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AI and corpora for interpreting: Case study on ChatGPT-5.5 Instant and SCIPPC applied on glossary building

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Dichiarazione del ricorso a strumenti di Intelligenza Artificiale (IA)

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A chi crede che nel mondo
ci sia ancora del buono.
Non ti conosco,
perché non dovrei fidarmi?

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摘要

本论文以人工智能为研究对象，通过案例分析探讨人工智能在国际环境外交中是否能为口译员提供应用，尤其是关于术语提取与术语表构建。论文的结构分为三部分。第一部分，首先将对欧盟、美国与中国之间的国际关系进行简述。该国家之所以被选，是因为它们在外交领域中带来了极大的影响。其次，还将介绍口译员在外交场合下的角色，以及他们在进行翻译当中面临的哪些挑战。第二部分，将描述口译员能使用的一些术语管理手段，包括术语学、术语编纂、口译研究中最有影响力的理论，以及语料库与人工智能。第三部分，将分析比较两个术语表。首先，术语是从 Speech Corpus of Interpreted Premier Press Conference 语料库提取的。第一个分析对象是通过半自动提取方式与术语编纂构建的。第二个分析对象则是通过 ChatGPT5.5 Instant 构建的。最终目标是确认 ChatGPT-5.5 Instant 在术语提取与术语编纂当中的应用。分析的焦点在于术语提取的过程与术语表构建的质量。

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Introduction

Economic, financial and environmental crises, wars, genocides. Now as in the past, international relations shape not only the global environment but arguably our everyday, influencing markets, policies and many more aspects of human life. As a matter of fact, international relations do not only involve states and supranational bodies such as the United Nations, but also smaller actors such as cities, which are involved in soft power dynamics (Kamiński et al., 2025; Nye, 1990). In this context, the triad US-EU-PRC can be considered quite important to analyse, as they are among the most influential and economically powerful entities in the world. One important aspect of relationships between these actors is probably the discourse around the environment.

In between these entities, interpreters have demonstrated to be playing an important part in maintaining international relationships, through their work in language services for diplomacy (Liu, 2023; Tipà, 2024). However, working as an interpreter in the diplomatic setting is far from being simple, as it entails issues regarding the role they play in this context and the challenges that come with it (Tipa, 2024; Zhang & Gao, 2023). In order to face such challenges, interpreters have access to an array of tools they can use, ranging from theoretical frameworks to more practical tools and technologies. This work mainly focuses on corpora and artificial intelligence (AI) applied in the creation of interpreting glossaries, another important tool interpreters can use in their preparation phase. Chinese and English were identified as a useful language pair to fill a gap in literature about Chinese interpreting learning and to further discuss the applications of AI in the realm of interpreting (Li & Wang, 2024; Moratto, 2024).

Some applications of AI in the field of interpreting have already been explored (see Fantinouli, 2025; Li & Wang, 2024). However, consensus on its usefulness in this context is still being debated. Some scholars argue that this technology can expedite international negotiations with ease through automatic translation (see Xia, 2025), while others take a more cautious approach, highlighting its limitations (see Fantinouli, 2025).

Through a literature review and a case study, this work explores the possibility of combining AI with corpora in order to access considerably large amount of data for the creation of interpreting glossaries (Gile, 2021; Li & Wang, 2024). The first chapter focuses on a general description of contemporary international relations between the US, the EU and the PRC (later referred to simply as China) and a more detailed one on the role interpreters play in this context as well as the challenges they face. The second chapter will provide a series of tools that

interpreters can use when providing their services, namely the most influential interpreting theories, the Functionalist Approaches, terminology and terminography, as well as corpora and AI. The third chapter will, instead, consist of a comparative analysis of two glossaries based on a corpus. Both were built using the high resource Chinese-English language pair, however, one was built using concordancers and terminographic online research, while the other was created with the assistance of ChatGPT-5.5 Instant. Final products can be viewed in the appendices at the end of this work.

1. International relations and interpreters

Interpreting services in the field of diplomacy are rendered necessary first and foremost by the mere fact that nations and institutions interact with each other. How this interaction evolves shapes the global context and consequently the knowledge and the attitudes an interpreter is required to have to perform their job in the best way possible.

This chapter will introduce the general dynamics among Chinese and Western institutions. It is important to highlight that what is defined as 'Western' actually refers to a plurality of subjects which, as it will be later explored, do not always share the same attitudes towards other actors and situations, and are usually recognised in the "Euro-American world" (Patel, 2026).

As the goal of this work is not to provide an extensive description and analysis of the history and current state of international relations and due to constraints of time and space, this chapter will focus specifically on dynamics regarding the environment and the fight against climate change, one of the most crucial global challenges, as well as the macro- and microlevel approaches China and EU have towards it. The role of the US will also be taken into consideration, as it influences China-EU relations. Finally, it will describe the pivotal role interpreters play in this kind of context (Liu, 2023; Tipà, 2024) and what kind of skills are required. This chapter is based on a literature review carried out through keyword research on google scholar and archives such as JSTOR and CNKI, as well as snowball sampling starting from the found articles.

1.1 International relations

Differently from those with the US, which have been characterised by a growing antagonism (Simón & Fiott, 2025), the relations between China and the EU can be considered ambiguous, due to the fact that the latter has labelled the former as a strategic partner, economic competitor, and systemic rival (Duggan et. al, 2025; Hamilton & Renouard, 2025). Through the years, this kind of dynamic has been characterised by alternating change and continuity in many subjects, climate change being one if not the strongest point of convergence (Feng, 2022; Men, 2025). The US is still an important participant in this interaction as it influences EU decisions regarding its relationship with China (Hamilton & Renouard, 2025; Simón & Fiott, 2025); were relations between the US and China to become friendlier, this work might prove useful in such diplomatic scenario as well.

1.1.1 The United States

As aforementioned, relationships between the US and China are characterised by an intensifying rivalry, which has pushed them to put a lot of effort into bringing other states and international institutions onside or preventing them from joining the other (Simón & Fiott, 2025). This competition has, consequently, pushed other countries such as India, Russia and Brazil to reject such dichotomy and to try to affirm their own ‘autonomy’ (Simón & Fiott, 2025).

According to Simón & Fiott (2025), thanks to its economic, technological and diplomatic importance, Europe represents a crucial playground or prize for the US and China, which has incentivised them to try to influence its policies in different areas. As a matter of fact, the US already has a significant influence over foreign policy of European countries (Simón & Fiott, 2025). As stated by Feng (2022), Europe and the US are linked by many factors such as ideology, shared history and culture, strong economic ties and most importantly military alliances. During the Cold War they established the North Atlantic Treaty Organization (NATO), which has helped solidify Western European countries dependence on the US (Feng, 2022). Feng (2022), then, continues arguing that since the end of the Cold War, Europe and the US have had more difficulties in maintaining their alliance, especially because the latter has since shifted its focus eastward and because important differences in principles and positions have eroded their relationship. Nevertheless, it can also be argued that between 2019 and 2025,

the US and the EU have also been trying to promote unity, as there were emerging concerns about “Western dependencies on China at a time when Beijing was subsidizing key industries, circumventing international trade rules to undercut Western companies, aligning with Russia, and challenging basic principles underpinning the international order” (Hamilton & Renouard, 2025). This has, thus, led both the EU and the US to identify common threats and to respond with China-focused policies in different fields, agreeing on “the need to preserve the liberal international order and to maintain the Indo-Pacific regional status quo of peace, freedom of the global commons, and relatively open markets” (Hamilton & Renouard, 2025). They tried to strongly reduce their dependence on China by using a series of policies revolving around the concept of "protect, promote, partner", which on the US side focuses on impeding technological and military advances in countries of concern, fostering innovation and maintaining the lead of the US in sectors concerning national security as well as the proposition to form broader support for these efforts, by building new alliances and partnerships, while strengthening the existing ones (Hamilton & Renouard, 2025).

Overall, despite these intents and initiatives, EU and US relations were hindered by competition, doubts, differences in priorities and other impeding factors, some of which have been the political transitions of 2024-2025, that have seen the beginning of Donald J. Trump’s second term, characterised by the rejection of his predecessor’s attitude towards Europe (Hamilton & Renouard, 2025).

1.1.2 China

Differently from what happened with the US, China-EU relations saw a burst in their development starting after the end of the Cold War and with the implementation of China’s reform and opening-up strategy, with Western Europe playing a major role in it and being an important economic and trade partner (Feng, 2022).

Ever since, China has been working on consolidating this relationship through various meetings, reiterating the importance of this partnership through the years (Feng, 2022) and “what begun as limited trade and diplomatic contact has developed into a dense network of exchanges” (Men, 2025). China has, thus, increasingly regarded the EU as an important partner, and the EU has also been paying more attention to China, especially because of its rise in power and economic strength (Feng, 2022), becoming “deeply interconnected economically, institutionally and strategically” (Men, 2025).

Nevertheless, in 2019 EU's perception of China has shifted. As a matter of fact, the latter has now become one of the world's largest economies and trading powers, leading the EU to rebrand it as a strategic partner, economic competitor and systemic rival (Duggan et al., 2025). Overall, Men (2025) argues that EU-China relations are defined by a dynamic of continuity and change:

> Continuity endures through institutional inertia, interdependence, and functional necessity. Both sides recognise the costs of rupture and the value of preserving engagement in at least limited form. Change, however, has reshaped the content and meaning of that engagement. What was once framed as partnership has been reframed as management; what was once an exercise in mutual learning has become a practice of mutual constraint.

1.1.3 The European Union

The US and China try to influence EU's policies through a variety of means, but how does the EU respond to this kind of influence? And what kind of actors play a role in this dynamic?

According to Simón and Fiott (2025), the EU aspires to preserve its autonomy from these two nations, by trying to assert more 'strategic autonomy' or 'sovereignty', which involves the capacity to create policies withstanding influence from external powers. Such an autonomy is "relative" and "contingent" (Simón & Fiott, 2025), as it relies on the ability of the most influential European actors to bind and unite all of Europe in its intents (Simón & Fiott, 2025). Simón and Fiott (2025) suggest that EU's autonomy depends on two factors: the efforts that the biggest European actors put into preventing and dispersing hostile alignment "through coercion, inducement or a combination of both" (Simón & Fiott, 2025), or 'wedging', and the "actor's attempts to maintain an ally's loyalty through positive inducements, negative sanctions or a combination of both" (Simón & Fiott, 2025), or 'binding'.

To reach EU's autonomy, Simón & Fiott (2025) argue that European countries should overcome two major obstacles. Firstly, resource limitations of individual countries are an important issue, which could be faced by gathering and sharing them, exerting a collective autonomy (Simón & Fiott, 2025). Secondly, to mobilise these resources would be a more difficult challenge, as "authority is shared unevenly between the EU and its 27 member states across different policy areas" (Simón & Fiott, 2025).

It begins to appear evident that not only European institutions but also individual countries play an important role in shaping diplomatic relations with the US and China. As a matter of fact, individual member states are relatively easier to influence than the EU as a whole. Moreover, it could also be said that the EU's two dominant powers, France and Germany, are the most important factor in binding intra-European actors and resist external influences (Simón & Fiott, 2025). Historically, these two nations together with other important members such as Italy, Benelux countries and Spain have given a massive contribution to European integration and unity, respectively with their strategic and economic capabilities (Simón & Fiott, 2025).

In this context, soft power as a means to influence internal and external actors can be quite relevant. It is no news that entities other than states can have a key role in international relations (Kamiński et al., 2025; Nye, 1990). As a whole, the EU can exert its influence through various initiatives in different sectors (B. Duarte & Ferreira-Pereira, 2022). As a matter of fact, soft power has always been one of the EU's specialties, sprouting from its cultural exchanges and its commitment to principles and science diplomacy (B. Duarte & Ferreira-Pereira, 2022). To name a few examples, between 2014 and 2020 science diplomacy has been promoted through fundings within the context of Horizon 2020[1], while the Erasmus Programme has allowed the EU to improve its relations with other countries such as Brazil and Russia (B. Duarte & Ferreira-Pereira, 2022). Conversely, the Belt and Road Initiative (BRI) has been a powerful tool for China to reinforce its political influence (B. Duarte & Ferreira-Pereira, 2022; Kamiński et al., 2025).

These initiatives are part of what constitutes a wider, multi-layered and more nuanced vision of international relations, that sees entities such as international organizations, multinational companies and non-governmental organizations actively participating in global dynamics (Kamiński et al., 2025). These and other stakeholders have at times both supported and hindered the EU's and the US' attempts to align in addressing China, shaping the current state of situation (Hamilton & Renouard, 2025). In 2025, a study conducted by researchers Tomasz Kamiński, Joanna Ciesielska-Klikowska and Michał Gzik found that, despite being under-researched, even subnational entities like cities are playing a crucial role in international relations. Through 'city diplomacy' they become international actors, developing new kinds of partnerships in different fields and networks sharing knowledge and responding to global issues

[1] An EU funding programme for research and innovation, that started in 2014 and ended in 2020 (European Commission, 2026)

(Kamiński et al., 2025). They not only act as a soft power tool for states in order to implement policies, but they also actively create new global management structures interacting with each other (Kamiński et al., 2025). The study was carried out by surveying 745 European cities, among which 292 established 474 cooperation agreements with Chinese partners, denoting the important degree of cooperation between these actors (Kamiński et al., 2025). Researchers also found that 383 European cities had established partnerships with China, with a strong increase in the 2000s with BRI being an important step (Kamiński et al., 2025). As a matter of fact, since its launch fostered by the central level, BRI has seen 146 European cities establish partnerships with China (Kamiński et al., 2025). City-to-city interactions resulted to focus mainly on economic and cultural aspects, followed by education, academic cooperation, sports, tourism and urban planning, while partnerships involving environmental issues are still relatively marginal despite global concerns (Kamiński et al. 2025). Finally, Kamiński et al. (2025) argue that:

> […] the EU could leverage the potential of cities to achieve its primary political goals towards China. They can provide an alternative communication channel for addressing shared challenges such as climate change, urbanisation and social inclusion, acting as 'contributors' to EU policy. They can transmit European ideas to local politicians in China through their dialogue with Chinese partners, even if disagreements or crises exist at the EU–China or member state–China level.

1.1.4 The environment

The previous sections have given a general introduction of who are the macro- and microlevel actors in the EU-China relationship, which is characterised by a strong ambiguity. Due to the EU's new perception of China, cooperation between these two entities still exists, however, competition has increased at the same time, making bilateral ties more complex (Feng, 2022). In this new context, the EU and China have changed approach towards some dimensions, such as politics, technology, industry and security, while they have managed to keep a certain degree of continuity towards others (Men, 2025). This research has found that among the latter, climate change is one of the most stable, as the EU sees it as an opportunity for collaboration and considers China to be indispensable in tackling it and protect biodiversity (Duggan, et al., 2025; Feng, 2022; Men, 2025).

The first step towards this collaboration was the United Nations Conference on the Human Environment in 1972, which was followed by the creation of an international treaty to combat climate change: 1992's United Framework Convention on Climate Change (UNFCCC) (Krishnakumar & Josukutty, 2024). Under this treaty, the EU was recognised as an Annex I country, meaning that it carried more responsibilities in terms of ambition and financial support than non-Annex I countries like China that were legally exempt (Duggan et al., 2025). In response to the UNFCCC, the EU accepted its role as a "leading" actor, while China mobilised the National Climate Change Coordination Group (Duggan et al., 2025; Krishnakumar & Josukutty. 2024).

1997 was marked by one of the two most important documents in climate change negotiations: the Kyoto Protocol (Duggan et al., 2025). It was the US rejection of this agreement that further pushed China's and the EU's unity through "their support of climate multilateralism and bilateral cooperation". (Duggan et al., 2025).

Another key factor in relations involving climate change were negotiations and dialogues that led to the 2015 Paris Agreement "by coordinating positions and bridging divides between developed and developing countries" (Men, 2025).

Such commitment to climate cooperation has since remained unchanged despite political tensions and other global challenges, such as US withdrawal from the Paris Agreement in 2017 and the Covid-19 pandemic, where both parties supported sustainable recovery (Duggan et al., 2025; Krishnakumar & Josukutty, 2024).

However, this dynamic was not free from internal conflicts. The 2007/2008 global financial crisis pushed the EU to ask for a more substantial contribution to climate finance from all countries, which resulted in the Paris Agreement contemplating a more dynamic system of financial support, "where parties would contribute in accordance with their evolving capabilities" (Duggan et al., 2025). Conversely, China's position towards the matter was that "it was already providing support to developing countries, but under a framework of South-South cooperation" (Duggan et. al, 2025) and that developed countries were to be held accountable for most of effects of climate change (Duggan et al.,2025). Eventually, in 2019 the EU recognised China as a strategic partner, economic competitor and systemic rival and ceased to see it as a developing country (Duggan et al., 2025). The EU, thus, expected a stronger contribution to a new funding mechanism for the most vulnerable developing countries, but China's stance did not change until 2024 COP29, which led to higher contributions by Annex I countries and efforts of all actors to increase the total amount of funds for climate change (Duggan et al., 2025).

Be it in a small or bigger scale, dialogue around climate change has been dynamic since the beginning. Balances between actors are always changing as new policies, initiatives and financial actions occur. Therefore, mediation granted by interpreters stands as a powerful tool for all involved parties, as they do not merely deliver messages from one language to another, but are rather a vehicle for culture, knowledge and institutions.

1.2 The role of the interpreter

In a dynamic and multilingual setting like diplomacy for climate change, interpreters are an important tool for communication. As it will be explained later, they act as both linguistic facilitators as well as cultural and institutional vehicles. To better explore this phenomenon, Translation and Interpreting studies can be useful, offering a comprehensive description of the role of the interpreter, the kinds of service they provided as well as the challenges they face.

1.2.1 Translation and Interpreting Studies

Contrary to what one might think, Translation Studies do not conceive the practice of translation just as a mere linguistic delivery from one language to another and the areas to which they are applied are extremely varied. As stated by Tymoczko (2006), translation does not involve only written text. Such view of Translation Studies has marginalised interpreting in the past, denoting a "bias towards seeing translation as a literacy practice" (Tymoczko, 2006). However, Tymoczko (2006) affirms that most of human culture has always been transmitted orally and expanding translation theory to the realm of interpreting would allow for a more comprehensive understanding of the human experience. As an example, by paying attention to orality, scholars can identify new text types and semiotic structuring of texts, expanding beyond traditional models (Tymoczko, 2006). Therefore, translation becomes a more complex concept to define, as it starts encompassing forms and means that would otherwise be left out by traditional Western views on the subject (Tymoczko, 2006).

Research on interpreting began in the 1950s but it was not recognised as an academic field until the 1990s (Pöchhacker, 2010b). This might also be related to the fact that interpreting was not officially considered a profession until the twentieth century, when, thanks to negotiations after World War I and the birth of organizations such as the League of Nations, it was possible to conduct the first scientific study on this activity (Pöchhacker, 2010b).

Another important milestone for interpreting was the success of simultaneous interpreting at the Nuremberg Trials and the adoption of this tool by the UN, which ignited research interest in other academic disciplines such as psychology, psycholinguistics and neurolinguistics (Pöchhacker, 2010b). In the 1980s an international network for interpreting studies began to emerge thanks to the will of research-oriented interpreters, who advocated for a greater scientific rigor, which in turn allowed for a greater recognition of interpreting as a more nuanced practice, encompassing not only conferences but also other kinds of contexts (Pöchhacker, 2010b).

1.2.2 Kinds of interpreting

Interpreting can refer to different activities. The first kind to be recognised was that of conference interpreting (Pöchhacker, 2010b). Setton (2010) offers a prototypical definition that provides four features: Setting and status, mode, qualification and professionalisation. Although some of these might be applicable to other kinds of interpreting (Setton, 2010), for the sake of clarity, in this research they will be used as categories to differentiate conference interpreting from its common counterpart, community interpreting.

What usually divides these two practices is the level of "formality and standardization of the interpreter's role and working environment" (Setton, 2010). Typically, participants in conference interpreting have the same level of education, represent institutions or nations and follow a set of procedures in their interactions, while interpreters are usually working in a booth and are required to focus on speed and accuracy (Setton, 2010). Moreover, conference interpreters usually receive "intensive initial training" (Setton, 2010), based on the skills required and the setting, and work within a framework promoted by international associations such as the International Association of Conference Interpreters (Setton, 2010). In terms of mode, both Setton and Pöchhacker recognise conference interpreting as relying mostly on consecutive interpreting and simultaneous interpreting, the latter accounting for 90% of modern interpreting (Pöchhacker, 2010a; Setton, 2010). Consecutive interpreting is usually performed with utterances of any duration; however, literature tends to link it to long speeches and settings such as international conferences (Dam, 2010). This practice can either be conceptualised as a two-phased process, with a focus on cognitive resource processing, or as a triangular process that includes an intermediary stage in which utterances are converted to non-verbal sense before being reorganised in the target language through the use of "both linguistic

input and prior knowledge" (Dam, 2010). As its name suggests, in simultaneous interpreting, the interpreter must listen and produce their own speech at the same time, which requires to divide one's attention among "several processes and sources" (Russo, 2010). Simultaneous interpreting, then, "presupposes great mental agility, pragmatic sensitivity and the flexibility to deal with a wide range of controllable and uncontrollable variables affecting the process" (Russo, 2010).

On the other hand, Hertog (2010) states that:

> Community interpreting (CI) takes place to enable individuals or groups in society who do not speak the official or dominant language of the services provided by central or local government to access these services and to communicate with the service providers.

Conference and community interpreting seem to be opposites, however, not only do they share some commonalities in modes and the tools they use (Setton, 2010; Hertog 2010), but one could also argue that there exist 'hybrid' forms of interpreting that combine different characteristics from both sides. One such practice could be diplomatic interpreting.

1.2.3 Diplomatic interpreting

Diplomatic interpreting is a "comprehensive category that […] encompasses diverse contexts unified by specific commonalities" (Tipà, 2024), the first one being that it involves state officials coming from different levels and engaging in "formal dialogues addressing an extensive array of topics" (Tipà, 2024). The second common characteristic is that these practices involve high levels of stress, originating from formality and the presence of a prescribed protocol, while the third one is that "interpreters operate within contexts and situations in which they frequently play a participatory role in shaping historical events" (Tipà, 2024), highlighting the importance of their job in the diplomatic field. In particular, the last two centuries have been characterised by wars, post war reconstruction and an increasingly globalised world, which has internationalised dialogue and decisional process, making the presence of interpreters with their linguistic and cultural expertise essential (Gao & Wang, 2021).

The role of the interpreter has been an important subject of study since the 1970s, sparking debates on the interpreter's identity, neutrality, invisibility and many more aspects, with positions that at times oppose each other (Zhang & Gao, 2023). The way such aspects are considered shapes the skills, scope and perception of this practice (Zhang & Gao, 2023).

Despite the efforts to define the role of the interpreter through codes of ethics and norms, scholars have yet to find a consensus on the matter, as points of view can widely differ from one another (Zhang & Gao, 2023). On one hand, the interpreter is regarded as a mere medium for communication, staying neutral and impartial by being as faithful as possible in their rendition of the message (Zhang & Gao, 2023). This is considered to be particularly true for interpreters employed in international organizations, who "are expected to observe complete neutrality and impartiality, displaying equal fidelity and transparency to all participants" (Zhang & Gao, 2023). On the other hand, another school of thought states that interpreters should be allowed a certain degree of intervention so as to facilitate communication (Zhang & Gao, 2023). This would be the case of interpreters recruited by individual parties, who may be considered leaning towards their clients' side and, therefore, denoting a bias while providing of their service (Zhang & Gao, 2023). Secondly, research proves a certain level of inconsistency in the interpreter's role perception or performance, with interpreters preferring being more "visible" or "invisible" depending on the setting (Zhang & Gao, 2023). To give a few examples, in their respective researches, Zhang & Gao (2023) and Liu (2023) have detected how interpreters have an active role in shaping diplomatic dialogue in Chinese context, being influenced by a series of factors and at times participating as an essential part of institutional arrangements, manipulating the flow of information in order to create a specific narrative. Although it is based on conference interpreting, the findings of Zhang and Gao's research (2023) can be related to diplomatic interpreters as well, as they are by no means strangers to conferences settings, Liu's study (2023) being an example, as it focuses on press conferences.

Just like international relations, interpreting does not occur in a vacuum, so just as interpreters have an active role in shaping diplomacy, the work of conference interpreters and by extension that of diplomacy interpreters are influenced by their relationships with their environment. Specifically, they are first and foremost influenced by the modes of interpreting, to which corresponds a series of specific "working norms, preparation, strategies allocation [and] management" (Zhang & Gao, 2023). Secondly, they are conditioned by personal factors, such as experience and topic familiarity, as well as external ones, like visual access and source-text complexity (Zhang & Gao, 2023). Thirdly, the interpreter's own perception on their role

or identity might affect their behaviour, as it is the case in Zhang and Gao's research (2023). By surveying 150 Chinese conference interpreters on their opinions in their working environment, they found that interpreters consciously adjust their strategies to ensure effective communication (Zhang & Gao, 2023). It was also found that their role perception is certainly influenced by interpreter-related factors and has an impact on both strategies and communication pattern (Zhang & Gao, 2023). Liu (2023) research add up to the notion of interpreters being influenced by their contextual role, as the analysed Chinese Premier's Press Conferences suggest that interpreters in this context tend to manipulate the flow of information during their rendition to "boost politicians' public images" (Liu, 2023).

Interpreting is a powerful tool in diplomatic relations, as interpreters can contribute their linguistic, cultural and institutional expertise in the field of communication. However, the settings in which they operate can widely influence their performance and pose specific challenges that must be tackled.

1.2.4 Challenges

As aforementioned, the setting has a strong influence on the interpreters' performance. Therefore, it is important to delineate in what kind of contexts diplomacy interpreters work, as to understand what kind of challenges they might face as well as what skills and tools might prove useful.

Contexts usually involve delegations from one country visiting representatives of the other, such as: bilateral talks, roundtable discussions, lunches and dinners (which can be both formal or informal) press conferences (which also involve the participation of media), institutional visits and ceremonies, each characterised by their own sets of rules and conventions (Tipà, 2024). These sort of events, thus, follow a protocol which reinforces the identity and authority of institutions and representatives, the standards of which were fixed in 1961 Vienna Convention on Diplomatic Relations, although they may also vary in some form based on the state in which the meeting takes place (Tipà, 2024). Moreover, it has been previously explained how diplomatic relations can be complex and dynamic, which means that interpreters are not only required to have general and protocol knowledge, but also to be knowledgeable about global geopolitics (Tipà, 2024). In her contribution to the book *Chinese Interpreting. Strategies and Teaching Methodologies*, Tipà also states that:

> An interpreter working or aspiring to work in the political-institutional sector must closely follow current events and have a profound understanding of the most significant historical moments in both bilateral and multilateral relationships involving the countries where their working languages are spoken. (Tipa, 2024)

Control of stress and anxiety is also a key factor when interpreting in political-institutional settings, where such emotions can be even stronger than in different situations. In diplomatic interpreting there might be several anxiety or stress-inducing factors, that range from the presence of important state figures or diplomats, who might understand the language with which the interpreter is working, to customs related with the interpreter's job, such as making eye contact while interpreting (Tipà, 2024).

Absolute confidentiality is another key aspect which requires the interpreter's attention, as they might be asked to dispose of their notes or be handed "highly sensitive data which cannot be disclosed" (Tipà, 2024); among others, attire, modes of interpreting, time and unpredictability management are key (Tipà, 2024).

For the purpose of this research, two key challenges described by Tipà (2024) must be highlighted: preparation and designations. Preparation is defined by being always curious and committed to continuous learning, as well as always staying informed (Tipà, 2024). Another important aspect is that materials related to the specific assignments are not always provided and interpreters might also get access to them shortly before the beginning of their work (Tipà, 2024). Even when interpreters manage to gain access to these resources, they are to be considered as reference materials, so it is no surprise that general and specific knowledge in subjects such as international relations, economics and politics are a powerful tool for the interpreter (Tipà). Designations, instead, refer to the great importance Chinese culture places on hierarchies and positions (Tipà, 2024). Understanding the differences in the administrative systems of both parties is crucial as to provide a functional translation (Tipà, 2024). To do so there are some tools interpreters can use to mitigate risk of error; as it will be discussed in the next chapter, such tools can come from theory, practice and technology, which can all be used in the creation of a glossary for preparation to interpreting.

2. The tools of the interpreter

The previous chapter has described what kind of context diplomatic interpreters work in, how they both influence each other and what kind of challenges the interpreter faces while providing their service. This chapter will, instead, explore the tools the interpreter can use in order to face such challenges, specifically terminology management. Three key aspects are, thus, identified: theory, practical tools and technologies. As it will be explained later, theory can be an important tool for translators training (Pérez, 2004). As mentioned before, Interpreting Studies draw from Translation Studies and both professions are even considered "twins" (Pöchhacker, 1995), so theories coming from both realms can prove to be useful. Terminology as a field of study can also be a theoretical framework that can help the interpreter in their decision-making process (Riediger, 2023). Among practical tools interpreters have at their disposal, glossaries are key for terminology management and technology can be very useful in their creation, especially corpora and AI. As in the previous chapter, a literature review was carried out through keyword research on google scholar and archives such as JSTOR and CNKI, as well as snowball sampling starting from the found articles.

2.1 Theory as a tool

Theory has always been a subject for debate in the field of Translation Studies, as it entails a dichotomy between it and practice (Pérez, 2004). As research develops, how theory is important for a good translation is still studied in many directions, that range from detecting references in textbooks to analysing students' perception and applications of it (see Albkower, 2026; Giczela-Pastwa, 2017; Yang & Li, 2022). Nevertheless, some scholars such as Hatim and Venuti argue that theory "helps to raise awareness amongst students and encourages them to make conscious decisions" (Pérez, 2004). Theoretical knowledge is, then, a resource interpreters can draw on. In this research, three theoretical frameworks have been identified: the Interpretive Theory of Translation (ITT) and the Effort Models (EMs), being two of the most prominent theories in the field of interpreting teaching (Yang & Li, 2022), but also the Functionalist Approaches, which, arguably, might have been applied by some of the mentioned scholars. Terminology as a discipline has also been considered an important theoretical framework, as it gives fundamental knowledge on how to build linguistic knowledge.

2.1.1 The Interpretive Theory of Translation

The ITT saw its beginning in the mid-1960s to deepen the knowledge about both oral and written translation processes and to fulfil the requirements needed for teaching translation and interpreting (Lederer, 2010). Starting from the reflections of interpreter and scholar Danica Seleskovitch, ITT postulates that the human brain does not build sense by understanding the meaning of separate words and then putting them together but rather interpreting the linguistic message as a whole with a top-down structure (Lederer, 2010). Later in the 1970s, this idea found support in developmental psychology and neuropsychology, which allowed for a deeper understanding of the human brain functioning, pushing the boundaries of Translation Studies towards the conception of translation as a cognitive process (Lederer, 2010).

Translation is first and foremost seen as an act of communication, in which the interpreter and the translator play a dual role, first as a listener or reader and secondly as the producer of the linguistic message (Lederer, 2010). Drawing primarily from examples of interpreting but also from translation, this theory traces a distinction between language as a system and language in use, drawing on the concepts of 'sense' and 'meaning', the former referring to texts or part of them and the latter to the meaning of single words, as well as that of 'word correspondences' and 'text equivalences' (Lederer, 2010).

Sense is, thus, to be considered as a combination of linguistic meanings and extra-linguistic knowledge, which is understood through a process of deverbalisation, in which the meaning of utterances is being kept while the single words are forgotten and which can be exemplified in the work of the consecutive interpreter "who obviously cannot retain nor jot down all the words of a speech" (Lederer, 2010). Once the explicit and implicit parts of the utterance have been decoded, the interpreter creates text equivalences through expressions with the same meaning and finds word correspondences where lexical items must be translated with a specific term (Lederer, 2010).

Since its inception, ITT has been used in interpreting teaching, with the EU commissioning Seleskovitch and Lederer to write *Pédagogie raisonnée de l'interprétation*, which was published in 1989, then revised and expanded in 2002 (Lederer, 2010). Based on ITT, this book has since become a teaching tool for interpreting trainers in the EU and the ITT model has been applied in various linguistic pairs, including Asian languages (Lederer, 2010). However, as suggested by Lederer (2010), far from being a complete theoretical model, ITT can be integrated with other theories and models, such as the EMs and the Functionalist Approaches.

2.1.2 The Effort Models

Despite its role in pioneering Translation and Interpreting Studies, Daniel Gile points out that "ITT ignored most ongoing research in cognitive psychology, psycholinguistics and linguistics" (Gile, 2021). Gile (2021) offers a different model, which was born from his experience in 1977 at ESIT in Paris and initially used to describe the phenomena by which interpreting students, who were fluent in their working languages, would miss certain concepts in their rendition of speeches "as if they had not heard them" (Gile, 2021). This model, or rather models, known as EMs further developed from the analysis of different issues in interpreting, among which coping tactics and directionality, in order to provide students with simple and intuitive explanations about them (Gile, 2021).

Drawing from various kinds of interpreting, these models start from the assumption that speech comprehension and production are not effortless, even when one has full mastery of a language, as they require a certain degree of attention (Gile, 2021). Taking inspiration from cognitive psychology, Gile (2021) identifies interpreting as a non-automatic operation, which needs attentional resources and time to be performed. This means that processing capacity is key to ensure this operation is carried out smoothly (Gile, 2021).

Gile (2021), then, describes a series of 'Efforts' that an interpreter must endure, which include not only comprehension and production but also other factors depending on the kind of interpreting. As attentional resources are limited, learning how to allocate them is fundamental as to avoid issues, thus, handling aspects such as lexicon and syntax can ease the cognitive load. As an example, unknown composite names can put a heavy pressure on the interpreter's processing capacity, as they require employing 'Working Memory', meaning that such terms will be kept in the short-term memory and "scrutinized with the purpose of determining the order in which their component words will be translated in the target language" (Gile, 2021). Language specificity is also an important factor to be accounted for, as even experienced interpreters claim that linguistic idiosyncrasies, such as lexical gaps, which would require some elaboration, can determine the success of the interpreting process (Gile, 2021). Language availability is, thus, another fundamental factor, as it entails the capacity to store 'language units' in the long-term memory, reducing the needed attentional resources and time (Gile, 2021). Arguably, the Functionalist Approaches can contribute to the creation of a framework, narrowing the pool of translation choices the interpreter must make to tackle these issues.

2.1.3 The Functionalist Approaches

The Functionalist Approaches, in particular what is known as *Skopostheorie*, was born from the idea of interpreting and translation as "twin" practices (Pöchhacker, 1995), as they both come from an "intercultural communicative interaction which is based on a source text" (Nord, 2018). The most relevant aspect for this research is that both interpreting and translation seek to reach a "communicative purpose" (Nord, 2018). This is the case for a study conducted by Pöchhacker on the application of *Skopostheorie* to simultaneous interpreting, as described by Nord (2018). Pöchhacker highlights that, differently from translation, contributions by single interlocutors do not constitute independent units of meaning, each possessing their own *Skopos*, but are rather to be interpreted as "components of a greater semiotic whole" (Nord, 2018), where:

> In addition to the individual speeches and contributions, the interpreter has to take a large amount of non-verbal acoustic and visual information into account, including slides, overhead transparencies, handouts, and the speakers' gestures and body language. All these factors make up the 'source text'. (Nord, 2018)

The *Skopos* of simultaneous interpreting is then identified as the conference assignment itself, informing the interpreters choices (Nord, 2018). In this framework, communicative context is key and is analysed in terms of "interactants' roles, perceptions, dispositions and intentions" (Nord, 2018).

Arguably, what is stated about the role of diplomatic interpreter in the previous chapter can be seen as an interpretation through the lenses of the Functionalist Approaches.

2.1.4 Functionalist Approaches and Diplomatic Interpreting

In his introduction of the book *Chinese Interpreting. Strategies and Teaching Methodologies*, Moratto (2024) states how interpreting requires a strong theoretical foundation and how little literature there is to support Chinese interpreting students in their learning process. Interpreting Studies are, in fact, relatively new: initially focusing on "cognitive mechanism and psycholinguistic aspects" (Moratto, 2024), conceptualisation of interpreting is now related to a more complex set of actions informed by the organic system in which they take place, offering a theorization not dissimilar to the Functionalist Approaches (Moratto, 2024).

It can also be inferred that, when Tipà (2024) offers her suggestions about diplomatic interpreting, she might be implicitly using the lenses of Functionalist Approaches. First of all, she introduces the setting in which diplomatic interpreting takes place, thus providing the "hypertext" (Nord, 2010, 2018) with its institutions, protocols and norms.

Particular importance is given to designations, which can be considered referring to the role of the interactants (Tipà, 2024). One application of the Functionalist Approaches on interpreting is what Tipà (2024) calls "reasoned translation" which has not the goal, as aforementioned, to provide an accurate and comprehensive rendition but rather accessible terminology that can clarify roles as best as possible. For example, Tipà (2024) explains how the term *Guójīa wèishēng jiànkāng wěiyuánhuì zhǔrèn* (国家卫生健康委员胡主任), which can be literally translated as "Director of the National Commission for Hygiene and Health", can also be interpreted as "Minister of Health", which highlights the practical function of the official and the designation of their counterparts in the Italian context.

Moreover, how the role of the interpreter and its influence in the interpreter's job is analysed by scholars might also be related to "perceptions" (Nord, 2018). Not only the interpreter's perception of their job informs their interpretative choices, but also interactants can have a say on the topic. For example, in the context of Chinese diplomatic interpreting, both Tipà (2024) and Liu (2023) observe how Chinese interpreters are not only expected to offer their expertise in linguistical mediation, but also to act as spin-doctors, "a sociopolitical actor who seeks to sway public opinion and boost politicians' public images by managing information presented to the media and the public" (Liu, 2023), or even as government officials.

Having a grasp of the Functionalist Approaches and accounting for the cognitive load highlighted by the EMs can, thus, help to recognise what terminological repertoire is most important to prepare in order to successfully conduct interpreting services.

2.1.5 One last theory: Terminology

While Interpreting Studies and their theories have helped creating a framework of the role of the interpreter as well as a conceptualisation of context, preparation and process of interpreting, terminology can be used to build the theoretical background required to build the proper linguistic knowledge needed for this practice.

Terminology is a discipline that studies concepts and the 'terms' related to them in specialised areas to 'describe' or 'prescribe' them (Alberts, 2001; Riediger, 2023). Here only

one of the three main school of thoughts of terminology will be taken into consideration, being terminology for translation, which, among others, has the purpose of spreading technical knowledge through structured terminological resources such as terminology sheets, glossaries and databases (Riediger, 2023). As a matter of fact, terminology is fundamental for translation and interpreting, as they are both mostly based on research and management of terms, which guarantees high quality and optimisation of translation and interpreting times (Riediger, 2023).

One key concept of terminology are domains and subject fields, which determine the perspective through which a phenomenon is observed (Alberts, 2001; Riediger, 2023). It can be argued that different individuals or groups refer to reality based on their needs and interests, which lead those who operate in the same field to select aspects of said reality that are relevant to them; domain and subject fields can, thus, be defined as the interpretation of a segment of reality by an interest group for a specific purpose and following a specific way (Riediger, 2023).

Domains and subject fields are characterised by the presence of special languages, which are the linguistic means used to exchange and spread information and knowledge related to them, as to create a system of principles of designation and terminology that follow a set of pre-defined rules (Alberts, 2001; Riediger, 2023). This allows for precision, unambiguity and conciseness in comprehension (Riediger, 2023). In this context, diplomatic language can be considered a special language and the practice of terminography can help interpreters gather fundamental terminology.

2.2 Practical tools: Terminography

Now that a theoretical framework has been drawn, it becomes clear how it affects the terminological choices of this research and what kinds of tools are needed to manage terminology.

Glossaries have been identified as the primary tool that can be used for terminology management. Making a glossary is a useful preparation strategy to tackle issues such as language specificity and language availability (Gile, 2021). While the Functionalist Approaches can help interpreters to narrow the pool of translation choices they must make to prepare a glossary, terminography can be a practical tool employed to deal with documentation of terminology (Alberts, 2001). Applying the principles and methods of terminology, it records, elaborates and presents terminological data through research (Riedieger, 2023). Terminography is based on an onomasiological approach, which involves reflecting on concepts regarding

concrete or abstract objects to create names for them (Riediger, 2023; Alberts, 2001). In translation and interpreting specifically, this thought process is applied to more than one language in search of correspondence of terms, which are to be distinguished from words (Riediger, 2023). As a matter of fact, a term is a phonic or graphic sign (being it a word, a compound word, locution etc.) which refers to a special concept about a concrete or abstract object with one unambiguous definition (Alberts, 2001; Riediger, 2023). The results of this work can, then, be made available through lists of technical terms, terminological glossaries or technical dictionaries (Riediger, 2023). As it will be explained in the next subsection, these products see their foundation in terminology sheets (Riediger, 2023).

2.3.1 What is a terminology sheet?

terminology sheets are the foundation of any terminological collection (Riediger, 2023). They are structured sets of terminological data about a concept and contain information about a term (Riediger, 2023). Depending on its purpose, a terminology sheet can include different quantities of information and for the purposes of this research the following fields, as described by Riediger (2023), have been selected:

- Term: it contains the term to which the sheet refers to, which can be simple or compound; terms are to be recorded in their lowercase or uppercase letters depending on their use, and in their base form, while syntagms must appear in their natural order.
- Definition: an utterance that defines the concept and that allows to differentiate it from other concepts in a conceptual system; it is a clear and concise summary of the semantic content of the concept, and it must not contain the defined term.
- Definition source: it indicates the bibliographical reference, document or source from which the definition has been taken or inferred.

2.3.2 Methodology for terminological research

For what concerns methodology, Riediger (2023) identifies two kinds of research depending on the needs: systematic terminological research (*ricerca terminologica sistematica*) and precise research (*ricerca puntuale*). The former refers to the detailed and thorough collection of documents concerning a specific domain or subject field, in order to clarify concepts and

identify equivalents, while the latter is a quicker research with the purpose of solving a specific terminological issue such as the need to understand the meaning of a term or to find its equivalent (Riediger, 2023).

Arguably, as some features of both methodologies can be useful to interpreters and as technology makes some tools more accessible and quicker to use, it could be beneficial to apply a hybrid approach in the creation of a glossary. On one hand the tripartition of the systematic research can offer an optimal starting point. Among other aspects, the preparatory phase (*fase preliminare*) defines the goal of the research, the limits and structure of the domain or subject field and the overall structure of the glossary (Riediger, 2023). It also includes gathering of documents (Riediger, 2023); in particular, parallel texts can be quite useful. Secondly, the main phase is concerned with 'term mining', collection of concepts and terms in all the subject languages, validation of terms and equivalents, elaboration of conceptual systems, definition of the structure of the glossary and of the terminology sheets and compilation of the latter (Riediger, 2023). The third one involves a graphic presentation of the glossary (Riediger, 2023). On the other hand, precise research identifies a wider set of skills that the interpreter must have to carry proper terminological research, specially knowing where and how to research sources and how they are characterized (Riediger, 2023). Moreover, experience, culture, fantasy and the capacity to move around the massive quantity of information that the internet provides are also highlighted (Riediger, 2023). As a matter of fact, as it will be explored in the next section, the internet and other technologies are not to be taken lightly and require specific knowledge in order to be put to proper use.

One last consideration about methodology to be made before moving on is what 'term mining' entails. This activity is focused on identifying relevant terms in a text or a corpus of texts (Riediger, 2023). Term extraction can be carried manually, semiautomatically using concordancers, which will be explained later, or automatically with terminology extractors which are usually integrated into CAT-tools (Riediger, 2023). Therefore, various sources can be searched, and different technologies can be applied to accelerate the interpreter's terminological research. In the next section some of them will be expanded upon, especially corpora and AI.

2.3 Interpreting technologies

Terminology management is a key feature of interpreting. A theoretical framework can be useful in defining the course of action for research. terminology and terminography provide theoretical and methodological tools for the creation of terminology sheets and glossaries (Riediger, 2023). This section will briefly describe the history of interpreting technologies and explore some of the technological tools that are used for semiautomatic and automatic term mining focusing on the use of corpora and arguing that AI can optimise the preparation of glossaries (Li & Wang, 2024). Before going into detail, it is important to highlight that AI as it has been conceived in recent times is a relative new phenomenon, so academic research on the topic is still being carried out and reviewed. This means some of the information gathered in this section comes from academic literature that is currently being reviewed. However, this can be an opportunity to analyse and use such information to further explore AI in the field of interpreting.

2.3.1 The history of interpreting technologies

As many other fields, interpreting has been influenced by technology, which has probably played an important role in its development (Li et al., 2024). Li et al. (2024) differentiate four phases of interpreting technologies history:

1. Preparatory phase: thanks to a gradual and intensifying interaction with technology, interpreting has gone through an important change in modality starting from the 1920s. Communication technologies made large-scale consecutive interpreting possible, improving interpreting services for conferences, while by the end of the decade Edward Filen introduced the first device for simultaneous interpreting;
2. Embryonic phase: between the 1920s and the 1950s simultaneous interpreting was improved as to allow for better efficiency during the Nuremberg Trials, in which interpreting services were provided in multiple languages and the practice became a full-fledged profession;
3. Growing phase: from the 1950s until the beginning of the twenty-first century, as telecommunication, media and computer technology developed, new employments of interpreting services such as community interpreting were needed, and automatic

interpreting started emerging. In particular, the 1980s saw the advancement of natural language processing and machine translation;

4. Explosive phase: Since 2010, technologies such as AI and neural networks have seen great improvement, giving rise to the transformer model, which can accelerate information gathering.

The evolution of AI will be explored later, but it is important to highlight that its creation would not have been possible without another important tool: corpora (Liu & Li, 2023).

2.3.2 Corpora

A corpus is a collection of digitalized texts containing authentic language from real situations (Manca, 2012). They are created following specific criteria which determine their purposes, mostly related to quantitative and statistical analysis of languages (Laviosa, 2010; Manca, 2010; Riediger, 2023). They allow to identify linguistical patterns and to elaborate wordlists that help to build the foundation for describing the structure of language in many areas of linguistics (Manca, 2012; Riediger, 2023).

Authenticity is one of the main advantages that corpora can offer as it allows to gather information which can help to validate a theory or "to have some insights into actual language" (Manca, 2012) without having to rely on the sole intuition of native speakers; therefore, collected texts should be examples of language used in real situations, while all fabricated sources are not to be considered representative (Manca, 2012).

Representativeness is another key aspect of corpora (Bendazzoli, 2010, Manca, 2012). Although the exact minimum quantity of words and samples needed can be debated, Manca (2012) and Bendazzoli (2010) offer insights as to how to make a corpus as representative as possible. Reflecting on the criteria needed to build representative corpora, Manca (2012) states that they can be separated into two types: external and internal criteria, the former being related to interlocutors, occasion, social setting or communicative function, while the latter concerned with the recurrence of patterns. She also highlights the importance of external over internal criteria, identifying communicative function as the foundation of text research, as well as the purpose of the analysis (Manca, 2012). On the other hand, Bendazzoli (2010) draws on Sociolinguistics theoretical framework, focusing on caution in data analysis and avoidance of biases while offering a three-step conceptualisation of the test subject:

1. Defining the sampling universe, which in linguistics-related research are usually smaller than what is suggested by theory. However, this is not considered an issue, as the use of language has a tendency to be more homogeneous than other phenomena;
2. Evaluating the dimensions of the variation within the community;
3. Determining the dimension of the sample, focusing on the definition of the target population and identification of a sampling frame, consisting of a list of members of said population, which are considered representative.

Such considerations can help recognise a useful corpus which can be used for term mining. However, as aforementioned, not all corpora are the same and some might prove more useful to the work of an interpreter than others.

2.3.2.1 Multilingual, specialized and spoken corpora

Among the various kinds of corpora, three might help to identify useful sources for building a glossary. Multilingual corpora are the first subject which might be taken into consideration, as they offer a collection of texts which are written in two or more different languages (Bendazzoli, 2010; Manca, 2012). Multilingual corpora can be further divided into comparable and parallel corpora, the latter consisting of original texts and their translations in other languages (Manca, 2012). Parallel corpora can either be bidirectional or monodirectional, depending on whether the original texts were all written in the same language or if the translation process was carried out in all languages (Bendazzoli, 2010). This kind of corpus can be used to analyse equivalences and translation strategies (Manca, 2012). Special purpose corpora or specialized corpora focus, instead, on a specific aspect of a language which ranges from language variety to the field in which it is used (Bendazzoli, 2010; Manca, 2012). Finally, special attention should be given to spoken corpora which, despite their limitations, have a huge potential for interpreting (Bendazzoli, 2010). Among spoken corpora, interpreting corpora are an interesting tool to be used, as they describe the use of spoken language in the context of interlinguistic exchanges (Bendazzoli, 2010). According to Bendazzoli (2010), they gather authentic and structured material from different linguistic events, allowing teachers and students to analyse strategies adopted by professional interpreters; arguably, such material could be used by interpreters as well, for example as a starting point in their preparation for interpreting, especially in the creation of glossaries.

For the purpose of this research, such categorisation is to be taken as a general outline of corpora's functions rather than a prescriptive separation of them, as one corpus can be ascribed to more than one category. To give an example, the Speech Corpus of Interpreted Premier Press Conferences (SCIPPC), which has been employed for the analysis carried out in the third chapter, can be considered a parallel spoken corpus (see Liu, 2024). How to access a corpus for term mining will be explored in the next subsection.

2.3.2.2 Concordancers and Excel

Corpora are a useful source to gather and arrange massive or specific terminological data, however, in order to access them, a specific kind of software is needed: concordancers (Riediger, 2023).

To understand concordancers it is important to know what wordlists and concordances refer to in the field of corpora studies. Wordlists are "a list of all the words contained in the texts chosen for analysis" (Manca, 2012). They are useful for identifying terms or collocations, the analysis of which might helpful, or to find the frequency with which a specific word appears (Riediger, 2023). Concordances consist, instead, of words in a co-text (Manca, 2012). Concordancers analyse a corpus, creating wordlists, which can be organised by frequency or alphabetical order, and identify concordances, presenting them in a format called "KWIC" (Key Word in Context), which allows to recognise patterns in the use of a word (Manca, 2012; Riediger, 2023).

Once the terminological data has been mined, Riediger (2023) suggests arranging it into Excel files, as they allow for importation on other tools such as CAT-Tools and for immediate access to terminology in general.

As it has already been explored in research (see Li & Wang, 2024) and will be expanded upon in the next subsection, concordancers are not the only way to access and arrange terminological data. Arguably, AI constitutes another useful and faster tool to analyse texts and by extension corpora.

2.3.3 AI in the world of Translation and Interpreting Studies

Terminology management is a key aspect of the job of the interpreter. So far, some of the most traditional strategies and tools have been examined, but as technology evolves, new ways of carrying out terminological research and organisation emerge. One such way is the use of AI, specifically Transformer models, which are deeply connected to translation through their predecessors (Li et al., 2024; Li & Wang, 2024; Liu & Li, 2023; Shormani & Al-Sohbani, 2025). Some scholars agree that these models can be helpful during term mining (see Li et al., 2024), while some others have also explored their usefulness in data augmentation (see Wayne & Garret, 2023). However, little research has been carried out on the impact of AI on interpreting (see Chan, 2025). On this specific matter, only one published case study was found during literature review for this study (see Li & Wang, 2024), although this might be related to time limitations or issues with the methodology of research. Another emerging field of studies is prompt engineering, which focuses on the analysis of prompting, giving possible methodological guidelines as to how to increase the level of efficiency of Large Language Models (LLMs) such as Generative Pre-trained Transformer (GPT) models (see Chen et al., 2025). Therefore, it seems important to have at least a basic understanding of what AI is, before being able to employ it at its maximum capabilities.

2.3.3.1 What is AI?

> Artificial intelligence is a big field of study which enables computers and machines to mimic the perception, learning, problem-solving, and decision-making capabilities of humans. (Li & Liu, 2023)

Born from mathematical and philosophical considerations on the possibility for computers to emulate human reasoning and how the human brain produces complex patterns through neural cells, AI has demonstrated to be a powerful tool in the development of many fields and industries, with applications that range from natural language processing to face recognition and image processing (Li & Liu, 2023).

The first step for its creation was Alan Turing's 1937 theory of computation, which stated that a machine has the potential to simulate any act of mathematical deduction (Li & Liu, 2023). This idea led to the design of artificial neurons by McCylloch and Pitts in 1943 (Li & Liu,

2023). Since then, neural networks were quickly improved, exploring capabilities that span from learning to decision-making (Li & Liu, 2023).

Another important milestone in AI history was the emergence of expert systems, the first successful form of AI, which "simulated the decision-making ability of human experts" (Li & Liu, 2023). Even though they represented an important breakthrough, expert systems still relied on the contributions of professionals and could not learn by themself from experience and data (Li & Liu, 2023). It was not until the 1990s that, thanks to machine learning based on pattern recognition, AI was finally able to make predictions and decisions autonomously (Li & Liu, 2023). This was possible thanks to a training process based on sample data known as 'training data' (Li & Liu, 2023).

After a quick development that saw an increase in computational capabilities and access of data, deep learning, which was first proposed in 1986, came once again to the fore in 2012, with applications that further quickened machine learning development (Li & Liu, 2023). This led to the birth of GPT models, which now match human standards, "albeit without the system attaining common-sense understanding of the contents of the benchmarks" (Li & Liu, 2023).

2.3.3.2 Machine Translation

The concept of AI and translation have been related since the beginning, as early as the 1930s, when Peter Troyanskii made the first attempt at machine translation (MT) in 1933 (Li & Liu, 2023). Beginning with literal word-for-word translation, MT saw an improvement with expert systems, which allowed for the encoding of sets of rules into the machines (Li & Liu, 2023). Rule-based MT endured from the 1970s until the emergence of deep learning in the 2010s, although in early 1990 this field saw the invention of statistical MT, which was not based on rules encoded by experts, but was rather capable of inferring them from the analysis of existing translations (Li & Liu, 2023). Statistical MT learned from human translations through machine learning methods, starting from a word-focused approach and reaching its peak in development with the phrase-based method (Li & Liu, 2023).

The next breakthrough was made in the 2010s with the application of deep neural networks, "which made translation between any two languages possible without explicitly analyzing the statistics of the words and phrases" and has been the state of the art as of June 2021 (Li & Liu, 2023).

Most recently, transformer models have been proposed as a new alternative as they are based on new strategies, such as the attention mechanism, through which neural networks are able to recognize what degree of importance they should assign to the various words (Li & Liu, 2023). Transformer models are also equipped with self-attention, a special kind of attention mechanism, which allows the machine to have a better understanding of "contextual information of the source sentence" (Li & Liu, 2023).

Overall, transformer models such as ChatGPT seem to be playing a pivotal role in MT development, with applications on specific languages and language pairs such as English and Chinese, although they still face some important issues like ethics and AI biases (Shormani & Al-Sohbani, 2025).

2.3.3.3 Machine Interpreting

Differently from those regarding the use of AI in translation, studies on integration of AI in interpreting are far less explored, as highlighted in a 2024 review, which focused on the analysis of 40 articles from 2013 to 2024 about interpreting technologies (see Chan, 2025). In this study, it emerged how, despite its benefits, AI in the field of interpreting needs further studies to catch up with the rapid technological changes, stressing the gap in research concerning training and exploration of integration of new technologies (Chan, 2025).

One emerging field of study that might be interesting to explore is that of machine interpreting (MI), which tries to overcome "the exclusivity of professionals in delivering this service" (Fantinouli, 2025). Automation of interpreting is usually referred to either as MI or speech-to-speech translation, the former referring to a field of Translation Studies, which focuses on immediacy as one of the "distinctive features of human interpreting" (Fantinouli, 2025). Its history is strongly related to the evolution of different technologies such a speech recognition, MT and LLMs but it first came to the fore during the World Telecommunication Exhibition in 1983 (Fantinouli, 2025). Ever since, development of this technology has been furthered through workshops and the support of organisations, with one significant contribution being a project started by the EU in 2019 which represented a fundamental milestone in the field of speech translation technologies (Fantinouli, 2025).

Starting from rule-based models until the application of deep learning and LLMs, speech-to-speech translation evolved in a similar way to MT, with cascading and end-to-end approach being the two main technical approaches (Fantinouli, 2025). Cascading approach focuses on

separating the interpreting process into concatenated variable components such as speech recognition, neural machine translation and text-to-speech (Fantinouli, 2025). Despite having the advantage of being supported by robust technologies and years of development, this approach faces the challenges of needing an extremely complex training of pipelines as well as being subject to error propagation and amplification through its various stages (Fantinouli, 2025). Conversely, end-to-end systems use a single component for input and output audio processing and seem to be capable of maintaining para- and non-linguistic speech characteristics such as prosody and tone of voice (Fantinouli, 2025). However, this technology is limited by availability of bilingual datasets and lack of data concerning non-linguistic characteristics (Fantinouli, 2025).

Overall, Fantinouli (2025) states that:

> Despite remarkable technological advancements, this technology continues to face complex challenges, particularly in accurately capturing the nuances of spoken language and contextual subtleties. There are also methodological challenges to tackle, such as the need to define shared quality criteria that should help diverse stakeholders evaluate the fit of the technology for their use cases.

Similarly to MT, MI also faces some ethical issues related to economic, environmental and bias-related problems, all connected to the use of AI, and which still need to be tackled (Fantinouli, 2025). Waiting for this technology to further develop, AI can still be and is being explored in limited applications, as it will be shown in the next subsection.

2.3.3.4 AI for glossary building: a case study on ChatGPT-3.5

As aforementioned, despite being under-researched, the use of AI in the field of interpreting can be quite useful in terminology management. The study carried by Li & Wang (2024) is one example of studies on this kind of application, which has been taken as a starting point for the experiment analysed in the next chapter.

The first consideration to be made is that AI can be used only in projects where confidentiality is not required, as LLMs such as ChatGPT are usually set in open networks (Li & Wang, 2024); One possible solution to this instance might be the use of open-source parallel texts and corpora. Another issue to be addressed is the definition of the version which will be tested, ChatGPT-3.5being the subject of Li and Wang's case study (2024). Although not openly

stated, it might be possible that the one used in the study, might have been the free version. One interesting alternative, which allows for the use of different features, is the use of application programming interfaces (APIs), which have been used in other studies on LLMs (see Wayne & Garret, 2023).

In their study, Li & Wang (2024) divide the interpreting task into three stages, namely a preparation phase or pre-interpreting, interpreting and post-interpreting. They identified the use of ChatGPT-3.5 as part of pre-interpreting, which consists of information retrieval and terminology preparation (Li & Wang, 2024). The study was carried out through a methodological comparison and analysis of the capabilities of both terminology management tools, represented by Termbox, with the help of conventional search engines, and AI, represented by ChatGPT-3.5 (Li & Wang, 2024). For what concerns term extraction, ChatGPT-3.5 was able to easily carry out term mining tasks and, when instructed, it was also able to explain the meaning of the terminology gathered, although it was not able to extract terms that were not explicitly requested (Li & Wang, 2024). As to information retrieval, through its capability to "emulate various identities" (Li & Wang, 2024) and to answer in a conversational manner, ChatGPT-3.5 was able to give useful information, that needed verification due to a lack of explicit sources (Li & Wang, 2024). Overall, both tools required "manual proofreading and verification to ensure accuracy" (Li & Wang, 2024).

Li and Wang concluded that integration of both conventional tools and AI can be beneficial in terms of efficiency (Li & Wang, 2024). However, as technology develops, new features can be added to AI, such as live search on the internet, which might prove useful in terminological research. Moreover, as already noted by Li and Wang, prompting is a key aspect in the use of LLMs such as ChatGPT, so it might be beneficial to explore its methodological study, prompt engineering, as to increase the probabilities of a successful term mining.

2.3.3.5 Prompt Engineering

The output of LLMs is defined by three main factors: hyperparameters, diversity of training data, and prompts (Chen & al., 2025). It might be too complicated and unfruitful to discuss what kind of training these models go through, how hyperparameters are set up or what they control and how these aspects interact with each other, as they are probably something on which the average interpreter does not have much agency. However, a methodological approach to

prompts could be beneficial for them, as they have demonstrated to be the most simple and direct way to interact with LLMs (see Chen & al., 2025).

Prompt engineering is “the process of structuring inputs, and it has emerged as a crucial technique for maximizing the utility and accuracy of these models” (Chen & al., 2025). Structure and content of prompts can influence LLMs behaviour, so a methodological design and optimisation can considerably increase the quality of output and even avoid hallucinations (Chen & al., 2025). What started as a simple practice based on structured inputs in the 1950s is now a field of research that has demonstrated its capabilities to enhance interaction with LLMs (Chen & al., 2025). A basic understanding of prompt engineering might, therefore, be beneficial to an interpreter wanting to apply AI in their term mining tasks. The following is a list of some of the basic strategies that can be used in the creation of a prompt, which were identified as a result of a review carried out by Chen & al. (2025):

- Providing instructions: it involves designing effective directives as to properly inform the model’s behaviour and output, ensuring accuracy in its performance and avoiding ambiguity and misinterpreting;
- Clearness and precision: unambiguity and specificity by giving sufficient details in the prompt are key to narrow the range of possible interpretations the model could give to the input, as it is trained with massive amounts of data that can be analysed through different points of view;
- Role-based prompting: assigning specific roles to the model, as Li & Wang (2024) did in their research, can help it better identify the context and specificity of its task. This is a technique that has shown to be efficient when output that is aligned with a specific role is required.

Although some other techniques might prove useful in the creation of a prompt (See Chen & al., 2025), the ones described above should be enough for carrying out simple tasks such as term mining and glossary creation. Now that some of the tools interpreters can use in their preparation phase have been presented, the third chapter will focus on a case study through a comparison of a human-made glossary and another one made through the help of a LLM, both based on a corpus.

3. Case study: GPT-5.5 Instant vs human-made glossary

So far, the importance of international relations and that of the role of the interpreter in shaping them have been examined. Interpreters have access to a wide array of tools they can use in order to handle the challenges that can emerge while providing their services. Drawing on Translation and Interpreting Studies, interpreters are equipped with a strong awareness of what their role and the communicative situation are, as well as what skills, kind of approach and terminology are required. Terminography combined with interpreting technologies can also be a powerful tool. The previous chapter has explored how corpora and AI can help interpreters gather terminological data, however during literature review little was found on the combination of both in terminological and terminographical activites, which, thus, begs the research questions: can AI be used to access large quantities of terminological data contained in corpora? If so, can such data be augmented through AI as well?

This study draws on the previous research carried out by Li & Wang (2024), focusing on term mining, and on the augmentation method proposed by Wayne & Garret (2023). Despite still being a preprint, this study offers and interesting take on the concept of 'data hallucination' which "generates sizable amount of synthetic data independently of the original data" (Wayne & Garret, 2023).

This research is based on a case study which consists of a comparative analysis of two glossaries, the first one being built through the use of concordancers and the second one through AI aiming at understanding whether AI can now be used not only for term mining but also for reliable source retrieval through the internet and data augmentation.

3.1 Subjects

As they have been recognised as important subjects of study regarding the political communication system (Liu, 2023), press conferences have been selected as an optimal context for terminographical research and, in order to have access to terminological data concerning this communicative setting, the aforementioned SCIPPC was chosen as a reliable source.

SCIPPC is a parallel corpus that contains recordings and transcriptions of consecutive interpreting services, provided in the Chinese-English language pair during Chinese premiers' press conferences since 2003 until 2017 (Liu, 2024). These conferences were held after the Two Sessions and saw the participation of approximately 170 speakers and six staff interpreters

of the Ministry of Foreign Affairs working in their B language (Liu, 2024). The creation of this corpus produced 192,209 tokens as well as 19 hours 43 minutes and 5 seconds of video recordings, the transcriptions of which have been aligned at source-target level (Liu, 2024). The SCIPPC is licensed to the public under the Creative Commons Attribution-ShareAlike 4.0 International license, a copy of this license is available at the following link http://creativecommons.org/licenses/by/4.0/.

Two concordancers, namely AntConc 4.3.1 [2] and AntPConc 1.2.1 [3], were used for semiautomatic term mining for building the human-made glossary.

The AI employed for automatic term mining was ChatGPT-5.5 Instant from OpenAI, available since May 2026. As using an API requires some knowledge in programming (see Wayne & Garrett, 2023), one means that was found to make the AI as stable as possible was to gain access to the ChatGPT-5.5 Instant Go plan, which grants access to higher usage limits (OpenAI, 2026a). ChatGPT was identified as the optimal candidate for this study because it has been previously found to have great potential in term mining, domain-specific knowledge retrieval, language translation, semantic analysis and intelligent recommendation (Li & Wang, 2024; Liu, et al., 2025). Previous models such as ChatGPT-4 and the current ChatGPT-5.5 Instant are now equipped with an internet search functionality which should allow for a better retrieval of reliable sources from the internet and their URLs (see Chen & al., 2025). Overall ChatGPT-5 is stated to outperform previous models on benchmarks (OpenAI, 2025), while its 5.5 Instant version seems to be more accurate than its predecessor ChatGPT-5.3 Instant (OpenAI, 2026c).

3.2 Methodology

To create the human-made glossary, the first step was to define the domain which was identified with diplomatic discourse regarding environmental protection. Some categories related to this domain were found during literature review and used as foundation for term mining. Namely human progress, development, ideologies, foreign relations, environmental protection, historical allusions, classical quotations, *Xíyán Xíyǔ* (习言习语)[4], designations and metaphors were found to be of most relevance (see Tipà, 2024; Zhan & Moratto, 2024).

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[2] As of May 25th 2026, a new 4.4.0 version is available at the following link https://www.laurenceanthony.net/software/antconc/.

[3] https://www.laurenceanthony.net/software/antpconc/.

[4] They are phrases and expressions used by President Xi Jinping in his speeches, covering different aspects such as politics, economy and culture (Zhan & Moratto, 2024). These terms which can be identified as various

Once the domain was defined, transcriptions were consulted through the use of the "file view" feature of AntConc, searching for relevant terminology. Attention was mainly focused on parts regarding environmental protection, though the whole texts were read. Once relevant terms were identified, they were searched on AntPConc through a "word" search, a "case" search and a combination of both as to see what and how many translations were provided; occurrences of translations were also searched through the same method to find other potential pairs. Gathered data was, then, arranged in an excel table. Once a list of possible relevant terminology was found, preliminary research on each term was carried out as to verify correlation between them and the domain. The glossary was then arranged into two main sections, one involving Chinese terms and the other their English counterparts, which were divided into three subsections, namely one containing the term, the second containing its definition and the third one displaying the URL or URLs of the online sources used to find said definition. To determine the meaning of the terminology contained in the glossary, online dictionaries and governmental, UN's or EU's websites were consulted, searching internet domains such as .gov.cn, .un and .eu. Moreover, it was also considered essential to ascertain the pairs could be considered acceptable and intelligible in the context of diplomacy, focusing on the communicative setting, as suggested by the Functionalist Approaches. For this reason, the United Nations Terminology Database, also known as UNTERM [5], was consulted. UNTERM is a multilingual database that seeks to align terminology relevant for meetings of the UN, thus it can be considered a reliable source for the identification of term pairs. In some instances, terminology was also verified through documents coming from the UN Official document System[6]. Whenever it was impossible to identify definitions or term pairs through these means, secondary sources were also consulted through platforms such as ResearchGate and JSTOR or journals like the South China Morning Post. Only when these steps were insufficient, were DeepL, Baidu Baike and Wikipedia used as a starting point for translation of terminology or retrieval of definitions. The latter were, thus, copied and pasted from online dictionaries and the aforementioned sources or inferred as suggested by Riediger (2023).

As for the methodology that concerns the glossary built with the help of ChatGPT-5.5 Instant, the first step was also defining the domain, which was the same as the human-made one. Secondly, 15 prompts were created following the three prompt engineering strategies that were

rhetorical devices, parallelisms and aphorisms to say a few, four-character structures, which are words or phrases consisting of 4 syllables that are used for aesthetic balance and which pose an important challenge for interpreters, and simple expressions used for conveying principles in a direct and comprehensible way (Zhan & Moratto, 2024).

[5] https://unterm.un.org/unterm2/en.

[6] https://documents.un.org/.

discussed in the second chapter. For the first one, role-based prompting was employed by identifying the AI as an interpreter. the first prompt also provided as clear and precise information as possible about setting, tools and categories that ChatGPT-5.5 Instant had to follow during the term mining process, as well as instructions on how to carry it out and the raw .txt files of the transcriptions of the first press conference. The prompt provided was as follows:

> "If you are an interpreter, you are given a parallel corpus in preparation for a diplomatic interpreting regarding environmental protection. You will be given a series of raw .txt files from the corpus. they will come in pairs, those with "st" in their name are source texts, the others are the target. Focusing on human progress, development, ideologies, foreign relations, environmental protection, historical allusions, classical quotations, 习言习语, designations and metaphors, extract relevant terminology from the source texts and find their translation in the target texts. Then put them in a table. [2003 conference files]".

Secondly, the remaining 9 source and target transcription pairs were input individually. After terming was completed, all resulting terminology was put in an excel table and searched through a "KWIC" search on AntConc and AntPConc as to ascertain whether the AI had hallucinated or all reported terms were actually in the provided sources. Once terminology verification was finished, the produced list was put through the same preliminary research, which was done for the semi-automatic term mining; the resulting list of selected terms was once again put into an excel list.

Prompts number 11 to 13 were repetitions of the following prompt:

> "The following is a list of selected terms to be inserted in a glossary. Find a definition for all of them searching reliable sources such as dictionaries and governmental websites such as .eu, .gov.cn, .gov,.int, .un. Finally, put them in a table divided into "term", "definition", to be inserted in the language in which the term is written, "source of definition", which will contain the URL of the used online sources. [list of selected terms]".

This input consisted of instructions on the construction of a glossary, which was to be built in the same manner as the human-made one, and a list of selected terms; the reason why three iterations of the same prompt were needed will be explained in the discussion of the experiment.

Prompt number 14 contained instructions regarding data augmentation and glossary building and was written as follows:

> “Generate a list of 10 possible useful terms to be inserted in the glossary for diplomatic interpreting regarding environmental protection. Terminology must not be present in the provided texts and must be inserted in a table, which will be divided into two main sections, one containing the Chinese terms and the other their English counterparts. each section must be further divided into "term", "definition", to be inserted in the language in which the term is written, "source of definition", which will contain the URL of the used online sources.”

Finally, the last prompt was a repetition of prompt number 14, with the term “counterparts” being replaced by “translations”; similarly to the previous step, reasons for this choice will be provided in the discussion.

Once all data was gathered, a comparative analysis was carried out on the building processes and the glossaries themselves. Focus was put on employed time, domain recognition, quality of the term mining process, terminographical research as well as quality of the two final products from the perspective of an interpreter.

3.3 Limitations

Being a relatively recent subject of study, it is important to note that this research has some limitations involving the person who is carrying it out, the tools that are employed and the methodology used to analyse it.

First of all, it is important to say that both glossaries were built by a beginner interpreter, which means that the time required to carry out each step and the use of the interpreting technologies might vary significantly depending on the individual, as a professional interpreter, for example, would face such challenges with a wider set of skills and knowledge.

Secondly, there probably is an issue of representativeness of the experiment for a series of reasons, starting from the fact that only one attempt and analysis were made, but also because the materials employed were probably too little, consisting merely of one corpus and only one AI model being tested; the same could be said for concordancers. Moreover, the impossibility of using an API made it also more difficult to create an environment that allowed for repeatability of the experiment, as the available versions of models can be subject to updates

or even be replaced by other ones, although it is likely possible that even if API were to be used and all controllable variables were stabilised, using the same prompt might not guarantee similar results to those of this experiment.

Lastly, on the issue of methodology, more knowledge on LLMs might have been necessary in order to better understand the issue at hand. For example, different prompt engineering strategies could have been applied to verify other possible behaviours and outputs. Furthermore, it is important to highlight that AI is considered a black-box which makes it hard to explain and interpret what is actually happening during its decision-making process (Komera & Manche, 2023; Somvanshi, et al., 2026). This issue is related to LLMs' complex design, which makes it difficult to draw correlations between inputs and outputs, thus creating a lack of transparency (Komera & Manche, 2023). Finding methods as to improve the interpretability[7] of these tools seems to be critical as to tackle three problematic aspects of LLMs, being bias and fairness, related to presence of biases in the data used to train these models, accountability, concerning the lack of transparency in the decision-making process, and trust, as a user cannot fully rely on LLMs if they cannot verify their outputs (Komera & Manche, 2023). The comparative study offered here is, therefore, only one possible method that can be applied to understand ChatGPT-5.5 Instant's behaviour and output, but this field of study is still being developed and other methodologies can be applied, ranging from analysis of the very architecture of these models to reverse-engineering (see Somvanshi & al., 2026).

3.4 Results and discussion

Just as with Li and Wang's study (2024), the difference of employed time between the building of the glossaries was quite significant, with the human-made one requiring approximately 5 working days while the other one taking only one working day. This difference is probably due to different factors one of them being domain recognition. For what concerns the human-made glossary, at the beginning of term mining the whole texts were thoroughly read as to search any possible relevant term. However, as the search continued more domain-related parts of discourse started to emerge and were given a higher priority than parts that were more concerned with other topics; this strategy, thus, required more time, concentration and effort in its initial part. Conversely, ChatGPT-5.5 Instant did not make such evaluations and proceeded

[7] The ability to understand and interpret the decision-making process of a machine learning model (Komera & Manche, 2023; Somvanshi *& al.*, 2026).

to extract all terminology it deemed necessary. This leads to another important factor influencing time which was the term mining process itself. Semiautomatic term mining produced a list of 131 terms while the automatic one through the use of ChatGPT-5.5 Instant resulted in a list of 814 terms, which were extracted in a considerably shorter amount of time. Nevertheless, some considerations should be made on why such terms were extracted and what impact prompting may have had on the LLM's choices. First of all, the difference in time employed for term mining was related to a problem with alignment, which is considered to be an essential aspect of parallel corpora and is particularly difficult to carry out in interpreting corpora, as interpreters are subject to time constraints in their renditions, regardless of the mode, which consequently can lead to lexical and syntax differences (Bendazzoli, 2010). As a matter of fact, "KWIC" searches sometimes produced results consisting of long chunks of text which impeded the retrieval of the translations of terms. In other instances, some terms such as *tóngzhì* (同志)[8] were omitted or translated by interpreters in ways that were apparently unrelated to the source such as with the designation "premier", which means that some search results required more time for analysis. This allowed for a deeper understanding of some strategies and reflection on rendition strategies which were not possible with the automatic mining, as most of times ChatGPT gave only one translation for each term, however, it also prolonged the time required for term mining. One possible solution to this alignment issue was using transcription symbols as a reference point to locate the term of interest. For what concerns the number of mined terms, as aforementioned, ChatGPT-5.5 Instant's output in this part of the experiment consisted of a table containing extracted terminology from source texts and translations from target texts. Moreover, apart from the 7th output, a third column was created and named "category" as to indicate to what aspect of the discourse the term refers to. Overall, generated tables contain only terminology from provided texts, which was in some instances cleared of superfluous elements, as is the case for the sentence *fǔbài hé wǒmen zhèngfǔ de xìngzhì kěyǐ shuō shuǐhuǒburóng* (腐败和我们政府的性质可以说水火不容)[9] which was reported as *fǔbài yǔ zhèngfǔ xìngzhì shuǐhuǒburóng* (腐败与政府性质水火不容)[10]. Moreover, some terms that were not identified during the semiautomatic mining were found and provided in the list, such as *chéngshìbìng* (城市病)[11]. However, it is important to highlight some peculiarities. First of all, as for Li and Wang's study (2024) ChatGPT-5.5 Instant's list was characterised by several

[8] Translated as "comrade" (Table A1).
[9] Translated as "corruption is at complete variance with the nature of our government" (Liu, 2024).
[10] Translated as "corruption is at complete variance with the nature of government" (OpenAI, 2026b).
[11] Translated as "urban malaise" (Table B4).

repetitions, which might have been prevented by explicitly instructing the LLM to avoid mining the same term with the risk of missing its few alternative translations as is the case for the previously mentioned *tóngzhì* (同志). The need for explicit indications also seems to be essential for two main reasons. Firstly, as previously mentioned, issues with domain recognition were found, as ChatGPT-5.5 Instant seems not to be able to recognise it and seems to be more focused on the single words in the prompt, rather than its meaning as a whole. however, the presence of "category" tags allowed for the identification of some autonomous decisions by the model, with the presence of terms related to finance, governance and economy, which were not explicitly requested, but are usually related to diplomacy (see Zhan & Moratto, 2024). Prompt engineering is once again a key factor not only for this reason, but also and especially for what is left behind. Despite the fact that ChatGPT-5.5 Instant seems to be more autonomous in its decision-making process, it is also important to note that some important terminology was not extracted. Because of ambiguity in the prompting, overload of information due to lengthy prompts or other reasons, designations were ignored. Dialectal forms such as *lèsè* (乐色)[12], which might help get acquainted with diatopic variations, and simpler terms such as *huánbǎo de ménkǎn* (环保的门槛)[13], which can still be considered part of relevant terminology, were also ignored, probably because they were not part of any of the suggested categories. What might be even more important is that terms referring to China's political institutions, important actors of Chinese environmental scene such as *Zhōngshíhuà* (中石化)[14] and technical terms such as *miànyuán wūrǎn* (面源污染)[15] are also absent, most probably because of the same reasons as for the previously described terminology. Being more precise while prompting or simply dividing prompts into smaller, more manageable chunks might help make the extraction more accurate. However, choosing this strategy might also hinder the identification of terminology that would have remained hidden had not the first prompt been so long and detailed.

After preliminary terminographical search, which produced a list of 52 terms for the human-made glossary and 58 for the other one, deeper search for definitions allowed for another aspect of this experiment to be analysed. As a matter of fact, more in depth terminographical research allowed for differentiation between terms that were translated with the same word in the target

[12] Translated as "rubbish" (Table A5).
[13] Translated as "environmental threshold" (Table A2).
[14] Translated as "Sinopec" (Table A5).
[15] Translated as "non-point source pollution" (Table A3).

texts, one example being *zǒngtǒng* (总统)[16], *zhǔxí* (主席)[17] and *zǒnglǐ* (总理)[18], all translated mostly as "president" but referring to three different designations. Search for definitions also allowed for the identification of aforementioned diatopic variations as well as the exploration of some concepts that can have a specific connotation in Chinese cultures, such as kēxué fāzhǎn (科学发展)[19], which might be inspired by Hu Jintao's kēxué fāzhǎnguān (科学发展观)[20]. However, the latter could be too difficult to insert and explain in a glossary, as it entails different aspects of the Chinese political culture, the explanation of which might not respect the communicative function of the diplomatic interpreting setting. Furthermore, thanks to the use of official sources, some important synonyms were found, for example the term *PM érdiǎnwǔ* (PM 二点五) had a similar meaning to *kēlìwù* (颗粒物) and they could both be translated as "PM2.5" or "particulates" (Table A4).

As for what concerns the glossary built through the use of AI, the output resulting from the eleventh prompt was not what was expected. Prompted terminology was not arranged as instructed, as both source and translation were put into one single column and divided by a slash. The task was thus split into two separate parts, the twelfth prompt focused on Chinese source terminology and the thirteenth on English target one, which were, then, researched starting from suggested sources as to confirm their definitions. Generally, the provided sources were links to homepages rather than the actual URL of the allegedly consulted source, while some even led to error pages, thus requiring human research starting from scratch or gathering of sources from the human-made glossary when possible. ChatGPT-5.5 Instant seems to have favoured sources in English rather than looking for original Chinese ones, maybe because of a bias towards them or because of the absence of more explicit instructions, as for example searching the .gov.cn domain can lead to websites that use both Chinese and English. Some of the provided links did not contain the information written in the definitions of the terms, however, they offered a good starting point for research. Chinese definitions coming from sources in English were probably translations of those provided for their English counterparts. Although not original, those definitions that did not refer to specific or technical concepts were kept, as they still fulfilled their purpose. However, more URLs were inserted as to provide more

[16] Translated as "president" (Table A4).
[17] Translated as "president", "chairman" or "chairperson" (Table A4).
[18] Translated as "premier" (Table A4).
[19] Translated as "scientific development" or "development in scientific way" (see Liu, 2024).
[20] Hu Jintao's Scientific Outlook on Development, which is a perspective on scientific development which is people-oriented and aims at a comprehensive, balanced and sustainable development following socialism with Chinese characteristics (The Academy of Contemporary China and World Studies, 2022).

accurate sources. This is the case for *Shànghǎi Hézuò Zǔzhī* (上海合作组织)[21], which is a proper noun and does not create any ambiguity. Some other links did not prove correlation between the specific or technical terms and their translations, which means that further research was required. Such is the case of *Nóngtián shuǐlì shèshī* (农田水利设施), the source of which was a link to the Food and Agriculture Organization of the United Nations[22], which did not prove correspondence between the Chinese original term and "water conservancy project" (Table B4). Finally, it is worth noting that analogy between terms such as *Qīngshān lǜshuǐ* (青山绿水) and *Lǜshuǐ qīngshān* (绿水青山)[23] was not recognised, so two separate terminological sheets were produced. It was, thus, necessary to unite them into one single sheet. The translation "verdant mountains and clear water" (Table B4) was kept as it better reflected the poetic effect that the original had and after some more research the Chinese terms were found to be part of *Xíyán Xíyǔ* (习言习语), an aspect which was not identified in the human-made glossary. After filtering all terminology through these methods, the final human-made glossary consisted of 31 pairs of terms, while the one built with the assistance of ChatGPT-5.5 Instant had only 13 pairs of terms collected from the corpus.

The augmentation of the glossary carried out through the last two prompts did result in the production of new terminology that was different from what it was contained in the corpus, though some considerations about the used prompts should be made. As a matter of fact, terminology produced through the first prompt was not aligned and the English terms were not translations of the Chinese ones, which might be due to a lack of clarity in the input. As to solve this problem, the word "counterparts" from the second to last prompt was changed into "translations" in the last one, which caused the output to improve considerably, with the result being new terms with their translations, though they were yet again not aligned. Regarding the sources provided, the same methodology of analysis was used as for the previous outputs, and the same considerations can be made. After augmentation using terminology from both final outputs and searching for translations of terms generated in only one language, the resulting glossary consisted of a total of 24 pairs of terms each with their own definitions as for the human-made glossary. However, it should be noted that differently from Wayne and Garret's study (2023), Mandarin Chinese, which is specifically the dialect of Chinese that is taken into consideration in this study, is not a low resource language, meaning that it is not a language

[21] Translated as "Shanghai Cooperation Organization" (Table A5).
[22] https://www.fao.org/home/en.
[23] Translated as "gorgeous scenery" (Table A2) or "verdant mountains and clear water" (Table B4).

“with limited high-quality, well-labelled data” (Noor & Kanitroj, 2025), and it is even used as a pivot in order to enhance neural machine translations between other Chinese dialects and English (see Suen et al., 2024). This aspect combined with the fact that, differently from Wayne and Garret’s study (2023), the goal of this experiment was not creating whole texts considerably increases the probability of producing new AI generated terminology and consequently further augmenting the final glossary.

Looking at the quality of the final products from the perspective of an interpreter, both glossaries contain terminology coming from different fields which is probably to ascribe to the corpus used, which contains discussions about a wide array of topics.

Conclusions

International relations are a key aspect of our reality, be it because of the great influence they have on major events around the world or the apparently minor impact they have on everyday life. The role of the interpreter in this context cannot be ignored, and research has proven how influential they can be in shaping the international environment. This work has mainly focused on discourse and diplomacy concerning the environment; however, it would not be that unrealistic to state that it could be generalised to all aspects of international relations and interpreting services in this setting. Corpora have been used as tools to study and describe languages, although it is reasonable to say that it would be difficult for an interpreter to utilise them, as their profession requires to gather as much information on a subject as quickly and efficiently as possible. Nevertheless, the goal of this work was to explore whether AI, LLMs in particular, can shorten the time needed to consult these sources. After having carried out a literature review and having experimented with ChatGPT-5.5 Instant, the answer is not as straightforward as one might think. This study proves once again that having some knowledge of prompt engineering is an important skill required for optimising interaction with LLMs. Although this study has demonstrated that ChatGPT-5.5 Instant and other LLMs alike can in fact can carry out term mining on bigger amounts of data, this comes at the cost of losing some important information, that a semiautomatic term ming could allow to gather. First of all, it seems that it is not possible to set a domain to guide the AI in its search for terminology. Secondly, if not instructed, the AI will not gather all possible translations of the same term, so it would be critical to assess which kind of prompt would be most beneficial. This opens a possibility for new content in the field of teaching to be added, if these models were to be

considered a valuable tool for interpreters, as well as new research regarding prompt engineering in the field of interpreting. It is important, though, to highlight that as this technology develops, new solutions to overcome this kind of challenges might be found. Consequently, as mentioned by other scholars, research on the matter should keep the pace with innovation (see Chan, 2025).

For what concerns search of definitions, internet search functionalities have not made this tool more reliable, as the provided sources were mostly insufficient to justify the information about the selected terminology. ChatGPT-5.5 Instant does not carry out thorough research on the internet when prompted but it does rather seem to provide information gathered by unknown sources and label it as if it came from the websites it was prompted to search. Although, it could be possible that such information does come from reliable sources the AI has searched, as the provided definitions were correct; pinpointing the actual sources seems to be very difficult if not impossible, so issues regarding trust are still quite present. It has also been observed a possible a bias towards sources written in English, which would greatly influence the outcome of terminographical research.

Regarding the quality of the produced glossaries, as already stated in the discussion, the heterogeneity and almost lack of cohesion of the contained terms might be attributed to the corpus itself. Tailored corpora on a specific topic or setting could help create more specific glossaries. Augmentation of glossaries could also be another solution. In the case the available corpora or material in general were to be insufficient, this process would give interpreters the possibility to generate more terminological data through accurate prompting. Gathered terms could be further researched and refined in order to improve the base glossary.

If used consciously, LLMs can be a valuable asset for terminology management helping the interpreter access considerable amounts of data or expanding the terminological pool where provided material are insufficient. However, AI can also be considered a proverbial double-edged sword, as this work revealed issues related to bias and fairness, accountability as well as trust, meaning that it is very difficult to make use of AI in an ethical way. Moreover, one last aspect that cannot be ignored is that related to the environmental impacts of AI (Chouksey et al., 2025; Fantinouli, 2025). As this work is in some degree related to the issue of climate change and sustainability, it is important to highlight that AI is the main protagonist of what Chouksey et al. (2025) call the “sustainability paradox”. As aforementioned, AI is used in different fields including that of sustainability, helping to improve serious environmental issues by shaping new ways of energy management and natural ecosystems monitoring among others (Chouksey et al. 2025). Arguably, AI also contributes more indirectly to this field, by providing

a useful tool for terminology management in interpreting, as communication and international relations are fundamental to coordinate global human action. Nevertheless, AI is also an important source of pollution in the contemporary world (Chouksey et al. 2025). Studies found that "AI can progress toward 134 Sustainable Development Goal (SDG) targets but may also negatively affect 59 others" (Chouksey et al. 2025). AI's demand for electricity is rising, rapid development of AI technologies has increased the electronic waste, while carbon emissions, water consumption and issues with supply chain are also important factors, making this technology unsustainable (Chouksey et al. 2025). That being said, Chouskey et al. (2025) also argue that AI's future is yet to be determined, as the choices made today will shape the environmental impact it will have.

Overall, AI in the form of LLMs can be a powerful tool for interpreters to use in terminology management, although it is important to consider how to use it in a way that is as ethical as possible in both the realm of human interactions and its environmental impact. currently, this technology seems to have important issues related to these aspects, but, as it develops, new breakthroughs could be made, as to allow for a use that would not negatively influence human relations and those with nature.

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Appendix A

Human-made glossary

The following appendix consists of the human-made glossary, which was divided into 5 tables and arranged vertically to facilitate viewing of its content.

Table A1

Chinese			English		
Term	Definition	Source of definition	Term	Definition	Source of definition
落后产能	处于较低发展水平上的生产能力。	https://cd.hwxnet.com/view/johnngadnioiocak.html https://unterm.un.org/unterm2/en/search?searchTerm=%E4%BA%A7%E8%83%BD&searchType=1&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&sortBy=&sortDirection=&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true	backward production capacity	Production capacity characterized by high energy consumption, heavy pollution, poor processing technology, and weak security, which results in environmental pollution.	Jia, W., Xie, R., Ma, C., Gong, Z., Wang, H. (2024). Environmental regulation and firms' emission reduction：The policy of eliminating backward production capacity as a quasi-natural experiment. *Energy Economics*, 130, Article 107271. https://doi.org/10.1016/j.eneco.2023.107271.
生态环境执法局	生态环境部的局，监督生态环境政策、规划、法规、标准的执行，组织拟订重特大突发生态环境事件和生态破坏事件的应急预案，指导协调调查处理工作，协调解决有关跨区域环境污染纠纷，组织实施建设项目环境保护设施同时设计、同时施工、同时投产使用制度。	https://english.mee.gov.cn/About_MEE/Internal_Departments/202501/t20250106_1100018.shtml	Bureau of Ecological and Environmental Enforcement	Bureau of the Ministry of Ecology and Environment that upervises the implementation of ecological and environmental policies, plans, regulations and standards. It guides and coordinates the investigation and handling of such incidents and events and the resolution of cross-regional environmental pollution disputes. It organizes and implements the system requiring simultaneous design, construction, and operation of environmental protection facilities for construction projects.	https://english.mee.gov.cn/About_MEE/Internal_Departments/202501/t20250106_1100018.shtml
党中央； 中国共产党中央委员会； 党的中央委员会	共产党的最高领导机构。在全国代表大会闭会期间，中央委员会执行全国代表大会的决议，领导党的全部工作，对外代表中国共产党。	https://dict.baidu.com/s?wd=%E5%85%9A%E4%B8%AD%E5%A4%AE&device=pc&from=home https://cd.hwxnet.com/view/jeekbgiaapacalkl.html	Central Committee of the Communist Party of China (CPC); Party's Central Commitee	Top leadership body of the Chinese Communist Party. It is tasked with carrying out the decisions of the National Congress, leading the work of the party, and representing the party internationally.	https://multimedia.scmp.com/infographics/news/china/article/3185694/ccp-fulllist/index.html https://www.fmprc.gov.cn/eng/xw/zyxw/202510/t20251023_11739505.html https://en.wikipedia.org/wiki/Central_Committee_of_the_Chinese_Communist_Party
中全会； 中央委员会全体会议	由中央政治局召集的会议。每年至少举行一次。中央政治局向它报告工作，接受监督。	https://www.bbc.com/zhongwen/articles/cp3xnrvg55ro/simp https://www.12371.cn/special/zggcdzc/zggcdzcqw/	Chinese Communist Party's Central Committee plenum; CPPCC plenum	Meetings where political decisions and goals are set. They usually see the attendance of the Central Committee, which consists of over 370 full and alternate members who hold key party and state positions, including members of the Politburo, ministers, provincial party secretaries, senior generals and heads of state-owned enterprises.	http://en.cppcc.gov.cn/plenarysessions.html https://www.scmp.com/news/china/politics/article/3241122/chinese-communist-party-plenums-what-cycle-and-what-can-we-expect
同志	为共同理想事业而奋斗的人，特指同一个政党的成员党员同志。	https://cd.hwxnet.com/view/klihalgmmkagjpch.html	comrade	A member of the same political group, especially a communist or socialist group or a trade union.	https://dictionary.cambridge.org/dictionary/english/comrade
能源强度	能源利用与经济或物理产出之比。	https://unterm.un.org/unterm2/en/search?searchTerm=%E8%83%BD%E6%BA%90%E5%BC%BA%E5%BA%A6&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=fr&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true	energy intensity	The ratio of energy use to economic or physical output.	https://unterm.un.org/unterm2/en/search?searchTerm=%E8%83%BD%E6%BA%90%E5%BC%BA%E5%BA%A6&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=fr&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true

Table A2

Chinese			English		
Term	Definition	Source of definition	Term	Definition	Source of definition
环保的门槛	环境保护的界限。	https://cd.hwxnet.com/view/olonbngangakogan.html https://cd.hwxnet.com/view/cbadgkpkaamlkeha.html	environmental threshold	The level or point at which you start to experience something, or at which something starts to happen or change, in this case concerning the environment.	https://dictionary.cambridge.org/dictionary/english/threshold
尾气排放	机动车辆或其他设备在工作过程中所排出的废气。	https://cd.hwxnet.com/view/ebgiknebjahbngdo.html	exhaust emissions; tailpipe emissions	The waste gas from an engine.	https://unterm.un.org/unterm2/en/search?searchTerm=%E5%B0%BE%E6%B0%94%E6%8E%92%E6%94%BE&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=fr&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true https://dictionary.cambridge.org/example/english/exhaust-
五年规划	是中国国民经济计划的重要部分，属长期计划。	https://www.smsy.gov.cn/hdjl/hdjlzsk/fgj/202209/t20220930_1834155.htm	Five-Year Plan	Plan that establishes medium- to long-term objectives, defines major priorities, and outlines policy directions that steer national development.	http://english.scio.gov.cn/m/in-depth/2026-03/04/content_118359611.html
总书记	政党各级组织的主要负责人。中国共产党中央委员会设总书记。	https://cd.hwxnet.com/view/ocojlbmoobhmcmba.html	general secretary	The person in charge of an organization, for example, a trade union (= an organization that represents workers) or political party.	https://dictionary.cambridge.org/dictionary/english/general-secretary
青山绿水； 绿水青山	美好国土。	https://cd.hwxnet.com/view/johdhfjclcfahbhj.html	gorgeous scenery	/	https://dictionary.cambridge.org/dictionary/english/gorgeous https://dictionary.cambridge.org/dictionary/english/scenery
人为因素	人造成的因素	https://cd.hwxnet.com/view/hopflnfkgnbopbbp.html	human factors	/	https://unterm.un.org/unterm2/en/search?searchTerm=%E4%BA%BA%E4%B8%BA%E5%9B%A0%E7%B4%A0&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true

Table A3

Chinese			English		
Term	Definition	Source of definition	Term	Definition	Source of definition
不是棉花棒，是杀手锏	【比喻】是指主体不跟棉花棒一样无效，而是跟杀手锏一样最有效。	https://www.xinhuanet.com/politics/2015lh/2015-03/15/c_1114643370.htm https://cd.hwxnet.com/view/nbpfkhgngomljknp.html	it isn't a house of cards, it's a trump card.	Metaphor that implies that the subject of the sentence is not something weak, but it is rather the most effective thing.	https://grammartwists.com/metaphors-for-useless/#A_House_of_Cards https://dictionary.cambridge.org/dictionary/english/house-of-cards https://dictionary.cambridge.org/dictionary/english/trump-card
东京议定书	于1997年12月11日获得通过的协议。通过使工业化国家和转型经济体承诺根据商定的具体目标限制和减少温室气体（GHG）排放，落实《联合国气候变化框架公约》。《公约》本身只要求这些国家采取减缓政策和措施，并定期报告。	https://unterm.un.org/unterm2/en/search?searchTerm=%E4%B8%9C%E4%BA%AC%E8%AE%AE%E5%AE%9A%E4%B9%A6&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true https://unfccc.int/zh/kyoto_protocol	Kyoto Protocol	Adopted on 11 December 1997, it operationalizes the United Nations Framework Convention on Climate Change by committing industrialized countries and economies in transition to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets. The Convention itself only asks those countries to adopt policies and measures on mitigation and to report periodically.	https://unfccc.int/process-and-meetings/the-kyoto-protocol https://unterm.un.org/unterm2/en/search?searchTerm=%E4%B8%9C%E4%BA%AC%E8%AE%AE%E5%AE%9A%E4%B9%A6&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true
全国人民代表大会； 人民代表大会； 全国人大； 人大会议	中国最高国家权力机关。由省、自治区、直辖市人民代表大会和人民解放军选出的代表组成，具有广泛的代表性。每届任期五年，如遇特殊情况，可以延长本届任期，或提前召开全国人民代表大会。每年举行	https://cd.hwxnet.com/view/moopbldnldiepgkn.html https://cd.hwxnet.com/view/jeglfagcanglkpdj.html https://cd.hwxnet.com/view/ffdfmcelcaindbom.html	National People's Congress; NPC	PRC's highest state organ of power, composed of deputies elected from the provinces, autonomous regions, cities directly under central government jurisdiction, special administrative regions and armed forces and with term of five years.	http://en.npc.gov.cn.cdurl.cn/statestructure.html
老天爷	源于迷信的词，是指一个个主宰一切的神。	https://cd.hwxnet.com/view/kapglmlahfnokhal.html	Nature	The force that is responsible for physical life and that is sometimes spoken of as a person:	https://dictionary.cambridge.org/dictionary/english/nature
面源污染	在降雨径流的淋溶和冲刷作用下，大气、地面和土壤中的污染物进入受纳水体而引起的环	https://unterm.un.org/unterm2/en/search?searchTerm=%E9%9D%A2%E6%BA%90%E6%B1%A1%E6%9F%93&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLa	non-point source pollution	Pollution that is diffused and without a single point of origin or not introduced into a receiving stream from a specific outlet. It generally results from land runoff, precipitation, atmospheric deposition, drainage,	https://unterm.un.org/unterm2/en/search?searchTerm=%E9%9D%A2%E6%BA%90%E6%B1%A1%E6%9F%93&searchType=0&searchLanguages=ar&searchLanguages=en&searchLa
中石油	国有重要骨干企业和全球主要的油气生产商和供应商之一，是集油气和新能源、炼化销售和新材料、支持和服务、资本和金融等业务于一体的综合性国际能源与化工公司。	https://www.cnpc.com.cn/cnpc/gywm/gywm_index.shtml	PetroChina	Largest oil and gas producer and seller occupying a leading position in the oil and gas industry in the PRC and one of the largest companies in the PRC in terms of revenue and one of the largest oil companies in the world. The Group principally engages in, among other things, the exploration, development, production, transportation and marketing of crude oil and natural gas, and new energy business	https://www.petrochina.com.cn/ptr/gsjj/gsjs_common.shtml

Table A4

Chinese			English		
Term	Definition	Source of definition	Term	Definition	Source of definition
光伏产品	一种通过调集固态装置中的电子，直接将光能转换成电能的技术的产品。	https://unterm.un.org/unterm2/en/search?searchTerm=%E5%85%89%E4%BC%8F&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true	photovoltaic products	Products that are capable of converting light energy directly into electricity by mobilizing electrons.	https://unterm.un.org/unterm2/en/search?searchTerm=%E5%85%89%E4%BC%8F&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true
PM二点五； PM2.5； 颗粒物； 扬尘	大气中空气动力学当量直径小于或等于2.5微米的微粒。产生的主要来源，是日常发电、工业生产、汽车尾气排放等。	https://www.lg.gov.cn/hdjl/ywzsk/hjbh/content/post_9428131.html https://meeb.sz.gov.cn/hdjl/ywzsk/ggfwl/content/post_11521030.html https://qyp.nc.gov.cn/qypqrmzf/zcjd1/202112/7a58d794540e48d0874823a9b19c26e0.shtml	PM two point five; PM2.5; particulates; particulate matter	Tiny particles or droplets in the air that are 2.5 microns or less in width. They represent a concern for people's health when levels in air are high. They are formed during industrial production processes, combustion processes, mechanical processes.	https://unterm.un.org/unterm2/en/search?searchTerm=%E9%A2%97%E7%B2%92%E7%89%A9&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true
先污染、后治理	先污染环境，然后整治。	https://www.mee.gov.cn/gkml/sthjbgw/qt/201310/t20131009_261311.htm https://cd.hwxnet.com/view/fbcfmnmbncohikco.html https://cd.hwxnet.com/view/hpanpblneaegfkdo.html	polluting first and then restoring the environment	/	https://dictionary.cambridge.org/dictionary/english/pollute https://dictionary.cambridge.org/dictionary/english/restore?q=restoring
总理	中央政府首脑的名称之一。	https://cd.hwxnet.com/view/ipeikbabfgaohfhi.html	premier	(Especially used in news reports) the leader of the government of a country, or of a large part of a country.	https://dictionary.cambridge.org/dictionary/english/premier
总统	共和国的国家元首名称之一。由选举产生，有一定任期。实行总统制的国家，总统既是国	https://cd.hwxnet.com/view/jnpbemaiehndelmf.html	president	(The title given to) the person who has the highest political position in a country that is a republic and who, in some of these countries, is the leader of the government.	https://dictionary.cambridge.org/dictionary/english/president
主席	某些国家的政府机关、党派或团体某一级组织的最高领导职位的名称。	https://cd.hwxnet.com/view/mlccojijghheigma.html	president; chairman; chairperson	The person who has the highest political position in a country or is in charge of a meeting, organisation, department or committee.	https://dictionary.cambridge.org/dictionary/english/president https://dictionary.cambridge.org/dictionary/english/chairperson

Table A5

Chinese			English		
Term	Definition	Source of definition	Term	Definition	Source of definition
乐色	作为“垃圾”的另一读音时，在港台地区“垃圾”读作lèsè，后渐写作“乐色”并蔓延至全国。	https://baike.baidu.com/item/%E4%B9%90%E8%89%B2/11035756	rubbish	Waste material.	https://dictionary.cambridge.org/dictionary/english/rubbish
上海合作组织	中国、俄罗斯、哈萨克斯坦、吉尔吉斯斯坦、塔吉克斯坦和乌兹别克斯坦六国2001年6月15日在上海宣布成立的政府间国际组织。各成员国遵循公认的国际法原则与准则，在彼此共同关心的领域，发展长期睦邻、友好与合作关系。上海合作组织的主要宗旨是：加强成员国之间的相互信任与睦邻友	https://chn.sectsco.org/20151209/26996.html	Shanghai Cooperation Organization; SCO	Organisation consisting of ten member states, developing long-term relations of good-neighbourliness, friendship and cooperation in the spheres of mutual interest based on the universally recognised principles and norms of international law. Its goals are strengthening mutual trust, promoting multilateral interaction to maintain and ensure peace, security and stability in the region, jointly adressing new challenges and threats, encouraging effective and mutuallt beneficial cooperation in various spheres, promoting economic growth and social and cultural development.	https://eng.sectsco.org/20170109/192193.html
中石化	中华人民共和国最大的一体化能源化工公司之一，主要从事石油与天然气勘探开采、管道运输、销售。	http://www.sinopec.com/listco/000/000/041/41630.shtml	Sinopec	A listed company on domestic and international stock exchanges with integrated upstream, midstream and downstream operations, strong oil & petrochemical core businesses and a complete marketing network.	http://www.sinopec.com/listco/en/000/000/041/41662.shtml
国务院	中国最高国家权力机关的执行机关，即最高行政机关，也就是中央人民政府，由总理、副总理、国务委员、各部部长、各委员会主任等人员组成。国务院对全国人民代表大会和它的常务委员会负责并报告工作。	https://cd.hwxnet.com/view/cmdnplhaiobfefbg.html	State Council	the executive organ of the highest state organ of power; it is the highest state administrative organ and it is composed of the following personnel: a premier, vice premiers, state councilors, ministers of ministries, ministers of commissions, an auditor general, and a secretary-general.	https://english.www.gov.cn/archive/chinaabc/201911/22/content_WS5ed77233c6d0b3f0e9499854.html
人大代表和政协委员；代表委员	各级人大代表是各级国家权力机关的组成人员，即全国人大代表是最高国家权力机关的组	http://www.locpg.gov.cn/jsdt/2019-02/26/c_1210068565.htm	The deputies and the members	Locution indicating elected members of the NPC and of the National Committee of the Chinese People's Political Consultative Conference (CPPCC).The former are broadly representative, including workers,	http://en.cppcc.gov.cn/2024-04/22/c_981188.htm
两会	是指“全国两会”，即全国人大和全国政协每年春天在北京召开的两个重要会议。	https://www.bjrd.gov.cn/rdzl/rdzc/zswd/202012/t20201222_2180784.html	Two sessions	Annual meetings of China's top legislature, the National People's Congress (NPC), and the CPPCC.	http://en.cppcc.gov.cn/2025-03/03/c_1074281.htm
城乡协议	城镇和乡村共同商量或谈判后取得的一致意见。	https://cd.hwxnet.com/view/fmoeejmolfhigolf.html https://cd.hwxnet.com/view/nlnlbjcbjnhofoep.html	urban-rural agreement	Agreements and coordination between urban and rural areas	https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Urban-rural_Europe_-_introduction#Introduction_to_territorial_typologies https://unterm.un.org/unterm2/en/search?searchTerm=%E5%9F%8E%E4%B9%A1&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&sortBy=&sortDirection=&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true https://unterm.un.org/unterm2/en/search?searchTerm=%E5%8D%8F%E8%AE%AE&searchType=1&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&subjects=Agriculture&subjects=Agriculture%20and%20agro-industry&subjects=Agro-industry&subjects=Climate%20change&subjects=Development%20%28general%29&subjects=Economic%20development&subjects=Environment%20%28general%29&subjects=Industrial%20development&subjects=Land%20use%20and%20human%20settlements&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=true&buildSubjectList=false

Appendix B

AI glossary

The following appendix consists of the glossary made using ChatGPT-5.5 Instant, which was divided into 4 tables and arranged vertically to facilitate viewing of its content.

Table B1

Chinese			English		
Term	Definition	Source of definition	Term	Definition	Source of definition
一带一路高峰论坛	中国倡议举办的高级别国际合作论坛，旨在推动“一带一路”框架下的互联互通、贸易投资和共同发展合作。	http://2017.beltandroadforum.org/n100/2017/0514/c24-407.html	Belt and Road Forum for International Cooperation	A high-level international forum launched by China to promote cooperation under the Belt and Road Initiative in areas such as infrastructure, connectivity, trade and sustainable development.	http://2017.beltandroadforum.org/english/n100/2017/0410/c22-45-4.html
蓝碳	利用海洋生态系统吸收和封存二氧化碳的过程及其储存的碳。	https://www.iaea.org/zh/newscenter/news/shi-yao-shi-lan-tan	blue carbon	Carbon captured and stored by coastal and marine ecosystems such as mangroves, salt marshes and seagrasses.	https://unterm.un.org/unterm2/en/search?searchTerm=blue%20carbon&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true https://www.iaea.org/newscenter/news/what-is-blue-carbon
碳达峰	指二氧化碳排放量达到历史最高值后进入下降阶段。	https://www.news.cn/world/2023-12/08/c_1130014971.htm	carbon dioxide emissions peak; CO2 emissions peak	Point at which CO2 emissions peak for each country, in order to start falling	https://www.nature.com/articles/s43247-023-00687-8
碳中和	指通过植树造林、节能减排等方式抵消人为产生的二氧化碳排放，实现净零排放。	https://www.news.cn/world/2023-12/08/c_1130014971.htm	carbon neutrality	The property of having net zero emissions of atmospheric carbon dioxide.	https://unterm.un.org/unterm2/en/search?searchTerm=carbon%20neutrality&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true
双碳目标	指“碳达峰”与“碳中和”目标，即中国力争2030年前实现碳达峰、2060年前实现碳中和。	https://cn.chinadiplomacy.org.cn/2022-10/11/content_78460529.shtml	dual carbon goals	China’s policy goals of reaching peak carbon emissions before 2030 and achieving carbon neutrality before 2060.	https://english.shanghai.gov.cn/en-SustainabilityESG/20231220/d04723d6215043faa070a5a73fba1afa.html
生态文明	以人与自然和谐共生为核心的发展理念和社会形态。	https://sthjt.hunan.gov.cn/sthjt/ztzl/lwhjr/hbzs/201206/t20120606_4632697.html https://unterm.un.org/unterm2/en/search?searchTerm=%E7%94%9F%E6%80%81%E6%96%87%E6%98%8E&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true	ecological civilisation	Vision of China about the environmental global crises, which stresses the harmonious coexistence of man and nature.	https://english.mee.gov.cn/News_service/media_news/202110/t20211015_956692.shtml https://unterm.un.org/unterm2/en/search?searchTerm=%E7%94%9F%E6%80%81%E6%96%87%E6%98%8E&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true

Table B2

Chinese			English		
Term	Definition	Source of definition	Term	Definition	Source of definition
生态补偿	为保护生态环境、促进资源节约利用而建立的补偿机制。	http://www.zhongxian.gov.cn/hdjl_156/zcwd/sthjj/202412/t20241203_13853065.html	ecological compensation	A policy mechanism that provides economic compensation for environmental protection and ecosystem conservation efforts.	https://english.www.gov.cn/policies/latestreleases/202404/10/content_WS66168934c6d0868f4e8e5ea7.html
生态保护红线	为维护国家生态安全和可持续发展而划定并严格保护的生态空间边界。	https://sthj.guizhou.gov.cn/hdjl/zhishiku/zrstbh/202309/t20230915_82412264.html	Ecological Redline Policy ; ERP	Policy whereby governments designate and enforce regulatory targets on ecosystem area at the landscape level, which is considered a 'lifeline' to protect ecosystem functioning for vital services.	Jiang, B., Bai, Y., Wong, C. P., Xu, X., Alatalo, K. M. (2019). China's ecological civilization program–Implementing ecological redline policy. *Land Use Policy*, 81, 111-114 https://doi.org/10.1016/j.landusepol.2018.10.031
排放量交易计划	对经济体中明确界定的部门允许排放的温室气体上限进行定义的计划。	https://icapcarbonaction.com/zh/guanyutanpaifangquanjiaoyitixiets https://unterm.un.org/unterm2/en/search?searchTerm=emission%20trading%20system%20%28ets%29&searchType=0&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true	emissions trading system	A market-based mechanism used to control pollution by providing economic incentives for reducing emissions.	https://climate.ec.europa.eu/eu-action/carbon-markets/about-eu-ets_en
五年规划	中国国民经济计划的重要部分，属长期计划。	https://www.smsy.gov.cn/hdjl/hdjlzsk/fgj/202209/t20220930_1834155.htm	Five-Year Plan	Plan that establishes medium- to long-term objectives, defines major priorities, and outlines policy directions that steer national development.	http://english.scio.gov.cn/m/in-depth/2026-03/04/content_118359611.html https://www.smsy.gov.cn/hdjl/hdjlzsk/fgj/202209/t20220930_1834155.htm
林长制	以地方党政领导负责森林和草原资源保护发展的管理制度。	https://www.forestry.gov.cn/c/www/xzsl/45540.jhtml	forest chief system	A governance mechanism assigning local authorities responsibility for forest and grassland protection and management.	https://english.www.gov.cn/statecouncil/ministries/202203/10/content_WS62294dbec6d09c94e48a65bb.html
偷排偷放	未经许可或违反环境法规，非法排放废气、废水或其他污染物的行为。	https://www.wz.gov.cn/zwgk_266/zfxxgkml_3393/zcwj_147297/qtwj_1/202003/t20200330_6651527.html https://china.chinadaily.com.cn/shizheng/2015-03/11/content_19775541.htm	illegal emissions and discharges	Unauthorized or unlawful release of pollutants, wastewater, gases or hazardous substances into the environment in violation of environmental regulations.	https://www.europarl.europa.eu/news/en/press-room/20231114IPR10506/pollution-from-ships-stricter-measures-to-stop-illegal-discharges Li, H., Lu, J. (2021). Can stable environmental protection officials' tenure reduce illegal emissions?. *Socio-Economic Planning Sciences* , 78, Article 101055 https://doi.org/10.1016/j.seps.2021.101055

Table B3

Chinese			English		
Term	Definition	Source of definition	Term	Definition	Source of definition
不是棉花棒是杀手锏	比喻主体必须具有真正的威慑力和执行力，而不能流于形式、软弱无力。	https://www.xinhuanet.com/politics/2015lh/2015-03/15/c_1114643370.htm https://cd.hwxnet.com/view/nbpfkhgngomljknp.html	it should be a powerful weapon, not cotton candy	A metaphor meaning that the subject should be forceful and effective rather than weak or merely symbolic.	https://dictionary.cambridge.org/dictionary/english/cotton-candy
公正转型	对发展中国家公平的绿色发展机构。	https://unterm.un.org/unterm2/en/search?searchTerm=%E5%85%AC%E6%AD%A3%E8%BD%AC%E5%9E%8B&searchType=1&searchLanguages=ar&searchLanguages=en&searchLanguages=es&searchLanguages=fr&searchLanguages=ru&searchLanguages=zh&languagesDisplay=en&languagesDisplay=zh&acronymSearch=true&localDBSearch=true&termTitleSearch=true&phraseologySearch=false&footnoteSearch=false&fullTextSearch=false&facetedSearch=false&buildSubjectList=true https://www.fmprc.gov.cn/web/zyxw/202507/t20250707_11666844.shtml	just transition	Key tool to ensure that the transition towards sustainable, low-carbon and climate-neutral economy is fair and inclusive.	https://doi.org/10.1016/j.landusepol.2018.10.031
京都议定书	《联合国气候变化框架公约》下具有法律约束力的国际条约，要求工业化国家和经济转型国家承担温室气体减排义务。	https://unfccc.int/process-and-meetings/the-kyoto-protocol?utm_source=chatgpt.com	Kyoto Protocol	An international treaty under the United Nations Framework Convention on Climate Change that commits industrialized countries to legally binding greenhouse gas emission reduction targets.	https://unfccc.int/process-and-meetings/the-kyoto-protocol?utm_source=chatgpt.com
说到做到	言行一致，说过的话一定用行动实现。	https://cd.hwxnet.com/view/ekfjblakfkofimaj.html	match words with action	Act reflecting ones' own promises, ideologies and statements	https://dictionary.cambridge.org/dictionary/english/match
排污许可制度	对排污单位依法核发许可证并实施监督管理的环境管理制度。	https://www.mee.gov.cn/zcwj/zcjd/202101/t20210129_819523.shtml	pollutant discharge permit system	A regulatory system under which entities must obtain permits for pollutant emissions and comply with environmental standards.	https://english.mee.gov.cn/News_service/media_news/201801/t20180118_429901.shtml https://english.mee.gov.cn/News_service/media_news/201611/t20161123_368038.shtml
先污染、后治理	指以牺牲环境为代价优先发展经济，待污染形成后再进行治理的发展模式。	https://www.mee.gov.cn/gkml/sthjbgw/qt/201310/t20131009_261311.htm https://cd.hwxnet.com/view/fbcfmnmbncohikco.html https://cd.hwxnet.com/view/hpanpblneaegfkdo.html	pollute first and clean up later	A development approach in which economic growth is prioritized at the expense of the environment, with pollution addressed only after serious environmental damage occurs.	https://dictionary.cambridge.org/dictionary/english/pollute https://dictionary.cambridge.org/dictionary/english/restore?q=restoring

Table B4

Chinese			English		
Term	Definition	Source of definition	Term	Definition	Source of definition
河长制	由各级党政负责人担任河流管理保护责任人的水环境治理制度。	https://www.cqcs.gov.cn/hdjl_164/zcwd/202202/t20220217_10407385_wap.html	river chief system	A water governance mechanism in which local officials are assigned responsibility for river and lake management and protection.	http://www.mwr.gov.cn/english/News/WaterNews/202510/t20251001_2072440.html
上海合作组织	区域性政府间国际组织，成立于2001年，旨在加强成员国之间的互信与睦邻友好，维护地区和平、安全与稳定，并推动政治、经济、科技、文化等领域合作。	https://eng.sectsco.org/20260306/2186042.html?utm_source=chatgpt.com https://chn.sectsco.org/20151209/26996.html	Shanghai Cooperation Organisation Secretariat	An intergovernmental regional organization established in 2001 to strengthen mutual trust and good-neighborliness among member states and promote cooperation in politics, security, trade, science, culture and other fields.	https://eng.sectsco.org/20170109/192193.html
城市病	指城市化快速发展过程中产生的交通拥堵、环境污染、住房紧张、公共服务压力等问题。	https://cd.hwxnet.com/view/fenigcjmngdippdj.html https://www.beijing.gov.cn/zhengce/zwmc/202103/t20210322_2313772.html	urban malaise	Social, environmental problems caused by urbanization, such as congestion and pollution.	https://www.sciencedirect.com/science/article/pii/S0264275119311102
青山绿水； 绿水青山	形容生态环境优美、山清水秀的自然状态。	https://cd.hwxnet.com/view/johdhfjclcfahbhj.html	verdant mountains and clear water	An expression describing beautiful natural surroundings with green mountains and clean water, often associated with ecological preservation and sustainability.	Geall, S. (2017). Clear waters and green mountains: Will Xi Jinping take the lead on climate change? Lowy Institute for International Policy. http://www.jstor.org/stable/resrep17555
农田水利设施	用于农业灌溉、排涝、防洪及水资源调配的工程设施和基础设施。	https://www.fao.org/land-water/water/water-governance/en/?utm_source=chatgpt.com https://www.fujian.gov.cn/hdjl/hdjlzsk/slt/slxmgc/201410/t20141023_1406824.htm	water conservancy project	Infrastructure and engineering works used for irrigation, flood control, drainage, water storage and agricultural water management.	Wu, Y., Guo, L., Xia, Z., Jing, P., & Chunyu, X. (2019). Reviewing the Poyang Lake hydraulic project based on humans' changing cognition of water conservancy projects. *Sustainability* , 11(9), 2605. https://doi.org/10.3390/su11092605 Zeng, C., Qi, W., Mao, Y., Liu, R., Yu., B. & Dong, X. (2022). Water conservation ecological service function and its value response mechanism in a nested water conservancy project area. *Frontiers in Environmental Science* 10:887040. doi: 10.3389/fenvs.2022.887040
无废城市	以创新、协调、绿色、开放、共享的新发展理念为引领，通过推动形成绿色发展方式和生活方式，实现固体废物源头减量和资源化利用的城市发展模式。	https://www.cqkz.gov.cn/zwgk_238/zfxxgkml/cjzcwd/qsthjj/202305/t20230509_11947771_wap.html	zero-waste city	An urban development model aimed at minimizing solid waste generation and maximizing recycling and resource utilization.	https://www.unep.org/news-and-stories/press-release/un-advisory-board-names-20-city-leaders-zero-waste