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TOWARDS AN ECO-FRIENDLY FUTURE: A CORPUS-BASED ANALYSIS OF MEDIA DISCOURSE ON "SAUDI GREEN INITIATIVE"[1]

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Abstract: This paper addresses the issue of the presentation of the Saudi Green Initiative in the Middle East media discourse. The specialized corpus has been prepared and analyzed using LancBox and SketchEngine software. The findings show that the Saudi Green Initiative is presented by the media as an aspiring venture of the Saudi Government. The analysis further reveals the ways the media has introduced the plan as ecologically beneficial, as per the stated objectives and environmental sustainability themes.

Key words: corpus linguistics, ecolinguistics, media discourse, Saudi Green Initiative, environmental sustainability, collocation network, themes.

1. Introduction

In the modern world, one of the terrifying issues the human race is dealing with is related to its survival on Earth. While searching for new moons and planetoids, human activities have devastated the only liveable planet known so far (Earth). From ozone depletion to

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species extinction, and from climate change to global warming, all of such calamities are consequences of human doings. According to a recent UN statement (United Nations intergovernmental report 2021), the current climate crisis is human-generated, which can be elicited from numerous pieces of evidence collected through observations, process comprehension, paleoclimate, and international and local climate simulations. Thus, efforts are needed to deal with these environmental issues at all levels (Gupta 2010). Kofi Annan (the former UN secretary) emphasized, "The world is reaching the tipping point beyond which climate change may become irreversible. If this happens, we risk denying present and future generations the right to a healthy and sustainable planet – the whole of humanity stands to lose" (quoted in Davis 2015). For this purpose, all human-related phenomena, from waste production to carbon emission, and from growing population to declining resources, need to be revisited and reviewed. There is no denying the fact that different nations and organizations are committed to addressing this issue, considering its urgency. At the national level, governments have to play their part. In this regard, the Saudi Green Initiative (hereinafter referred to as the SGI) is an important contribution along with the Middle East Green Initiative to fighting climate change, protecting the environment, preserving flora and fauna, and improving air quality in the region.

"To become a global leader in forging a greener world" (Saudi Green Initiative. His Royal Highness the Crown Prince … 2021) for a better future, the Saudi Government has outlined its detailed SGI program. This initiative is in line with the Vision 2030 (Saudi Vision 2030, *s.a.*) that aims to bring positive changes in the economic, social, as well as the environmental structures of the Saudi Kingdom. This initiative accentuates objectives that will cater to a sustainable future not only locally but globally as well. This initiative is proposed by the Saudi Regime seeking "to advance to the next level by unifying all sustainability efforts in the Kingdom to increase reliance on clean energy, offset the impact of fossil fuels, and combat climate change" (Saudi Green Initiative. His Royal Highness the Crown Prince … 2021). In fact, it is a much-needed action from a country

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that is already listed as one of the biggest oil producers in the world. Thus, it can be a role model for other countries as well. It should be noted that an environmental plan like this has not only a local but also a global impact. Therefore, it can be valuable for ecological rectification around the globe, as per UN representative (United Nations environment programme [Anderson statement], *s.a.*). A news report was published by Reuters as "Saudi Arabia sided with the club of climate crusaders" (Cox 2021). Seznec and Mosis (2021) in their report relate that the Gulf States like Saudi Arabia can face problems in the implementation of such plans as the official bodies need to make more efforts than they have envisaged in SGI. However, on the other hand, some reports also criticize the SGI as a mere greenwashing stunt by an oil-supplying state (e.g., Kennedy 2021).

According to its official website, the SGI is framed as an effective strategy for dealing with environmental concerns (Saudi Green Initiative [section: Homepage], *s.a.*). Moreover, the official web site lists the following key elements for this initiative: clean energy sector, carbon emissions reduction, oceans protection, wildlife defence, desertification prevention, and increased recycling (Saudi Green Initiative [section: Targets], *s.a.*). The plan implies using governmental and non-governmental resources (both human and financial) in order to join hands with the global community against the climate crisis. Thus, the overall focus of the SGI is on the environmental sustainability target listed as one of the commitment areas in the UN 2030 agenda for sustainability program (UN environment programme, *s.a.*). The present paper analyses the use of language in the SGI document as Vasko and Aleksiievets (2021) comment that language has been used carefully in the SGI documented version to highlight the state's concerns. Such language use is termed as discourse and with reference to media can be termed as media discourse.

Keeping in mind the crucial nature of environmental issues, media discourses around the globe have considered and investigated them from numerous perspectives. A number of

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papers have pinpointed climate-related disasters like global warming, fauna extinction, deforestation, smog, etc., based on their analysis of print media and social media reports (e.g., Anderson & Huntington 2017; Fest 2021; Fløttum et al. 2014; Pearce et al. 2019). These papers explore the representation of ecological issues in the selected media. Taher and Hajjar (2014) comment that environmental agitations have been centralized and prioritized in global policies. Thus, it is important to consider such environmental issues as crucial and therefore the Saudi Government has laid emphasis on it. As mentioned above, a number of researchers have explored various types of media discourse (e.g., Anderson & Huntington 2017; Fest 2021; Fløttum et al. 2014; Pearce et al. 2019) to see how ecological apprehensions are presented. No doubt, the media discourse plays an important role in emphasizing or deemphasizing a particular stance by giving the due coverage (Grundmann & Krishnamurthy 2010). Besides raising public awareness, the media can also be influential in promoting green initiatives around the globe. It helps us to understand what is being done in order to save Earth from climatic annihilations. SGI is a great ingenuity by Saudi Arabia enabling the country to use its resources not only for its own betterment but also for the benefit of the whole global village. Therefore, understanding how the media contributes to the promotion of this great green agenda is an important matter. Thus, the paper aims to scrutinize the selected media reports (related to SGI) and identify major thematic trends in its representation by using corpus-based tools. Accordingly, the objectives are as follows:

- to analyze media discourse in general and newspapers articles in particular for the representation of the SGI;
- to prepare a corpus of the selected newspapers reports;
- to scrutinize keywords related to the SGI in the selected corpus;
- to determine the collocational usage of keywords (based on thematic trends) and their collocations in the selected corpus;
- to analyze how keywords (linguistic choices) in the selected media present SGI goals;

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- to interpret the SGI major goals areas of concern as reported in the media with reference to ecolinguistic approaches and environmental sustainability framework.

Thus, the specific question which drives the research is:

- How the selected Middle Eastern media corpus have illustrated the SGI through the use of collocations and keywords?

The research is valuable in multiple respects. Firstly, it is a contribution to the domain of linguistics in general and Corpus Linguistic research in particular. Secondly, the present paper highlights the role of the media in spreading awareness regarding environmental issues as aimed in the SGI. Such studies can further create a positive impact on the world in need of ecological awareness. Thirdly, it sheds light on how the media plays its part in the promotion of the Saudi Kingdom's campaign for a healthy environment based on the SGI. The findings provide an important opportunity for the Saudi Government to advance its understanding of the approaches of the media towards reporting on eco-friendly initiatives put forward by the government. Finally, this study has a huge social significance as it contributes to raising awareness about SGI by the general public not only in Saudi Arabia but all over the world.

2. Literature review

An important dimension of the topic under consideration is discourse, which is generally defined as 'language in use'. However, this term has become multidimensional in the modern world due to its complex nature. It can be considered as an embodiment of religious, political, social, cultural assumptions, which are not only reflected but also (re)constructed in the language and through the language. This paper proceeds from the Foucauldian concept of discourse as a social practice, which is later defined by Fairclough (1989) as a process of symbolizing objects, entities, situations, etc. In this process of symbolizing, meanings are constructed, which is never a neutral process (Burke 1969).

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There is no denying that language is a cognitive tool facilitating world comprehension of the world (Erofeeva & Ushnikova 2017) and this tool becomes even more effective when related to media platforms. Grundmann and Krishnamurthy (2010) narrate that the media makes the news exciting to attract the audience, so as not to present information, but rather sell it. In fact, the media plays an important role in the contemporary world to spread the news to a larger audience through its diversified channels. Moreover, their online availability has made it more vulnerable to reach and affect a larger number of readers than ever. Bailey et al. (2014) report that in the contemporary world the media is more than just a source of information; news is created and crafted. Prihodko et al. state that the "population relies on the news media as the chief source of information and the base, on which they formulate their opinions, judgments, values, and voting decisions" (2020: 211).

The media discourse becomes noteworthy when related to pressing issues like climate change, poverty, crimes, etc. According to Lyytimäki, "media representations are an important part of the dynamics of contemporary socio-ecological systems" (2012: 1) given that media discourses serve as the explanatory system of modern societies, they have even become more important when discussing the issues related to climate change (Pasquaré & Oppizzi 2012). Boykoff narrates that "people abundantly turn to media – such as television, newspapers, magazines, radio, and Internet – to help make sense of the many complexities relating to environmental science and governance that (un)consciously shape our lives" (2009: 431). He further remarks that there is a large number of "approaches, methods, and research questions explored under this umbrella of media and climate change" (Boykoff 2011: 50). In this regard, Grundmann and Krishnamurthy (2010) have studied the media discourse of the Western countries (the USA, the UK, France, and Germany) with regard to the representation of climate change. Boykoff (2009) has examined the US and UK newspapers' coverage of climate change and reported that the majority of the news items are presented from an anthropogenic dimension (i.e., from human perspective). Carvalho and Burgess (2005) claim that media discourses report

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climate change as a socially constructed phenomenon. Fløttum et al. (2014) opine that linguistic techniques used by media to represent climate change have impacts on the psyche of the readers, the way they perceive and judge the phenomenon. Moser (2016) believes that such studies are transitional, as they tend to shift focus from awareness to action desired. He further argues that such efforts are needed to review climate-related actions in the light of the UN framework convention on climate change (ibid.).

As the media is a popular source of information for the masses, it is always useful to explore and analyze media discourses to identify underlying ideologies and linguistic patterns. The technical solution to such issues is discourse analysis. There are numerous ways to analyze discourses and one of the recent approaches is corpus linguistics. Baker and McEnery comment that "the relationship between corpus linguistics and discourse analysis has been in development for a quarter of a century" (2015: 6). Corpus Linguistics helps to explore larger sets of data (called corpora) than other manual discourse analysis techniques, therefore considered effective for the generalization of the results. Baker comments that corpus materials are effective "to analyze large bodies of 'real life' text, or corpora" (2006: 8). A corpus is created as a .txt file and then a variety of tools can be used to analyse it to meet the objectives of one's scholarly work. The most commonly employed techniques of Corpus Linguistics are those to identify concordances (based on collocations), words frequency, n-grams, and keywords. The present investigation is based on the identification of collocations and keywords (thematic trends) in the selected corpus. Collocations are defined as a linguistic context of words or words that tend to exist together (Evert 2004: 17). According to Baker (2012), collocations are fundamental to discourse analysis, as they may to expose the ways a particular fact or event is presented or interpreted by the media. A more recent approach is to display collocations as a network often illustrated as *GraphColl*, shortened from graphical collocations (Brezina et al. 2015). This tool is more extensive to explore and "uncover meanings and connections in text or discourse that may otherwise pass unnoticed" (Brezina et al. 2015: 141). This

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graphical representation can be explicated in terms of distance, frequency, exclusivity, directionality, etc. Each of these factors assist in the interpretation of the results. For example, the items near the central node (i.e., distance factor) are more important collocates than the words at distance. Another approach used in ~~in~~ Corpus Linguistics is a key word analysis, which implies identifying the terms extensively used in the texts for representation of certain phenomena and thus defining thematic trends. Baron et al. (2009) define keywords as the most significant words in a text, which can be identified through assorted corpus analysis tools. One of the recently designed tools in this regard is Sketch Engine (Kilgarriff et al. 2004), which is often used for various data queries: word frequency, collocations, n-grams, keywords, etc.

As the data studied through corpus techniques belong to a real-life context (i.e., social, political, economic, etc.), the results provide a comprehensive interpretation of any situation under investigation. Corpus techniques enable scholars to explore different forms of discourse from multiple perspectives. For example, Pérez-González (2020) studied climate science reports by corpus tools to identify antagonistic discursive practices used for constructing the climate discourse. Based on the findings, he reported that such ecologically unfriendly messages have always had a negative impact on society. Hameed et al. (2021) used a corpus-based approach to evaluate media discourses related to Saudi Vision 2030 arguing that corpora offer generalizable results owing to the processing of massive amounts of data. Wagner and Payne (2017) have studied the coverage of climate issues in Irish newspapers. Their findings show that "Irish newspapers produce and reproduce a narrow ideological worldview that is articulated, shared, and propagated by Ireland's political and economic elites" (ibid., 5). Urry and Dayrell have conducted an analysis of a large Brazilian Corpus related to climate change to test the assumption that the Brazilian news media emphasize "a consensus or gradualist view of climate change" (2015: 265). Their findings expose that the Brazilian media has given a comprehensive representation to climate-related issues. Grundmann and Krishnamurthy (2010) used a

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corpus-based technique to investigate climate change coverage, and found it effective for processing large sets of news data. Pearce (2008) used SketchEngine to explore the collocational behavior of men and women in the British National Corpus and exposed the functional behaviour of the identified lemmas.

Another important objective of corpus-based studies is to determine a hypothetical paradigm for interpretating the results obtained. For the present work, it is ecolinguistics that provides the required theoretical underpinning. Ecolinguistics or ecological linguistics is a "set of linguistic theories with a heavier focus on animals, plants, and the physical environment and how they are or are not represented" (Rapo 2020: 4). In modern times (as the world has faced the ramifications of the severe climate changes, particularly in the last few decades), it has become an influential domain of knowledge with its focus on environmental issues. There is no denying that anthropocentric attitude has caused the world many troubles like the rise in world's temperature, extinction of animal species, depletion of natural resources, etc. (Hameed 2021), and ecolinguistics aims not only to criticize such attitudes but also to evaluate the environmentally constructive efforts made by the world community. Stibbe narrates that ecolinguistics contributes to the "search for the new forms of language that inspire people to protect the natural world" (2014: 131). It provides various theoretic paradigms (from linguistic to ideological ones) to interpret discourses. This paper further develops the notion of environmental sustainability (Hansmann et al. 2012) as well as Stibbe's (2015) vision of conceptual nature of environmental or ecological discourses (explained below).

Environmental sustainability is the main concern of ecological treatises, as they tend to portray discourses as frameworks of ideologies and actions needed for a green future. Sutton (2004) defines environmental sustainability as a capability to sustain whatever is needed and cherished in the physical environment. He further explains the multitudinous dimensions of environmental sustainability including

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"actions to reduce the use of physical resources, the adoption of a 'recycle everything/buys recycled' approach, the use of renewable rather than depletable resources, the redesign of production processes and products to eliminate the production of toxic materials, and the protection and restoration of natural habitats and environments valued for their livability or beauty" (Stibbe 2015: 1).

For this study, environmental sustainability themes are identified on the basis of Hansmann et al. (2012) framework that includes: protection of the natural environment; responsible usage of renewable resources; reduction of the usage of non-renewable assets; protection from environmental threats, cutbacks of risks; fortification of natural spaces and biodiversity. Piccarozzi (2017) used the above-mentioned framework to analyze the role of innovative setups as a contribution to sustainability in Italy. Another key element of the philosophy behind ecolinguistics is the propensity to consider discourses as environmentally constructive or destructive. The proponent of this idea is Stibbe (2015) who describes environmental discourse as a story having a positive or negative impact on society. Thus, depending on ideologies embedded in them, he identifies beneficial, destructive or ambivalent discourses. The ideologies are arrays of linguistic features that repeatedly appear in texts (ibid.). Beneficial discourses are the ones that promote ideological standpoints to protect the environment; in contrast, destructive discourses promote capitalist activities that are harmful to nature; and, lastly the ambivalent discourses include talks about environmental aspects or issues that cannot be clearly marked as beneficial or destructive (ibid.). Fløttum and Gjerstad (2017) state that "stories" that are used to talk about climate change can positively contour the preferences and attitudes.

In recent times, a number of researchers around the world have focused on media discourses from eco linguistic perspectives as explained above as well (such as Carmen 2019; Grundmann & Krishnamurthy 2010; Pasquaré & Oppizzi 2012; Rapo 2020; Wagner & Payne 2017, and others). These studies explain how environmental issues or ecological visions are presented in diverse forms of media discourse. Some of these studies have also

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used corpus-based techniques (e.g., Grundmann & Krishnamurthy 2010; Rapo 2020). The present inquiry has also used corpus based techniques like graphical collocations and thematic patterns which have been further analyzed through the content analysis technique. Furthermore, there are limited studies available in the Saudi context in relation to the environment and ecology (e.g., DeNicola et al. 2015) and none related to the SGI so far. The study offers fresh and important insights to environmentally friendly media discourses regarding the SGI.

3. Research method

This study employs a mixed methods approach, as its goal is to provide a deeper understanding of the media discourse. The data collection process involves a quantitative approach (corpus-based) whereas the data analysis technique includes quantitative methods (with respect to the presentation of results in graphical formats) as well as qualitative ones (involving the discussion of results). Tashakkori and Teddlie define a mixed methods design as "products of the pragmatist paradigm that combines the qualitative and quantitative approaches within different phases of the research process" (2008: 22). Such an approach allows scholars to compile a comprehensive database and interpret the results. Consequently, the current paper aims primarily to examine the selected discourse for lexemes and themes (in line with this objective, respective software is used).

Bennet (2010: 12) defines 'corpus' as a large assemblage of written or spoken texts stored electronically. She defines corpus analysis as a practice to analyse and uncover linguistic patterns from the selected corpora. According to Baker (2012: 102), corpus analysis is one of the most effective tools to identify meaningful linguistic patterns in a huge amount of data. The use of corpus enables investigators to present generalizable results; therefore, for the purposes of this research there has been prepared a specialized corpus with the focus on the SGI. A specialized corpus is a kind of corpus based on "specific pre-

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established criteria as a guide to selecting the type of texts" (Mateo & Cazevieille 2015: 301). This kind of corpus is not readily available like the BNC or COCA but is built in line with the objectives set by the researchers. In specialized corpora, representativeness (i.e., corpus is representative of the selected theme / topic / token term / aspect, etc.) is a more crucial aspect than the length or size (Meyer & Mackintosh 1996). The study also has used the content analysis method to probe further into results obtained through software analysis. Content analysis is a method to explore the selected content for the identification or examination of a certain theme or concept. Kutter and Kanther (2012) developed an extensive design to scrutinize the content of corpus materials, which involves four stages: (1) key terms identification, (2) corpus analysis of lexical representations of key terms, (3) text-mining, and (4) qualitative analysis. In this way, the key items or results obtained through software can not only be identified but also studied within their contexts. This further provides extensive insights into the findings. For example, the findings from SketchEngine are further analyzed and categorized under the labels of the SGI targets and environmental sustainability themes.

The sample corpus is composed of newspaper reports and articles (online resources) from the selected English-language newspapers (Middle Eastern Media discourse). The following seven countries are considered to collect sample data: Saudi Arabia, the UAE, Qatar, Egypt, Bahrain, Cyprus, and Kuwait. The reasons for delimitation are time constraints (the project time frame), radical issues (no representation in some countries' media platforms due to internal issues like in Iraq and Palestine), and non-availability (some countries of the Middle East as Algeria, Oman, Turkey, etc. do not have reasonably enough material on some particular matters). From the above-mentioned countries, the following newspapers (based on the availability of the material) have been used to prepare the corpus:

- Arab News, Saudi Gazette (Saudi Arabia);
- The National Gulf, Gulf News, Khaleej Times, Gulf Times (United Arab Emirates);

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- The Gulf Times, Al Jazeera (Qatar);
- Egypt Independent (Egypt);
- Gulf Daily News (Bahrain);
- Kuwait Times (Kuwait);
- Cyprus Mail (Cyprus).

(The links to these newspapers are provided in Appendix A.)

The specialized corpus contains around 100 articles (of all types from political articles to business reports and from world to sports news items) published within the selected time frame from January 2021 to December 2021 (as the SGI was publicized and inaugurated within 2021). The key phrase used to select the material is Saudi Green Initiative / SGI. After the preparation, the corpus is cleaned for the analysis purpose (as corpus software accepts only simple text files). In this process, all the images, and formatting styles are removed from the text to prepare a text file with plain text. The .txt file is further created from the word file (most of the corpus analysis programs process only this file extension).

The analysis of the corpus is conducted using the following software: LancBox 6.0 (for collocations and collocation graphs) and SketchEngine (for the identification of key themes).

Initially, LancBox (Brezina et al. 2020) software package is employed to analyze the data for the collocations of the key term in both formats, i.e., SGI and Saudi Green Initiative. Bennet defines collocations as "the statistical tendency of the words to co-occur" (2010: 8). These collocations are helpful to understand the ways a particular word is contextualized. There are several tools available for this purpose. For the current research, *GraphColl* format is used. It is a graphical representation that helps us to view and interpret the network of collocations based on color intensity, and the distance from the central node (Brezina et al. 2015). Moreover, the pictorial illustration helps researchers

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and the audience to comprehend the results hastily. The next part of the analysis involves the identification of key themes in the corpus. The purpose is to see which themes (in the form of lexical bundles) are presented most frequently. It would help to ascertain the emphasis of the selected media texts. For this purpose, SketchEngine (Kilgarriff et al. 2004) is used with its feature keywords. The results are further analyzed (using content analysis techniques) to identify the most frequently recurrent themes, themes in line with the SGI framework (Saudi Green Initiative [section: Targets], *s.a.*), and themes representing environmental sustainability (Hansmann et al. 2012). The results are presented in tabular and graphical formats. Finally, the results are discussed in light of the selected theoretical framework, i.e., concepts of environmentally beneficial and destructive discourses (Stibbe 2014) and environmental sustainability themes (Hansmann et al. 2012).

4. Findings and discussion

The specially designed corpus contains around 50,000 words. Further characteristics of the specialized corpus are given below:

Table 1. Details of the corpus (Based on LancBox report) (Source: Own processing)

Type of Corpus	Media / Newspapers
Tokens count	59,789
Words count	51,821
Sentences count	1,873
No. of the news items	100

The first step is to analyse the corpus for the presence of the keyword *Saudi Green Initiative*, and its abbreviated version *SGI*, with its widely used collocation formats. Collocations are words that appear close to a selected keyword and are therefore imperative to analyse as they divulge the linguistic patterns in which the keyword is

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employed. The graphical format is used to display collocations as they make data more evident than the traditional methods (as in list formats). Figure 1 presents a collocation network used for the keyword. This figure displays 46 collocates of the Saudi Green Initiative and 29 collocates of SGI (out of these 19 are shared collocates). Among the prominent collocates obtained through the software, lexical words are studied only (as the functional words are suitable to review grammatical patterns of the text which is not the focus of the present project). The prominent lexemes are nouns (*Saudi*, *initiative*, speech, *summit*, *Riyadh*, *forum*, *inaugural*, *emissions*, *event*, *vegetation*, *carbon*, *goals*, *2060*, *prince*, *opening*, *kingdom*, *billions*), verbs (*announce*, *aims*, *launched*, *cover*, *raise*, *reduce*, *achieve*, *work*) and adjectives (*green*, *ambitious*, *key*, *crown*, *east*). The distance parameter is not very prominent as for the Saudi Green Initiative majority of words are at almost equal distance from the center, except for a few which are slightly on the right side. The intensity parameter shows the following words as more projecting: *prince*, *crown*, *goals*, *sgi*, *east*, *carbon*, *initiative*, and *billions*.

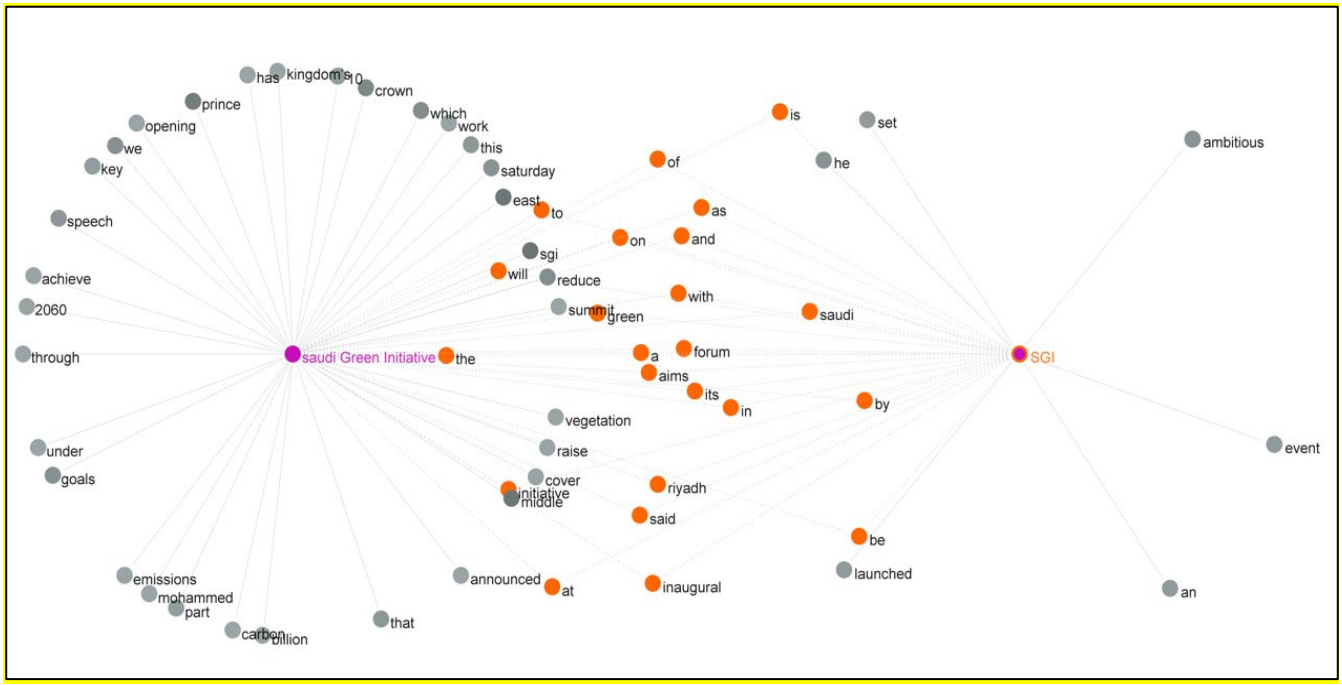

Figure 1. *GraphColl* for Saudi Green Initiative and SGI
(Source: Own processing. Created through LancBox)

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Figure 1 shows the significance of the Saudi initiative in the selected media in disparate dimensions (for more collocation details, see Appendix B). Firstly, the SGI is considered to be an ambitious plan set by the Saudi Government towards a green future. Secondly, in 2021 the inaugural Saudi Green Initiative forum was held in Riyadh, where crown prince Muhmmad bin Salman asserted himself as an initiator of this amazing proposal. Such collocates as *green vegetation*, *carbon emissions*, and *billions-dollars budget* appear to give an indication to the SGI goals. These nouns reflect the important dimensions of the plan, i.e., to work towards reduction of carbon emissions and promote green vegetation. According to a topical UN report (United Nations intergovernmental report 2021), these are the areas where human activities need to be reviewed for negative and positive impacts. Furthermore, the goals set by the Saudi Kingdom are presented by the use of verbs, such as *announced*, *launched*, and *aims* (from the *GraphColl*). In addition, the action words (verbs) like *work*, *achieve* provide fixation on the practical actions needed to attain the intended goals. The detected verbs signify the fact that SGI is not merely based on plans (as depicted through noun), but rather focuses on action (through the use of verb). The findings make it clear that the media has esteemed this project as a step to save the world. Erofeeva and Ushnikova (2017) speak about the significant role of the media in disseminating information owing its extended outreach capacity. Thus, the media do not only inform a wider audience about the SGI making available facts and figures on this endeavor but also inspire new ideas in this regard (which is the need of the time). Boykoff (2009) comments that the utilization of mass media sources by various actors – both individuals and collective – is quite a communal practice in order to contour perceptions of environmental issues depending on their viewpoints and interests.

The next important step of the paper is to identify the goals of this initiative as presented in the selected media. The purpose is to see how far these revealed objectives are in line with the actual goals set in the Saudi Green Initiative and, secondly, to examine these goals from the environmental sustainability perspective. This in turn helps to mark the

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project and the media discourse as environmentally friendly (from the ecological viewpoint), unfriendly or neutral (depending on the results). The SketchEngine was employed, in this regard, to identify the key terms based on the word sketches provided by the software. Using the advanced options, key items (multi-word level) are identified (see Appendix C). 634 key items (multi-words) representing major themes have been identified in the selected corpus. The initial content analysis of the list reveals that many of the themes are repeated (either in the same phrase format or in a transformed one, e.g., *green project*, *green bond*, *clean fuel*, *green fuel*, *clean energy*, *climate change*, *climate disasters*, etc.). These key items were further analyzed using the manual content analysis technique to find the recurrent themes. One of the goals of this research is to examine the themes (identified through the software) as related to the actual SGI agenda (Saudi Green Initiative [section: Targets], *s.a.*) as well as the ones related to environmental sustainability themes. In this regard, Table 2 outlines the major identified themes.

Table 2. Key themes in the selected corpus (Source: Own processing)

Key themes identified from SketchEngine results (Based on frequency)		
planting billions of trees	sustainability strategy	climate change challenge
net zero carbon emission	global contribution	global effort
cutting global methane emission	green hydrogen	environmental challenge
carbon neutrality	environmental initiative	climate crisis
climate action	green bond	marine life
energy transition	carbon capture technology	global temperature
land degradation	reforestation program	clean fuel
combat pollution	impact of fossil fuel	green summit
climate conference	green era	global trees
strategic initiative	climate change summits	stabilizing energy
climate target	strategic initiative	blue ammonia
green project	afforestation	ambitious roadmap
coastal environment	emissions cut	hydrocarbon technology
combating climate change	challenge of climate	environmental declaration
share of responsibility	global commitment	green future
sustainability initiative	climate mitigation	significant investment
global goal	invitation for the world	global warming
action-oriented approach	climate ambition	renewable energy capacity
renewable water	green future	sustainability initiative

These identified themes in the selected media highlight the awareness of the Saudi state regarding climate change as a threat to the planet's future. The repetition of the themes such as "climate action" (frequency 26 in different phrasal formats), "sustainability initiative" (frequency 19 in different phrasal formats), "strategic initiative" (frequency 13 in different phrasal formats), "environmental initiative" (frequency 13 in different phrasal formats), and "environmental declaration" (frequency 7 in different phrasal formats) in the selected corpus shows that Saudi Arabia has set a significant agenda for a sustainable future, not only for the region but also for the whole world. The use of inflated language shows that the media is quite passionate about the project. (e.g., *climate ambition*, *significant investment*, *action-oriented approach*, *global commitment*, *global effort*, etc.). This in turn reflects the environment-friendly approach of the media that is highly emphasized by many scholars in their papers (Boykoff 2009; Carvalho & Burgess 2005; Erofeeva & Ushnikova 2017; Wagner & Payne 2017). The media emphasizes the need of the joint efforts by the world community and highlights the global significance of these efforts, which can be seen in keywords such as *global commitment*, *global effort*, *global contribution*, *invitation for the world*, etc. In addition, the media stresses that there is an inherent constant threat or challenge that the country is seeking to address by embarking on the SGI implementation (as mentioned through words such as *land degradation*, *climate change challenge*, *global warming*, etc.). The idea of global effort (the word *global* appears 23 times) has been repeatedly mentioned along with the importance of local practices and policies. In this regard, there remains the need for climate summits and conferences, which is in line with the Gupta (2010) assumption that the world needs an action plan to combat climate change. Moreover, the media depicts the SGI as an ambitious plan that is based on meticulous planning, sufficient budget, and well-determined objectives (viz. *strategic initiative*, *ambitious roadmap*, *significant investment*, *action-oriented approach*, *the share of responsibility*, etc.). Fløttum et al. (2014) have also reported the findings that show climate-related actions needed for a better world while working on blogs content. Boykoff (2009) remarks in this regard that the

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media can raise awareness of environmental challenges by speaking about them recurrently.

Afterward, it is crucial to compare the identified themes with the actual SGI goals in order to see which points have been covered more frequently. For this purpose, there has been analysed the list of keywords (obtained through SketchEngine), and recurrent themes have been listed under the SGI identified frameworks. As mentioned above, the *clean energy sector*, *carbon emissions reduction*, *oceans protection*, *wildlife defense*, *desertification prevention*, *and recycling increment* (Saudi Green Initiative [section: Targets], *s.a.*) are the cornerstone areas. The results are presented below in Table 3.

Table 3. SGI framework and representation of key themes in the selected media
(Source: Own processing)

SGI Targets	Examples from Media Discourse (from SketchEngine)
1. Clean energy sector	energy transition, stabilizing energy, blue ammonia, clean fuel, fossil fuel impact, green hydrogen, cutting global methane emission, stability of global oil, efficiency of energy production, reducing greenhouse gas emission, diversified energy, investment in renewable energy, wind farm, clean energy, renewable energy plant
2. Carbon emission reduction	carbon neutrality, net-zero carbon emission, emissions cut, hydrocarbon technology, carbon capture technology, circular carbon economy, initiative on slashing emission, amount of carbon, reduction in carbon
3. Oceans protection	marine life, global ocean
4. Desertification prevention	green area, planting billions of trees, global trees, green, afforestation, global tree-planting target, reforestation program, land degradation, billion trees in the region, trees in the desert, planting target, olive trees, protected area
5. Recycling increment	recycled water, renewable water
6. Wildlife defence	-

As Table 3 clarifies, the three main areas which are highly emphasized in the selected media reports are *clean energy sector*, *carbon emission reduction*, and *desertification prevention* (persistently mentioned). Conversely, the other three areas (in Table 3) of *oceans protection*, *recycling increment*, and *wildlife defence* are not much fixated on. In

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the domain of *oceans protection*, the only items detected are *marine life* and *global ocean*; similarly, in the domain of *recycling increment* only *recycled water* and *renewable water* (frequency 1 for each term) were found. The most repetitive goals in the news reports are related to carbon emission and its reduction (32% of the total key terms), and clean energy (19% of the total). Greening through plantation is also emphasized (12%) as one of the main goals of SGI. Nevertheless, the findings also indicate that the SGI agenda is not wholly reflected in the Middle East media as nearly half of the foremost topics are not covered in the media reports. Rapo (2020) suggests that ignoring certain features related to climate change can be devastating as it means that the world is not going for any solutions as well.

Another important dimension of this work is to understand SGI as represented in the media from ecological perspectives. For this reason, the environmental sustainability framework has been taken into consideration in order to investigate whether the media represents the SGI as a beneficial, destructive, or neutral story (Stibbe 2014). The key terms list (prepared by using SketchEngine) is analyzed and major themes are itemized under selected sustainability themes (based on Hansmann et al. (2012)). Table 4 presents the findings.

Table 4. SGI representation in media and environmental sustainability themes
(Source: Own processing)

Environmental Sustainability Themes	**Examples from Media Discourse (obtained from SketchEngine)**
1. Protection of the natural environment	planting trees, olive trees, carbon capture technology, net-zero carbon emission, reducing greenhouse gas emission, reforestation program, billion trees in the region, tackling climate change, carbon emission reduction target, global emissions cut, clean hydrocarbon technology, emissions reduction, green bond, green future, planting target, combat pollution, reducing greenhouse
2. Responsible use of renewable resources	stabilizing energy, energy transition, renewable energy plant, recycled water, clean fuel, energy export, hydrogen fuel, green hydrogen, investment in renewable energy, first wind farm, renewable water, renewable energy plant, investment in renewables, diversified energy mix

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3. Reduction of use of non-renewable resources	stability use of global oil, burning fossil fuel, less oil production, cutting global methane, new energy source, cut demand of oil, methane pledge, fossil fuels
4. Protection from environmental hazards, reduction of risks	dust storm, early warning of storms, climate-related weather-event, warning of storms, harsh climate, air capture, percent of waste, harsh climate conditions
5. Protection of natural spaces and biodiversity	marine life, protected area, desert area, global ocean, afforestation initiatives, allocating protected area, natural reserves, save desert state

Table 4 reveals that the SGI is a plan meant to contribute to respective dimensions of environmental sustainability, which is illustrated by the media as well. The themes most frequently and abundantly covered by the media include *natural environment protection* and *renewable energy conservation*. On the other hand, comparatively less emphasis is laid on such themes as *environmental threats reduction* and *wildlife preservation*. However, the overall impression is striking as the media views environmental sustainability as the cornerstone of the SGI. All the environmental challenges are reflected in the SGI and abundantly covered by the Middle East Media.

As Stibbe (2015) suggests, ecological discourses can be labelled as beneficial or destructive based on the ideologies embedded in them. In this regard, ideologies are often presented in linguistic features of texts like lexis, keywords, word associations, etc. The analysis of the media discourse displays a comprehensive list of keywords, collocations, and themes related to primary ecological concerns (see Figure 1, Tables 1, 2, 3, and 4). The issues of climate change have been considered from diverse perspectives (for instance, *energy issues*, *global warming*, *forestation*, etc.) and further, prominence has been given to the possible solutions, such as *climate revolution*, *energy use*, and *afforestation*. Similar findings were also reported by Fest (2021) while working on western media reports on climate change. The specifics of the SGI media coverage and the emphasized linkage of the SGI with environmental sustainability prove that the media discourse dealing with SGI can be defined as a constructive discourse (Stibbe 2014). All the aspects outlined in the SGI document are related to the preservation of nature and

resources in discrete dimensions (environmental sustainability goals as listed by Hansmann et al. 2012). The distress caused by climate change and the challenging nature of environmental problems in the modern world is also highlighted in the SGI, the media exposes. According to Erofeeva and Ushnikova (2017), a media text "radiantly" epitomizes a national worldview; thus, such a media representation of the SGI exposes the Saudi Government's vision of this initiative, which seems to be an effective practical tool to tackle modern-day environment-related issues. In addition, Sutton (2004) advocates the idea that any national narrative in line with ecological sustainability is what is essentially needed for a green future.

5. Conclusion

There is no denying that human beings have no such option as another planet available for their survival. Living on Mars or some Earth-like planet in a parallel universe is possible only in some fictional discourse and can be defined as sci-fi. Thus, saving Earth for a sustainable future is the primary agenda in every field of knowledge in the present times. Such themes as *climate change*, *global warming*, *carbon capture technology*, *biodiversity*, *wildlife preservation*, *forestation*, etc. are focal points in various discourses (e.g., political, corporate, advertisements, etc.) including media. How the media covers such ecological apprehensions, particularly when they are raised at the national level, is the prime subject matter of this paper.

The Saudi Green Initiative is a representation of ecological trepidations as anticipated by the Saudi Kingdom to work for a sustainable future. Thus, the media, and in particular the local Arab Media has given it adequate reportage to bring forth and applaud the Saudi states' solicitude. To examine the efforts made by the Saudi Government apropos the global and local environmental issues, this paper explores the Middle East media discourse by using corpus-based techniques. The results are noteworthy as they expose how diverse the topical themes of the SGI are in terms of focus and range.

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It is worth noting that, as per media reports, almost all of the major climate issues have been emphasized in the SGI, for instance *controlling the carbon emission*, *replacing fuel energy with clean energy*, *sustainable uses of resources*, *protection of natural habitats*, etc. The practical solutions to deal with these calamities and to work for a green future are also highlighted quite frequently. The media evaluates the initiative as an ambitious effort with the focus on environmental sustainability themes. Moreover, it should be kept in mind that the promotion of such environment-friendly discourses inspires people to shield their natural habitation. There is no denying the world is in urgent need of some solutions to address such issues as global warming, climate change, waste management, depleting resources, etc. On the other hand, there have been identified certain gaps in the media representation. For example, the SGI focuses on such goals as *recycling*, *wildlife*, *ocean life*, *biodiversity* (as per official document) but these goals are not highlighted in the media discourse. In this regard, the research findings (Table 3) expose that certain targets of the SGI as *ocean protection*, *recycling*, and *wildlife* are not reflected in the selected media texts.

The findings reveal that the media of the Middle East presents the Saudi Green Initiative as a possible game-changer *vis-à-vis* environmental sustainability (besides the economic sustainability prioritized by the UN as well). There is no doubt that in the modern world, the media plays a vital role in shaping and reshaping opinions regarding people, actions, governments, agencies, corporations, etc.; thus, the coverage of the SGI by the Middle East media would help the Saudi Government to gain public recognition and appreciation. Due to outreach to a wider audience, media coverage of the Saudi Green Initiative can promote awareness and understanding of such environmentally beneficial projects. Nevertheless, this study remains mostly focused on the use of language as per the selected dimensions (collocations, and lexical bundles as thematic expressions) by the Middle East media to portray this green project (SGI) as a beneficial or disparaging story about nature

(Stibbe 2015). The study suggests further research of this project for the use of other linguistic choices and structures to uncover supplementary dimensions.

Finally, the analysis endorses that corpus techniques are helpful for the comprehensive investigation of media discourses (with big data) related to the description of the ecological concerns. In this regard, collocations networks and keywords (providing thematic trends) analysis can be useful techniques.

List of abbreviations

BNC – British National Corpus

COCA – Corpus of Contemporary American English

SGI – Saudi Green Initiative

UAE – United Arab Emirates

UN – United Nations

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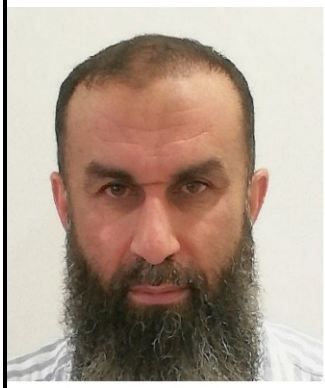	*name:*	**Naeem Afzal**
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Résumé

This study is an attempt to explore media representation of the contemporary ecological initiative that is based on the idea of the amelioration of the natural environment. This is referred to as the Saudi Green Initiative or SGI. Initiated by an Arab nation (Saudi Arabia), the project is welcomed by the world because it involves a country that is one of the largest suppliers of oil to the world. Along the lines, it is also esteemed and illustrated by various media platforms. In this regard, the current study analyses the Arab media discourse (in particular online newspapers) for the presentation of the SGI. To achieve the objectives, there has been prepared a corpus of the selected English-language Middle East newspapers (electronic versions). The findings disclose that the Saudi Green Initiative is appreciated and narrated in the selected media corpus as an ambitious endeavour. The

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projecting collocates (lexical words only) include nouns (*Saudi*, *initiative*, *emissions*, *event*, *vegetation*, *carbon*, *goals*, *summit*, *Riyadh*, *forum*, *inaugural*, *2060*, *prince*, *opening*, *kingdom*, *billions*), verbs (*raise*, *reduce*, *achieve*, *work*, *announce*, *aims*, *cover*, *launched*) and adjectives (*green*, *east*, *ambitious*, *key*). The identified key themes like planting billions of trees, net-zero carbon emission, cutting global methane emission, carbon neutrality, climate action, energy transition, land degradation, combat pollution, climate target, coastal environment, green project, etc. depict how environmental sustainability themes are addressed in the project. All in all, in terms of collocations and keywords, the selected media portrays the SGI as a plan with affirmative linguistic choices.

Key words: corpus linguistics, ecolinguistics, media discourse, Saudi Green Initiative, environmental sustainability, collocation network, themes.

Appendices

Appendix A

Web links for the Newspapers:

- https://www.arabnews.com/
- https://saudigazette.com.sa/
- https://www.thenationalnews.com/gulf/
- https://gulfnews.com/
- https://www.khaleejtimes.com/
- https://www.gulftimes.com/
- https://www.gulf-times.com/ (Qatar)
- https://www.aljazeera.com/
- https://egyptindependent.com/
- https://www.gdnonline.com/index.html
- https://www.kuwaittimes.com/
- https://cyprus-mail.com/

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Appendix B

▼ Span 5<>5 ▼ Statistics 03 - MI

Saudi Green Initiative

Freq: 130 - Collocates: 46

Index	Status	Position	Collocate	▼ Stat	Freq (coll.)	Freq (corp...
1	○	L	speech_n	8.8705977...	7	6
2	○	L	opening_n	8.1627783...	5	7
3	○	L	inaugural_...	7.6482055...	5	10
4	○	R	forum_n	7.3180568...	35	88
5	○	R	vegetation_n	6.8826706...	5	17
6	○	L	key_adj	6.4258130...	6	28
7	○	R	cover_v	6.3851709...	5	24
8	○	R	sgi_n	6.2052619...	16	87
9	○	R	riyadh_n	6.0134898...	19	118
10	○	R	saturday_n	5.9757800...	8	51
11	○	R	raise_v	5.8002086...	5	36
12	○	R	east_n	5.7222060...	15	114
13	○	R	middle_n	5.6971150...	15	116
14	○	L	under_con	5.5778161...	5	42
15	○	L	at_con	5.3797166...	22	212
16	○	L	goal_n	5.1887738...	8	88
17	○	R	aim_v	5.0188488...	8	99
18	○	R	work_v	5.0159372...	5	62
19	○	L	through_con	4.9928535...	5	63
20	○	M	part_n	4.8581285...	6	83
21	○	R	which_other	4.5893117...	9	150
22	○	R	reduce_v	4.5864292...	10	167
23	○	R	include_v	4.5778161...	5	84
24	○	R	summit_n	4.5778161...	5	84
25	○	R	crown_n	4.5189224...	10	175
26	○	L	achieve_v	4.5052474...	6	106
27	○	R	announce_v	4.4518082...	6	110
28	○	L	the_other	4.4401106...	201	3715
29	○	R	investment...	4.4111662...	7	132
30	○	R	prince_n	4.3713652...	13	252
31	○	L	mohamme...	4.3407769...	5	99
32	○	R	on_con	4.2945685...	18	368
33	○	R	green_n	4.1435850...	10	227
34	○	R	will_v	4.1073240...	18	419
35	○	L	with_con	3.9578899...	11	284
36	○	R	billion_other	3.9477657...	5	130
37	○	L	of_con	3.7465705...	55	1644
38	○	L	say_v	3.7040163...	14	431
39	○	L	we_pron	3.6940091...	8	248
40	○	L	@card@_o...	3.6210893...	28	913
41	○	R	this_other	3.4129889...	6	226
42	○	R	in_con	3.3412795...	29	1148
43	○	R	its_pron	3.2706850...	7	291
44	○	L	by_con	3.2311201...	11	470
45	○	R	be_v	3.2243391...	28	1202
46	○	R	initiative_n	3.0269675...	9	443

Figure 2. Collocates of Saudi Green Initiative and SGI (Created by using LancBox 6.0)

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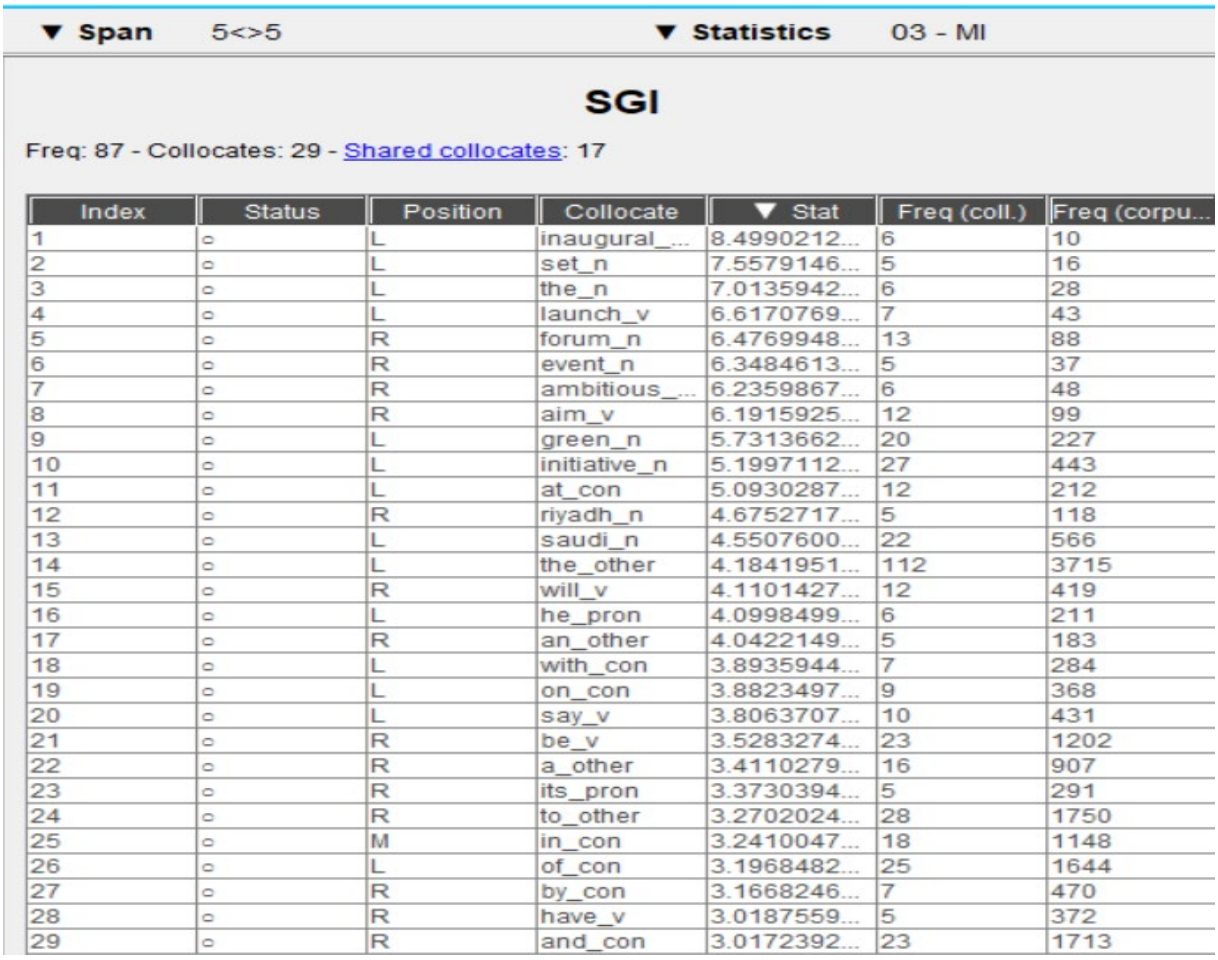

▼ Span 5<>5 ▼ Statistics 03 - MI

SGI

Freq: 87 - Collocates: 29 - Shared collocates: 17

Index	Status	Position	Collocate	▼ Stat	Freq (coll.)	Freq (corpu...
1	○	L	inaugural_...	8.4990212...	6	10
2	○	L	set_n	7.5579146...	5	16
3	○	L	the_n	7.0135942...	6	28
4	○	L	launch_v	6.6170769...	7	43
5	○	R	forum_n	6.4769948...	13	88
6	○	R	event_n	6.3484613...	5	37
7	○	R	ambitious_...	6.2359867...	6	48
8	○	R	aim_v	6.1915925...	12	99
9	○	L	green_n	5.7313662...	20	227
10	○	L	initiative_n	5.1997112...	27	443
11	○	L	at_con	5.0930287...	12	212
12	○	R	riyadh_n	4.6752717...	5	118
13	○	L	saudi_n	4.5507600...	22	566
14	○	L	the_other	4.1841951...	112	3715
15	○	R	will_v	4.1101427...	12	419
16	○	L	he_pron	4.0998499...	6	211
17	○	R	an_other	4.0422149...	5	183
18	○	L	with_con	3.8935944...	7	284
19	○	L	on_con	3.8823497...	9	368
20	○	L	say_v	3.8063707...	10	431
21	○	R	be_v	3.5283274...	23	1202
22	○	R	a_other	3.4110279...	16	907
23	○	R	its_pron	3.3730394...	5	291
24	○	R	to_other	3.2702024...	28	1750
25	○	M	in_con	3.2410047...	18	1148
26	○	L	of_con	3.1968482...	25	1644
27	○	R	by_con	3.1668246...	7	470
28	○	R	have_v	3.0187559...	5	372
29	○	R	and_con	3.0172392...	23	1713

Figure 3. More Collocates of Saudi Green Initiative and SGI (Created by using LancBox 6.0)

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Appendix C

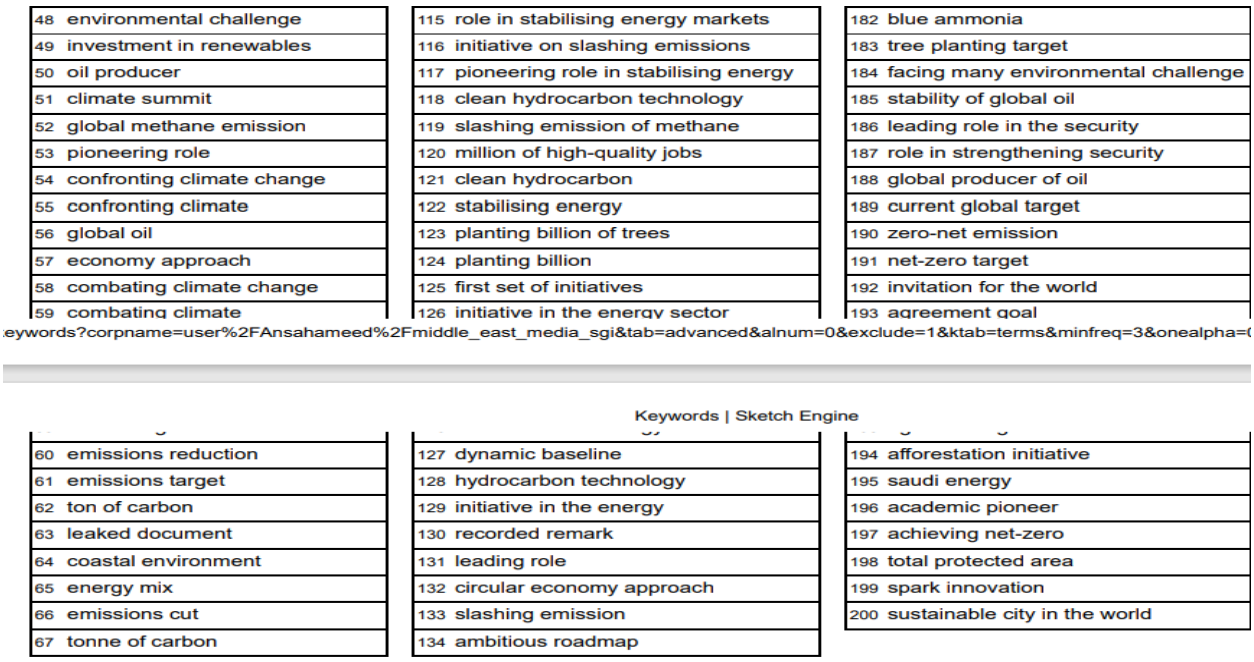
Key Phrases (first 200 are attached as sample)

rpus.
tdated term extraction configuration (term grammar). Recompile your corpus with the latest term grammar for better results.

	Word		Word		Word
1	net zero	68	cutting global methane	135	tree in the region
2	billion tree	69	cutting global methane emission	136	impact of fossil fuels
3	circular carbon	70	net zero carbon emission	137	worldwide emission
4	circular carbon economy	71	zero carbon emission	138	role in the security
5	carbon economy	72	net zero carbon	139	fossil fuel export
6	carbon emission	73	billion of trees	140	oil revenue
7	degraded land	74	quality job opportunity	141	inclusive future
8	global target	75	climate conference	142	hydrocarbon industry
9	carbon neutrality	76	green hydrogen	143	area equivalent
10	crown prince	77	zero carbon	144	fuel export
11	global methane	78	strategic initiative	145	total land area
12	energy transition	79	environmental initiative	146	global airline
13	oil exporter	80	green bond	147	production in the region
14	climate action	81	previous target	148	hydrocarbon production
15	green initiative	82	ton of carbon emissions	149	green economy
16	global energy	83	carbon capture technology	150	high-quality job
17	hectare of degraded land	84	set of initiatives	151	climate change summit
18	global contribution	85	reforestation program	152	change summit
19	carbon capture	86	fossil fuel	153	sustainability strategy
20	climate envoy	87	capture technology	154	burning fossil fuel
21	land degradation	88	emissions reduction target	155	climate change challenge
22	combat pollution	89	next green era	156	practical solution
23	net-zero emission	90	reforestation program in the world	157	annual forum

eywords?corpname=user%2FAnsahameed%2Fmiddle_east_media_sgi&tab=advanced&alnum=0&exclude=1&ktab=terms&minfreq=3&onealpha=(

24	top oil exporter	91	political climate action	158	change challenge
25	energy minister	92	percentage of protected areas	159	oil market
26	top oil	93	green summit	160	climate goal
27	circular economy	94	spare capacity	161	climate target
28	global methane pledge	95	total land	162	green project
29	methane pledge	96	summit last year	163	sustainable city
30	stability of global energy markets	97	global tree	164	investment fund
31	stability of global energy	98	quality job	165	regional centre
32	net-zero carbon emission	99	tonne of carbon emissions	166	economic diversification
33	net-zero carbon	100	global temperature	167	protected area
34	global initiative	101	clean fuel	168	cent of the global tree
35	energy market	102	emission of methane	169	cent of global contributions
36	determined contribution	103	reduction target	170	global tree planting target
37	global energy market	104	carbon emissions reduction	171	phase of afforestation
38	methane emission	105	climate crisis	172	leading role in strengthening security
39	billion riyal	106	global carbon emission	173	first phase of afforestation
40	opportunity for the private sector	107	pre-industrial level	174	percent of the global target
41	global effort	108	climate challenge	175	leading global producer of oil
42	reducing carbon emission	109	program in the world	176	open invitation for the world
43	global carbon	110	marine life	177	goal for individual states
44	reducing carbon	111	stabilising energy market	178	worldwide emissions target
45	green era	112	global initiative on slashing emissions	179	billion tree in the region
46	hectare of degraded lands	113	role in stabilising energy	180	stability of global oil markets
47	gas era	114	concept of a circular carbon	181	enhanced international relationship



48 environmental challenge	115 role in stabilising energy markets	182 blue ammonia
49 investment in renewables	116 initiative on slashing emissions	183 tree planting target
50 oil producer	117 pioneering role in stabilising energy	184 facing many environmental challenge
51 climate summit	118 clean hydrocarbon technology	185 stability of global oil
52 global methane emission	119 slashing emission of methane	186 leading role in the security
53 pioneering role	120 million of high-quality jobs	187 role in strengthening security
54 confronting climate change	121 clean hydrocarbon	188 global producer of oil
55 confronting climate	122 stabilising energy	189 current global target
56 global oil	123 planting billion of trees	190 zero-net emission
57 economy approach	124 planting billion	191 net-zero target
58 combating climate change	125 first set of initiatives	192 invitation for the world
59 combating climate	126 initiative in the energy sector	193 agreement goal

eywords?corpname=user%2FAnsahameed%2Fmiddle_east_media_sgi&tab=advanced&alnum=0&exclude=1&ktab=terms&minfreq=3&onealpha=(

Keywords | Sketch Engine

60 emissions reduction	127 dynamic baseline	194 afforestation initiative
61 emissions target	128 hydrocarbon technology	195 saudi energy
62 ton of carbon	129 initiative in the energy	196 academic pioneer
63 leaked document	130 recorded remark	197 achieving net-zero
64 coastal environment	131 leading role	198 total protected area
65 energy mix	132 circular economy approach	199 spark innovation
66 emissions cut	133 slashing emission	200 sustainable city in the world
67 tonne of carbon	134 ambitious roadmap	

Figure 4. SketchEngine key-terms results (Created by using SketchEngine)

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