Section 3, a collocation analysis was conducted for each of the three chosen topic words across the two periods. In the process, Log Dice was utilised as the metric for identifying collocations and for comparing collocations across corpora of different sizes (Rychlý 2008). Specifically, a Log Dice threshold of ≥ 7 was employed to focus on those collocations with the strongest association (Feola and Jaworska 2019). The collocation window was adjusted for each topic word in order to draw attention to particular discursive tendencies of the three lexical items.

4.2.1 Analysis of sustainability

To better uncover the semantic collocation of *sustainability*, the study focuses on the lexical collocates of *sustainability* in the L1 position (i.e., the first position to the left) with Log Dice scores ≥ 7 . In other words, the focus was upon how sustainability is modified and evaluated in the discourse of CD first between 2013-2018 and later from 2019-2024.

Period 1 2013–2018		Period 2 2019–2024	
Collocates	Log Dice ≥ 7	Collocates	Log Dice ≥ 7
environmental	10.59	environmental	10.68
urban	8.43	Debt	10.27
global	8.17	Fiscal	8.48
debt	7.64	Financial	7.93
Social	7.40	Global	7.29
Fiscal	7.35	corporate	7.04
corporate	7.32	--	--

Tab. 2: Top L1 collocates of *sustainability*

As shown in Table 2, an analysis of these collocates in context reveals that Period 1 is dominated by a narrative of environmental governance and is complemented by economic and social sustainability. The prominence of *environmental* indicates that sustainability reporting is mainly conceptualised through environmental protection with environmental action proposed at various geographic scales (*urban* sustainability, *global* sustainability) from localised to

transnational actions. The attention to urban sustainability can be illustrated in the following example:

- (1) But Chinese cities still have much to do to improve sustainable development. Only Hong Kong ranks among the top 20 for **urban sustainability** competitiveness. Sustainable development capacity, which refers to a city's soft capacity to improve and sustainably satisfy residents' long-term social wellbeing, is of great significance to urban competitiveness. (30/10/2018)

Example (1) denotes the urgency of embracing *sustainability* in urban management constructed in the discourse. Here, the adversative conjunction *but* limits adverbs *still* and *only* to acknowledge existing gaps between Chinese cities and international cities. The lack of Chinese cities' ranking in the global urban sustainability index has potentially prompted China to strengthen city resilience, thereby raising local residents' happiness through improved sustainability efforts.

The collocates of *sustainability* in Period 2 point to the significant shift toward economic sustainability. Though *environment* remains the predominant collocate for sustainability, the sharp rise in *debt* and the slight ascendancy of *fiscal* and *financial* concerns consolidate the prominence of economic-fiscal concerns in the discourse. In the case of *debt sustainability*, its Log Dice value increased from 7.64 to 10.27, approaching the bonding of *environmental sustainability* (10.68). A close inspection of its concordance reveals that *debt sustainability* is mainly related to BRI, as shown in the following example:

- (2) More important, contrary to Western propaganda, no country has fallen into a debt crisis as a result of its participation in the Belt and Road Initiative. In fact, **debt sustainability** is of major importance to China. (23/12/2021)

Example (2) shows that CD employs the defensive rhetorical strategy "no country has fallen into a debt crisis" to deal with Western scepticism on BRI's potential financial burden on participating countries (World Bank 2019). In addition, by asserting that *debt sustainability is of major importance to China*, the media underscores its priority in their discourse, thereby producing the elevated position of economic sustainability in Period 2.

4.2.2 Analysis of *environment*

This study of the topic word *environment* focuses on collocates within a span of five words to the left (L5) and right (R5). Given space limitations, Table 3 only presents the top 15 collocates by statistical significance.

Period 1 2013–2018		Period 2 2019–2024	
Collocates	Log Dice ≥ 7	Collocates	Log Dice ≥ 7
protect	10.68	business	10.67
protecting	9.77	protect	10.41
create	9.68	ecological	10.16
natural	9.55	protecting	9.87
resources	9.46	protection	9.67
society	9.33	healthy	9.60
business	9.26	create	9.60
healthy	9.24	improving	9.60
protection	9.24	improve	9.57
institute	9.23	conducive	9.51
social	9.05	institute	9.37
development	8.97	stable	9.33
sustainable	8.91	marine	9.23
living	8.89	society	9.22
favorable	8.79	favorable	8.95

Tab. 3: Top 15 collocates of *environment*

As shown in Table 3, the media discourse in Period 1 constructs a narrative in which environmental protection serves as the foundation for sustainable development. It is represented by high-ranking keywords such as *protect*, *protecting*, *natural*, and *resource*, which frame the environment as a vulnerable object in need of preservation (see example 3). Meanwhile, the purpose of environmental protection is fully aligned with ‘people-centred’ needs, as evidenced by collocates such as *society*, *social*, and *living*. This suggests that in Period 1 that environmental quality is constructed as a prerequisite for long-term development and for the satisfaction of citizens.

- (3) China has reiterated its policy of protecting resources and the **environment for sustainable development**. (01/11/2013)

Example (3) uses a direct quotation from an official of the Ministry of Commerce to reveal China’s responsible environmental governance policy. Here, the verb *reiterate* discursively

conveys continuity and resolution, thereby enhancing the credibility and authority of the statement and reflecting China's long-term determination to protect natural resources and the environment.

The discourse of period 2 indicates a strategic integration of economic and environmental narratives. In terms of economic growth, the metaphorical extension of *environment* becomes a dominant feature. It is interesting that the word *business* has risen from rank 7 to rank 1. Such a shift suggests CD's extension of the environment from a primarily physical one in Period 1 to an economic one in Period 2. Additionally, the collocational profile reveals a semantic preference for positive evaluative terms such as *conducive*, *stable*, and *favorable*, which form an enabling policy support for the business environment. Nonetheless, the close combination of the market economy with the environment implies a duality in the discourse which emphasises both the wellbeing of the market environment and the physical environment. The appearance of ecological conservation suggests China's view of integrating the environment into the layout of national sustainability, as in the following:

- (4) With 17 years of fishing experience, Xu attributes the good harvests to the improving ecological environment and strengthened conservation efforts. To ensure the **sustainable development** of Bosten Lake's fishery, local authorities have implemented a range of measures, such as managing and controlling pollution at its source, separating pollutants from the water, releasing fish into the lake and imposing seasonal fishing bans. (10/10/2023)

The quotation in example (4) comes from a fisherman. He expresses appreciation for the Chinese government's achievements in building toward an ecological civilisation. This reflects the implementation of the national vision of building an ecological civilization system and building towards modernisation featuring harmonious coexistence between humanity and nature proposed at the Fifth Plenary Session of the 19th Central Committee. The shift from *protecting* to *improving* in the discourse frames environmental action not merely as safeguarding against resource loss but as an active action that yields dual dividends: tangible economic benefits (*good harvests*) and natural capital, thereby constructing sustainability as a synergistic achievement.

4.2.3 Analysis of economy

Similar to Table 2, Table 4 shows the top 15 (L5 to R5) collocates of the word *economy* over the two periods.

Period 1 2013–2018		Period 2 2019–2024	
Collocates	Log Dice ≥ 7	Collocates	Log Dice ≥ 7
world	11.08	Digital	11.05
Chinese	11.06	China's	10.64
global	10.79	circular	10.49
China's	10.75	Chinese	10.28
growth	10.49	global	10.27
sustainable	10.24	blue	10.26
world's	10.01	growth	10.23
will	9.89	world	10.16
development	9.76	healthy	9.86
balanced	9.66	sustained	9.85
second-largest	9.65	recovery	9.84
green	9.53	platform	9.83
open	9.46	green	9.68
new	9.36	development	9.67
inclusive	9.36	sustainable	9.59

Tab. 4: Top 15 collocates of *economy*

In Period 1, the media coverage centres on China's commitment to economic restructuring aligned with sustainability, particularly within a global framework. This is evidenced by adjectives such as *sustainable*, *balanced*, *open*, *new*, and *inclusive*. Meanwhile, this adjustment is usually posed in a global context. As *economy* was mostly associated with nouns and adjectives illustrating the geographic scope and belongings, such as *world*, *Chinese*, *global*, *China's*, and *world's*. Take *world* as an example:

- (5) Despite being **the second-largest economy in the world**, China is still trapped in a low-skill equilibrium, in which most enterprises employ semiskilled workers who produce low-end goods or provide comparatively low-quality services. Since this economic model cannot ensure sustainable growth, the government has been taking measures to expedite high value-added production. (11/07/2014)

Example (5) demonstrates the necessity of China's economic reform by highlighting the gap between its economic quantity and quality. It adopts a juxtaposition strategy, where the concessive marker *despite* contrasts China's *second-largest* economic status globally with its *low-skill*, and *low-end* reality. The metaphorical use of the verb "trapped" also implies a state of stagnation. By depicting the economy as "stuck," CD argues that the previous growth model is

“unsustainable.” This discourse serves to validate the Chinese government’s restructuring policy that aims to promote economic development while ensuring sustainable growth.

Period 2 witnesses a discursive shift towards a developing sustainable economy, where sustainability is embedded in economic forms. Specific modifiers such as *digital*, *circular*, *blue*, *platform*, and *green* represent high-quality economic forms driven by technological innovation. The development of these sectors suggests a discourse which asserts sustainability is no longer just a slogan to adopt but a practice to pursue. Such a shift is crucial for the post-pandemic context in which *growth* and *recovery* have become central concerns. Developing such sustainable economies can not only contribute to economic recovery but also achieve the targets of the 17 SDGs. Take the circular economy as an example:

- (6) The **circular economy** is our only hope of achieving the 17 UN Sustainable Development Goals and ensuring humanity’s long-term survival. If great powers must compete, it is here that they should be doing it. (04/08/2021)

Example (6) demonstrates a strong appeal for developing a circular economy in the practice of sustainability. Here, the exclusive adverb “only” creates a sense of urgency, framing the circular economy as the sole path to achieving the SDGs and human survival. Moreover, the emphatic pattern “it is [...] that [...],” along with the obligational modal verb “should,” creates a sense of responsibility, which reframes the narrative of “great power competition.” It is the moral race for sustainability that major countries ought to seek, thereby legitimizing the development of the circular economy and elevating it to an imperative for global leadership. Thus, the CD discourse frames economic reform and action as central to sustainability efforts.

4.3 The national image of China

National image is the abstract cognition of a nation’s actions, characteristics, spirit and the public’s overall evaluation and interpretation (Xue, et al. 2015, 1258). It contributes to national development while fostering cooperation within international systems (Zhu, et al. 2022). The topic analysis in section 4.1 demonstrates a discourse that presents China as playing an indispensable role in promoting sustainability. Therefore, this section focuses upon China’s national image and its diachronic changes in official sustainability coverage from 2013 to 2024. To further explore China’s national image, this study integrates DNVA to identify news values in China’s sustainability discourse.

A list of the top 35 collocates of China was compiled within the span from L5 to R5, using Log Dice as the association metric. According to Table 5, and with DNVA as interpretive lens, the news value of Positivity, Consonance and Eliteness are all present across the two periods. In

terms of differences, Period 1 is dominated by Positivity, while Period 2 maintains Positivity as a baseline but strengthens Eliteness. This shift projects China's image as a cooperative reformer in sustainability during the first period, and as a global leader in the second.

Period 1 2013–2018		Period 2 2019–2024	
Collocates	Log Dice ≥ 7	Collocates	Log Dice ≥ 7
Is	11.20	Has	11.47
Has	11.14	Is	10.84
Said	10.94	Said	10.66
Will	10.85	Will	10.57
sustainable	10.70	Sustainable	10.45
growth	10.66	development	10.42
development	10.49	growth	10.10
economic	9.89	can	9.85
can	9.81	cooperation	9.70
sustain	9.67	economic	9.70
world	9.50	countries	9.64
sustainability	9.38	global	9.54
economy	9.29	are	9.50
have	9.29	been	9.49
cooperation	9.28	sustained	9.34
should	9.24	sustain	9.33
achieve	9.20	international	9.32
been	9.14	world	9.32
sustained	9.11	sustainability	9.32
continue	9.07	should	9.27
countries	9.07	achieve	9.23
needs	9.03	have	9.21
global	9.01	Africa	9.20
help	8.88	market	9.05
important	8.87	US	9.04
investment	8.86	continue	9.01
business	8.80	new	8.95
work	8.77	other	8.94
years	8.76	made	8.94
would	8.76	help	8.87
country	8.72	Goals	8.87
made	8.67	work	8.87
reforms	8.66	security	8.86
international	8.64	energy	8.85
US	8.62	Bank	8.84

Tab. 5: Top 35 collocates of *China*

In the first period, pointers to Positivity – such as *sustainable*, *growth*, *development*, *investment*, *will*, *should*, *would*, *work*, *reforms*, *help*, *international*, *cooperation* and *global*, – indicate

China's emphasis on enacting sustainability, thereby projecting itself as an active participant that advances sustainable development and integrating sustainability into its national agenda by means of domestic reforms and international cooperation. Meanwhile, pointers to Consonance, including *has*, *been*, *sustain* and *continue*, reflect China's efforts to pursue reforms that advance sustainable development. A pointer to Eliteness is realised through the collocate *US*, highlighting China's engagement with a major Western power and projecting its sense of responsibility in building a sustainable future through Sino-American collaboration.

- (7) History shows that opening-up is a viable way for **China** to promote further domestic **reforms** and sustainable economic development, and also an important means to achieve new progress in China's modernization drive. (14/11/2017)

Example (7) illuminates China's attempt to combine *domestic reforms and sustainable economic development* with the global sustainability objectives through the implementation of *opening-up*. The combination is supported through historical reference in the discourse (*history shows*) and through future-oriented phrasings (*an important means to achieve new progress in China's modernization drive*). Therefore, the example illustrates a discourse that attempts to align China's self-driven sustainability efforts with its goal of modernisation, thereby shaping its national image internationally as one that incorporates global norms into its long-term strategy.

In the second period, the persistence of sustainability in the coverage is evident in collocates such as *sustainable*, *growth*, *development*, *security*, *energy*, *cooperation*, *global*, *international*, *Goals (SDGs)*, which again point to Positivity, as well as collocates such as *has*, *been*, *sustain*, and *continue* point to Consonance. Eliteness is encapsulated in the key players in global sustainability governance, including countries or areas such as the *US* and *Africa*, as well as the organisation *Bank* (The People's Bank of China). The most important evolution is the presence of *Africa*. While the only explicitly named nation state that appears as a collocate of China is the *US*, the emergence of *Africa* as a new collocate signals China's strategic alignment with developing nations. This discursive change reflects China's commitment to both its relations with Western major powers and its engagement with additional countries (Zhang and Li 2026), thus framing its leadership within a broader context of South-South cooperation and global balance for a shared future. Notably, the words that have risen in rank – *cooperation* (from Rank 15 to Rank 9), *global* (from Rank 23 to Rank 12) and *international* (from Rank 34 to Rank 17) –, as well as the appearance of *Goals (SDGs)* indicate China's emphasis on achieving international sustainability, discursively framing China as a regional coordinator and a global leader in sustainable development in Period 2.

- (8) In addition, **China** is assisting **Africa** in developing sustainable agriculture, improving its food security risk management systems and establishing an emergency response mechanism. It is carrying out cooperation on agricultural scientific research and technological transfer to support African countries implementing the Comprehensive Africa Agriculture Development Programme, including African Union-led food security projects and activities. (10/11/2020)

Example (8) highlights China's growing leadership in promoting development across the Global South. Nowadays, countries in the Global South are important co-creators in international relations. By offering strategic assistance mainly through *Comprehensive Africa Agriculture Development Programme*, China has incorporated the Global South into a broader vision of global sustainable development. This practice of *developing sustainable agriculture* indicates the discursive framing of China's image has evolved from a "domestic sustainability cooperator" to a "global sustainability leader," representing China's global mission as a responsible major country (Ren 2025).

5. Discussion and conclusion

This study has combined quantitative and qualitative methods to investigate the narratives of sustainability by *China Daily* from 2013 to 2024. Underpinned by a corpus-based method, we used the corpus tool KH coder to generate 8 representative topics, which were categorised into four groups: "development orientation" (Topic 1 and Topic 2), "economic reform" (Topic 3 and Topic 4), "international solution" (Topic 5 and topic 6), and "China's contribution" (Topic 7 and Topic 8). Results indicate that CD's media reporting and discursive framing of sustainability is closely related to all-around transformation with domestic economic restructuring as its main engine.

Furthermore, we carried out collocation analysis of three selected words (*sustainability*, *environment*, and *economy*) across the two periods of 2013-2018 and 2019-2024. The analysis reveals CD's discourse has shifted from environmental sustainability to economic sustainability and from domestic sustainability to international sustainability. In the transformation, economic factors, including debt sustainability, business environment, and economic recovery, are emphasised within the discourse. This finding aligns with the previous investigations which similarly suggest that economic concepts are preferred in the newspaper *People's Daily* (Zhang, et al. 2022).

Finally, we explored China's national image in sustainability through the lens of news values. As demonstrated in Section 4, CD's representations of China's sustainability foreground the

news values of Positivity, Consonance and Eliteness across both periods. However, while Positivity is emphasised in the first period, Period 2 also strengthens the news value of Eliteness. Overall, this analysis reveals that China is discursively framed as a responsible major power in promoting sustainability. The discourse also reflects a shift of China's image from an active participant to a global leader in addressing sustainability issues.

Importantly, news discourse underpins the construction and reconstruction of social reality. As shown in the current study, China's self-image in its mainstream media is portrayed as a proactive agent spearheading sustainability through economic transformation. However, in Western media, China is frequently portrayed as a country pursuing economic growth at the expense of the environment (Yang and Wang 2023) – two discourses clearly in conflict. Such representations in the West potentially fail to capture the comprehensive nature of China's sustainability efforts or the philosophical underpinnings guiding its policies. In response to Western media's stance, CD, as the official English-language media, produces a discourse that highlights the country's achievements in multiple aspects of sustainability.

In conclusion, this study has presented a diachronic analysis of sustainability discourse in the Chinese official press spanning 2013 to 2024. Since our data processing is limited by the corpus tools in terms of capacity and variety, future studies are encouraged to utilise more advanced computational linguistics methods to identify more complex and robust linguistic patterns.

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