

Comparative sentiment analysis of grand renaissance dam controversy in Egyptian and Ethiopian newspapers

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Article info

Received: 15 September 2023**Accepted:** 20 December 2023

Keywords: Sentiment Analysis; Grand
Renaissance Dam; GERD; Controversy;
Ahram Online; The Reporter; News
Coverage.

How to cite this article: Fedaa
Mohamed. (2023). Comparative sentiment
analysis of grand renaissance dam
controversy in Egyptian and Ethiopian
Newspapers, International Journal of
Politics and Media, 2(2), 35-47 Retrieved
from [https://ijpmonline.com/index.php/
ojs/article/view/43](https://ijpmonline.com/index.php/ojs/article/view/43)

Abstract

Through a 3-year period of content analysis, this study compares predominant sentiments, stakeholder portrayal, framing techniques, and prevailing tone in Egyptian 'Ahram Online' and 'The Reporter' Ethiopian newspaper coverage of the Grand Ethiopian Renaissance Dam (GERD) controversy. Despite the relatively extended, ongoing nature of GERD negotiations, throughout the last 3 years, 2020 – 2023, representing the time frame of the current study, the news coverage of both the Ethiopian and Egyptian media has portrayed the sentimental pillars of controversy in a contemporary manner.

The results revealed that Ahram Online, the Egyptian newspaper, predominantly conveys a positive sentiment, echoing Egypt's focus on diplomacy and negotiation to resolve the Grand Renaissance Dam dispute, fostering an optimistic and cooperative tone. Conversely, 'The Reporter,' an Ethiopian newspaper, exhibits varying sentiments over time, with positive portrayals of Ethiopia's perspective on the Grand Ethiopian Renaissance Dam (GERD) and negative sentiments concerning external actors and evolving Egypt-Ethiopia tensions.

Ahram Online portrays Egypt as advocating for its water rights and comprehensive agreements, emphasizing diplomacy and casting Egypt positively. 'The Reporter' presents Ethiopia as dedicated to its development, emphasizing the GERD's importance while critically covering external stakeholders.

Both newspapers employ framing techniques. Ahram Online emphasizes cooperation, regional stability, and responsible water use, framing the GERD issue positively. 'The Reporter' highlights Ethiopia's historical challenges and the urgency of the GERD project while critically framing external actors.

Al-Ahram's tone remains optimistic and cooperative, emphasizing diplomatic solutions. 'The Reporter' exhibits varying tones, including optimism, urgency, skepticism, and negativity, reflecting Ethiopia's perspective and concerns about external actors and evolving tensions.

1. Introduction

The most heated dispute is the controversy surrounding the Grand Ethiopian Renaissance Dam (GERD). The GERD, initially conceived as a symbol of national development and progress for Ethiopia, has become a source of tension and controversy among the riparian states. The dam's construction and the filling of its reservoir have raised fundamental questions about the equitable sharing of the Nile's waters, a topic of paramount importance to Egypt, a country that is heavily reliant on the river for its freshwater needs, agriculture, and overall sustenance. This tension has given rise to a unique dynamic in international relations, diplomacy, and media coverage.

Newspapers in Egypt and Ethiopia have played a crucial role in shaping public opinion and influencing the trajectory of the Grand Renaissance Dam controversy.

In this context, examining the content for sentiment, stakeholders' portrayals, framing techniques employed, and prevailing tones of newspaper articles become paramount to understanding the newspaper's discourse.

2. Research Objectives

1. Determine the sentiment (positive, negative, neutral) expressed in Egyptian and Ethiopian newspaper articles covering the Grand Renaissance Dam controversy under study.
2. Examine how different stakeholders, such as Egypt, Ethiopia, and Sudan, are portrayed in the news articles and whether sentiment varies across these key actors.
3. Investigate the framing techniques used in the news coverage of Egyptian and Ethiopian newspapers.
4. Evaluate the tone of the news articles, including whether they exhibit tones of optimism, pessimism, skepticism, or urgency when discussing the Grand Renaissance Dam controversy.

3. Research Importance

The Nile River is of immense geopolitical significance, particularly for Egypt and Ethiopia. Both countries have strong national interests tied to the river, making the news coverage a reflection of broader geopolitical tensions and cooperation

in the region. Newspapers plays a pivotal role in shaping public opinion and influencing policymaking. Analyzing how the Grand Renaissance Dam controversy is framed and the sentiment and tone used in news coverage can provide insights into how the newspapers may influence public perceptions and government decisions.

4. Research Problem

The Grand Renaissance Dam controversy is an ongoing issue, and its resolution or escalation has significant consequences. Conducting this research in the contemporary context ensures that the analysis is relevant to current events and can provide timely insights. The research problem lies in investigating the portrayal of the Grand Renaissance Dam controversy in Egyptian and Ethiopian newspapers, with a focus on sentiment, tone, framing, and source bias.

Specifically, the research seeks to understand how these newspapers cover and represent the ongoing dispute over the Nile River and its implications.

5. Literature Review

Several studies have explored sentiment analysis in various contexts, with each study offering unique insights and findings.

(Samuels & Mcgonical, 2020) conducted sentiment analysis on news articles and aimed to address the challenge of efficiently analyzing sentiments expressed in news articles, given the vast volume of data generated through digital platforms. The research introduced a lexicon-based approach, which proved effective in analyzing sentiments within news articles, highlighting the potential of sentiment analysis in the context of digital media. In addition, (Ahmed & Ahmed, 2020) explored the application of sentiment analysis in news articles and its role in understanding how news content affects people's perceptions and emotions. While specific results were not detailed, the study emphasized the significance of sentiment analysis for assessing the attitude of writers and the overall sentiment conveyed in news articles.

Regarding Sentiment Analysis in Political Contexts, (K, et al., 2019), sentiment analysis was employed to evaluate the electability of political figures in general elections based on public comments from online news media platforms. The study showcased the superiority of the Particle Swarm Optimization-based Support Vector Machine method in accurately discerning sentiment in comments. In contrast, (Ahmad, Wang, Martin, Xu, & Xu, 2023) focused on sentiment analysis within the context of COVID-19 news headlines. The study achieved a remarkable testing accuracy of 0.931, emphasizing the efficacy of their Cov-Att-BiLSTM approach. While the contexts differ, both studies underline the importance of sentiment analysis in understanding public perception.

Concerning the Challenges in Sentiment Analysis, (Balahur, et al., 2010) addressed the challenges of sentiment analysis in news articles, highlighting the need to account for domain-specific vocabulary, which can significantly impact performance. This insight aligns with the need for tailored approaches in sentiment analysis. The study identified three crucial subtasks: defining the target entity in news articles, distinguishing between the sentiment expressed about the target and the news content itself, and analyzing explicitly marked opinions without requiring interpretation or world knowledge. Additionally, the study recognized three different

perspectives on newspaper articles: author, reader, and text, each necessitating different approaches for sentiment analysis. To achieve these objectives, the research aimed to assess the suitability of various sentiment dictionaries and determine whether subject domain-defining vocabulary should be considered. The results indicated that accounting for subject domain-defining vocabulary is more appropriate in the context of news opinion mining, leading to improved performance in sentiment analysis. Also, (Garvey & Maskal, 2019) study challenged the widely held belief that AI news coverage is primarily negative, showcasing a more nuanced sentiment pattern. This finding highlights the importance of empirical analysis to dispel common assumptions. Contrary to the belief that news coverage of AI is predominantly negative, the study's results did not support this claim. The findings suggest that negative sentiment in news media about AI may not be as pervasive as previously thought. The study concludes with a discussion on AI risk perceptions and highlights the role of critical social sciences in promoting responsible AI innovation in areas such as digital health, life sciences, and society.

About Sentiment Analysis in Practical Applications, (Kumar, Jayant, & Charagulla, 2021) demonstrated the real-world application of sentiment analysis in improving mental health through a mobile app. The results revealed high user satisfaction and improved mental well-being, emphasizing the practical implications of sentiment analysis beyond data analysis. In addition, (Swati & Pranali, 2015) applied sentiment analysis to assess sentiment in news articles related to companies. While not specifying results, the study highlighted the growing importance of news analysis and sentiment calculations for businesses. It was revealed that the main tasks involved extracting sentences mentioning company news from online news articles, identifying positive and negative sentiments within those articles, and summarizing the general polarity. The results highlighted the increasing use of news analysis and sentiment calculations in market surveillance and compliance by both buy-side and sell-side firms, emphasizing the significance of sentiment analysis in assisting companies in making informed business decisions based on news coverage.

Regarding sentiment analysis in the financial markets, (Yu, 2014) explored the impact of sentiment analysis on tradable financial assets, revealing how news sentiment significantly affects asset behavior. The study's innovative "impact score" provided insights into trading strategies and risk management. This research introduced a novel measure called the "impact score," which considers both news volume and the decaying effect of news sentiment to assess the aggregated impact of news events on individual assets. Additionally, the study characterized asset behavior using parameters like return, volatility, and liquidity and constructed predictive models that incorporated these impact scores. The research findings demonstrated that news sentiment significantly affects asset behavior, and the study presented both univariate and multivariate predictive models, including a Bayesian multivariate model that incorporated domain expertise to enhance predictions. These innovations contribute to the understanding of how sentiment in news coverage influences financial asset behavior and offer valuable insights for trading strategies and risk management.

Concerning Sentiment Analysis in COVID-19 News, (O'Brady, 2021) examined the sentiment analysis within the context of COVID-19 news, specifically differentiating between news reports and opinion pieces. The research identified significant differences in sentiment between the two categories and highlighted a negative correlation between sentiment and readability. This points out the complex role of sentiment analysis during the pandemic.

Extent of Benefit from Literature Review

The role of newspapers in shaping public opinion and influencing government policies is a crucial aspect of the Grand Renaissance Dam controversy. Understanding how news sentiment varies between Egyptian and Ethiopian newspapers can fill a knowledge gap related to the media's role in shaping narratives and potentially influencing public sentiment and decision-making processes. Also, this research can bridge a significant knowledge gap by focusing on the Grand Renaissance Dam controversy, which is a critical geopolitical issue in the African region. It can provide insights into the sentiments, attitudes, and perspectives of key stakeholders, including Egypt and Ethiopia, shedding light on regional dynamics and viewpoints.

Theoretical Framework

This theory will employ the framing theory. A frame in communication serves to structure our perception of everyday reality, giving significance to unfolding events, and endorsing specific interpretations of political matters (Tuchman, 1978); (Gamson & Modigliani, *The Changing Culture of Affirmative Action*, 1987); (Gamson & Modigliani, *Media Discourse and Public Opinion on Nuclear Power: A Constructionist Approach*, 1989); (Dhavan V. Shah, 2002). In the last ten years, there has been a proliferation of research dedicated to identifying these frames in communication. Scholars use this approach to discern patterns in how issues are defined, compare the portrayal of events across various media platforms, and analyze differences between different types of media (Semetko & Valkenburg, 2000). While there is no standardized method for measuring frames, the most influential studies usually follow the subsequent steps.

It is essential to pinpoint a particular issue or event (Entman, 2004). The concept of a communication frame can only be established within the context of a specific issue, event, or political figure. For instance, the frames employed for discussing social security reform will vary from those used in the context of immigration reform. Even when dealing with the same issue, different frames may come into play at different times (for instance, the frames applied to social security reform between 1997 and 2000 are distinct from those used in the period from 2003 to 2005).

Extent of Benefit from Theoretical Framework

The framing theory helps researchers understand how specific events, issues, or controversies are portrayed and interpreted in the media. In this research, this theory can aid in comprehending how the Grand Renaissance Dam controversy is framed in both Egyptian and Ethiopian newspapers, which is crucial for context. By employing this theory, the researcher can systematically analyze and compare the frames used in Egyptian and Ethiopian newspapers. This allows the researcher to identify

similarities and differences in how the same issue is presented in different media environments.

6. Research Methodology

This research is qualitative research where the content analysis will be used to determine sentiment (positive, negative, neutral), examine stakeholder portrayals (different stakeholders such as Egypt, Ethiopia, and Sudan which are portrayed in the news articles), identify framing techniques, and evaluate the tone of the articles (looking for signs of optimism, pessimism, skepticism, or urgency in the discussions regarding the Grand Renaissance Dam controversy). Research Time Frame:

Over a three-year period (2020 – 2023), a wide-ranging random sample of articles was analyzed to gain insights into the predominant sentiments, portrayals of key stakeholders, employed framing techniques, and the prevailing tones within the media discourse of the *Ahram Online* (Egypt) and *The Reporter* (Ethiopia).

Research Sample

The scope of this research will involve the analysis of news coverage from two influential newspapers, each representing one side of the Grand Renaissance Dam controversy. When researching the Grand Renaissance Dam controversy, analyzing news coverage from both *Ahram Online* and *The Reporter* can provide valuable insights into the contrasting viewpoints and narratives on this contentious issue. These selected newspapers are:

1. Egypt: *Ahram Online*

Ahram Online is the digital portal of *Al-Ahram*, one of Egypt's oldest and most prominent newspapers. *Al-Ahram* has been in circulation for over a century and has played a crucial role in shaping public opinion in Egypt.

Ahram Online is typically aligned with the Egyptian government's position on the Grand Ethiopian Renaissance Dam (GERD) issue. As such, it often presents the dam as a threat to Egypt's water security, focusing on concerns about reduced water flow to Egypt and potential negative impacts on agriculture and the economy.

2. Ethiopia: *The Reporter*

The Reporter is a prominent English-language newspaper based in Ethiopia. It is known for its balanced and often pro-government stance on national and regional issues.

The Reporter generally supports Ethiopia's stance on the GERD. It emphasizes the dam's importance for Ethiopian economic development, energy security, and poverty reduction. The newspaper often highlights Ethiopia's right to harness the Nile waters for its development.

Research Questions

1. What are the predominant sentiments (positive, negative, or neutral) expressed in Egyptian and Ethiopian newspapers' news articles covering the Grand Renaissance Dam controversy?
2. How do different stakeholders, including Egypt, Ethiopia, and Sudan, get portrayed in the news articles, and is there significant variation in sentiment across these key actors?
3. What framing techniques are employed in the news coverage of the Grand Renaissance Dam controversy within Egyptian and Ethiopian newspapers?

4. What is the prevailing tone in the news articles, and do they exhibit tones of optimism, pessimism, skepticism, or urgency when discussing the Grand Renaissance Dam controversy?

Research Results

The researcher analyzed random samples of articles spanning three years to gain insights into the coverage of the Grand Renaissance Dam controversy. This extensive analysis allowed for a comprehensive understanding of predominant sentiments, stakeholders' portrayals, framing techniques and prevailing tones.

Egypt: Ahram Online

The predominant sentiments in the Ahram Online news articles covering the Grand Renaissance Dam controversy fluctuate between cautious optimism and growing frustration. While there are moments of cautious positivity when negotiations appear promising, the general sentiment is predominantly negative, reflecting Egypt's deep concerns about the potential impact of the Grand Ethiopian Renaissance Dam on its water supply and the ongoing challenges in reaching a comprehensive agreement with Ethiopia.

In the article from January 16, 2020, titled "Egypt, Sudan and Ethiopia agree to finalize Grand Renaissance Dam agreement later this month," the predominant sentiments exhibit a cautiously positive outlook, primarily for Egypt. Egypt is portrayed as cautiously optimistic. The article suggests that Egypt has been seeking an agreement on the filling and operation of the dam, and the fact that the ministers from Egypt, Sudan, and Ethiopia have agreed to reconvene for further discussions may be seen as a positive development. However, Egypt's concerns about the dam's potential impact on its water supply are well-documented and are likely still present.

Furthermore, in the article from January 28, 2020, titled "Grand Ethiopian Renaissance Dam: Talks about talks," the predominant sentiments are characterized by cautious optimism and cooperation. Egypt's sentiment appears cautiously positive, as the article suggests that Egypt has expressed concerns about the impact of the Grand Ethiopian Renaissance Dam (GERD) on its water supply. The preliminary agreement, seen as progress, is framed as addressing certain issues but not yet constituting a comprehensive deal. This suggests that Egypt remains vigilant about protecting its water interests.

Moreover, in the article from February 26, 2020, titled "Egypt says is committed to Grand Renaissance Dam talks after Ethiopia's withdrawal from the final round," the predominant sentiments exhibit a mix of positivity and negativity. Egypt's sentiment is positive, expressing a commitment to US-sponsored negotiations and a willingness to reach a final agreement, reflecting a cooperative and solution-oriented stance. In contrast, Ethiopia's sentiment is more negative, with Ethiopia's announcement of withdrawal from the final round of talks and the statement from the Ethiopian ambassador in Washington suggesting a more assertive position focused on retaining its rights to use the Nile. The article also mentions that Sudan received a draft deal from the US Treasury, indicating its engagement in the negotiation process.

Moving forward, in the article from June 26, 2020, titled "Egypt, Ethiopia and Sudan agree to delay filling Grand Renaissance Dam until a deal is reached," the predominant sentiments are likely positive, especially for Egypt. Egypt's

efforts to reach an agreement on the Grand Ethiopian Renaissance Dam (GERD) are depicted as progressing, as Egypt, Ethiopia, and Sudan have agreed to delay the filling of the dam until a final binding deal is reached. This signifies a positive development in the negotiations from Egypt's perspective.

Furthermore, in the article from August 14, 2021, titled "Qatar's S'hail Holding Group donates \$10,000 for Ethiopia's Grand Renaissance Dam GERD," the predominant sentiment is positive. The donation of \$10,000 from the Qatar-based S'hail Holding Group for the Grand Ethiopian Renaissance Dam (GERD) reflects a positive sentiment. This donation can be seen as a supportive and positive gesture towards Ethiopia's position on the dam.

In contrast, in the article from August 26, 2021, titled "Arab countries have tools to pressure Ethiopia on its intransigence in GERD dispute: Arab Parliament speaker," the predominant sentiments reflect a negative outlook towards Ethiopia. The Arab Parliament Speaker expresses concern and frustration regarding Ethiopia's intransigence in the GERD dispute.

Subsequently, in the article from July 29, 2022, titled "Egypt records 'utter rejection' to Ethiopia's continuity of unilaterally filling GERD in letter to Security Council," the predominant sentiments are characterized by negative responses from Egypt to Ethiopia's unilateral actions.

Shifting to the article from May 2, 2023, titled "GERD: No longer a priority for Sudan," the predominant sentiments include negative concerns for Egypt and possible neutrality for Ethiopia. Egypt's sentiment related to this article appears to be predominantly negative.

Likewise, in the article from May 24, 2023, titled "Ethiopia should stop misleading 'colonial agreements' claims to dodge GERD obligations: Egypt," the predominant sentiments are a mix of negative responses from Egypt and Ethiopian claims.

Consequently, in the article from September 8, 2023, titled "Another round of GERD negotiations," the predominant sentiments appear negative and reflect a lack of agreement between the involved parties. The talks held in August yielded no progress, indicating a sense of frustration due to the long-standing dispute. Additionally, the sentiment reflects the contrasting positions of Egypt and Ethiopia.

Examining these news articles, it becomes evident that each piece in Ahram Online shapes the perception of key stakeholders in the ongoing Grand Ethiopian Renaissance Dam (GERD) controversy, primarily focusing on Egypt, Ethiopia, and Sudan.

In the article from the 16th of January 2020, titled "Egypt, Sudan and Ethiopia agree to finalize Grand Renaissance Dam agreement later this month," the portrayal of stakeholders presents a different dynamic. Egypt is depicted as a country concerned about the potential impact of the dam on its water supply and emphasizes the need for an agreement. In contrast, Ethiopia is portrayed as engaged in discussions and willing to reconvene for further talks. While differing proposals on the timeline for filling the dam are highlighted, the article does not provide a strong negative or positive portrayal.

Shifting to the article from the 28th of January 2020, titled "Grand Ethiopian Renaissance Dam: Talks about talks," the portrayal of stakeholders exhibits distinct characteristics.

In this case, Egypt is depicted as cautiously optimistic but also vigilant, expressing concerns about the potential impact of the GERD on its water supply and emphasizing the need for a clear explanation of measures during periods of drought. Ethiopia, though not explicitly mentioned, is implied to be participating in the preliminary agreement and considering the delay, indicating its engagement in the negotiation process. Sudan, while not specifically portrayed, is highlighted as a participant in the preliminary agreement with concerns regarding the potential risks posed by the GERD.

In the article from the 26th of February 2020, titled "Egypt says is committed to Grand Renaissance Dam talks after Ethiopia's withdrawal from the final round," the portrayal of stakeholders differs significantly. Here, Egypt is presented as committed to the negotiation process, expressing goodwill and a desire for a final agreement. Ethiopia, in contrast, is portrayed as taking a firm stance, refusing to sign any agreement that compromises its right to use the Nile, as evidenced by its decision to withdraw from the talks. The article suggests

Sudan's engagement in the negotiation process through its receipt of a draft deal from the US Treasury.

Transitioning to the article from the 26th of June 2020, titled "Egypt, Ethiopia and Sudan agree to delay filling Grand Renaissance Dam until a deal is reached," the portrayal of stakeholders diverges. In this context, Egypt is depicted as actively engaged in the negotiations, expressing concerns about the potential impact of the GERD on its water supply, and advocating for international intervention and potential risks associated with unilateral dam filling. While not explicitly portrayed, Ethiopia's willingness to delay the filling of the dam can be seen as a cooperative gesture. Sudan is portrayed as a participant in the agreement to delay the filling of the dam and is concerned about potential risks, particularly for its Roseires dam.

In the article from the 14th of August 2021, titled "Qatar's S'hail Holding Group donates

\$10,000 for Ethiopia's Grand Renaissance Dam GERD," Ethiopia is portrayed as the recipient of a donation from a Qatari company for the GERD, indicating support for Ethiopia's position on the dam.

In the article from the 26th of August 2021, titled "Arab countries have tools to pressure Ethiopia on its intransigence in GERD dispute," Egypt and Sudan are not explicitly mentioned but can be inferred to be portrayed as concerned parties who have been negotiating for nearly a decade, seeking a legally binding agreement to protect their water interests. Simultaneously, Ethiopia is not directly portrayed in the article, but through the Arab Parliament Speaker's statements about Ethiopia's intransigence, it implies that Ethiopia is depicted as uncooperative or unyielding in the negotiations.

In the article from the 29th of July 2022, titled "Egypt records 'utter rejection' to Ethiopia's continuity of unilaterally filling GERD in letter to Security Council," Egypt is depicted as actively defending its rights and water security, expressing its commitment to reaching a fair and equitable agreement on the GERD and its readiness to protect its national interests.

Ethiopia is portrayed as the source of concern due to its unilateral actions in filling the GERD, emphasizing Ethiopia's

defiance of international obligations and agreements. Furthermore, the article briefly mentions the US Special Envoy's visit to the region and describes the US as actively engaged in supporting a diplomatic solution under the African Union's auspices.

On the 31st of March 2023, in the article titled "GERD: Ethiopia continues unilateral action," various stakeholders are portrayed distinctively. Ethiopia is depicted as taking unilateral actions and is criticized for its approach to the dam, with its dismissal of Egypt's concerns framed as "irresponsible." In contrast, Egypt is portrayed as a country deeply concerned about its water security and is actively seeking a legally binding agreement to protect its water rights and population's interests, making diplomatic efforts and raising concerns on the international stage. While not as prominently featured, Sudan is likely seen as a concerned stakeholder in the situation.

In the article from the 13th of April 2023, titled "Egypt accuses Ethiopia of buying time, evading legal responsibility to continue unilateral GERD filling," the portrayal of stakeholders reflects distinctive attributes. Egypt is portrayed as deeply concerned about its water security and the impact of the GERD. Ethiopia, in contrast, is depicted as assertive and unwilling to seek permission from other countries to fill the GERD, opposing the internationalization of the issue and emphasizing its right to use the dam. Sudan, while mentioned, is not the central focus of the article, and it is portrayed as potentially distracted by domestic issues, particularly ongoing conflicts.

Moving on to the article from the 2nd of May 2023, titled "GERD: No longer a priority for Sudan," the portrayal of stakeholders takes a different tone. Egypt is portrayed as concerned about the potential impact of the dam on its water supply and emphasizes its repeated calls for a legally binding agreement. Ethiopia's stance in the article is less explicit, mentioning its construction of the dam, but without a strong positive or negative portrayal. Sudan, however, is depicted as potentially distracted by domestic issues, particularly the ongoing fighting within the country, and its position on the dam is not presented in detail.

In the article from the 24th of May 2023, titled "Ethiopia should stop misleading 'colonial agreements' claims to dodge GERD obligations: Egypt," Egypt is portrayed as defending its stance based on historical agreements and international law, emphasizing its opposition to Ethiopia's position. Ethiopia is depicted as making claims about "colonial agreements" and criticizing Egypt's monopoly over the Nile River, with its claims met with skepticism by Egypt. The Arab League (AL) is mentioned as expressing concerns about the lack of progress in GERD negotiations due to Ethiopia's intransigence, aligning itself with Egypt in this context. Finally, in the article from the 8th of September 2023, titled "Another round of GERD negotiations," different stakeholders are portrayed with distinctive attributes. Egypt is depicted as opposing any unilateral actions, emphasizing the violation of the 2015 Declaration of Principles and its concerns about water security and potential impacts on its water supply. Ethiopia is portrayed as asserting its rights to use Nile water for development, preferring a "friendly" entente over a legally binding agreement, emphasizing its focus on economic development. Sudan is mentioned as having concerns about the safety impacts of GERD on its

dam networks and seeking a dispute resolution mechanism. The UAE and Abu Dhabi are portrayed as supporting diplomatic dialogue and negotiations to resolve disputes, emphasizing discussions within the framework of the African Union (AU), which aligns with Ethiopia's position.

Moving on to the article dated the 16th of September 2023, titled "GERD: Another disappointment," the portrayal of stakeholders is marked by the following distinctions. Egypt is depicted as frustrated and concerned about the lack of progress in negotiations, highlighting its dependence on the Nile for irrigation and drinking water, and its regular calls for a legally binding agreement. Ethiopia, in this context, is portrayed as assertive in its approach to the dam, celebrating the completion of the filling but also facing criticism for unilateral actions that disregard the interests of downstream states, causing frustration.

Ahram Online employs various framing techniques to highlight the positions and actions of Egypt, Ethiopia, and other stakeholders in the Grand Renaissance Dam controversy, often emphasizing Ethiopia's unilateral actions and the ongoing challenges in the negotiations.

Regarding "Thursday 16 Jan 2020 - "Egypt, Sudan and Ethiopia agree to finalize Grand Renaissance Dam agreement later this month": In this article, the primary framing focuses on the recent agreement to reconvene for further discussions and the specifics of the potential agreement. The framing suggests that the main points of contention have revolved around issues related to drought limits and operation under different hydrological conditions, indicating the core aspects of the ongoing dispute.

Regarding "Tuesday 28 Jan 2020 - "Grand Ethiopian Renaissance Dam: Talks about talks": In this article, the article frames the preliminary agreement as progress in the negotiations, acknowledging the need to address significant issues related to the GERD's filling and operation. It suggests that key details are yet to be determined, portraying the negotiation process as ongoing.

Regarding "Wednesday 26 Feb 2020 - "Egypt says is committed to Grand Renaissance Dam talks after Ethiopia's withdrawal from final round": In this article, the framing technique emphasizes Egypt's commitment to negotiations and its positive approach to reaching a final agreement regarding the Grand Renaissance Dam. Egypt is framed as cooperative and solution-oriented. On the other hand, Ethiopia is framed as assertive, unwilling to compromise on its rights to use the Nile, and withdrawing from the talks, which is framed as a negative action. The mention of the three countries' agreement on a schedule for the staged filling of the dam and mitigation mechanisms highlights ongoing negotiations and the pursuit of an agreement.

Regarding "Friday 26 Jun 2020 - "Egypt, Ethiopia and Sudan agree to delay filling Grand Renaissance Dam until the deal is reached": In this article, the framing highlights the recent agreement as a positive development in the ongoing negotiations over the GERD. It emphasizes the decision to delay the dam's filling until a final binding deal is reached, portraying it as a step towards cooperation and diplomacy. The article also touches on potential risks and the need for international intervention, framing the situation as a matter of international concern. Regarding "Saturday 14 Aug 2021 - "Qatar's S'hail Holding Group donates \$10,000 for Ethiopia's Grand Renaissance Dam GERD": The article predominantly focuses on

the positive development of a financial contribution from a Qatari company towards the GERD. This framing emphasizes the international interest and support for the project.

Regarding "Thursday 26 Aug 2021 - "Arab countries have tools to pressure Ethiopia on its intransigence in GERD dispute: Arab Parliament speaker": In this article, the framing is centered on the Arab Parliament's role in the GERD issue and its emphasis on the need for a strong Arab stance. The article highlights the impact of the GERD on Arab national security, emphasizing the broader implications of the dispute beyond Egypt and Sudan.

Regarding "Friday 29 Jul 2022 - "Egypt records 'utter rejection' to Ethiopia's continuity of unilaterally filling GERD in letter to Security Council": The article frames Ethiopia's unilateral actions as a "clear violation" of international law and agreements. It highlights Egypt's efforts to seek a fair agreement and portrays Ethiopia as thwarting these efforts. There's also an emphasis on Egypt's appeal to the United Nations Security Council to intervene and enforce its obligations, positioning Egypt as a cooperative actor seeking international support.

Regarding "Friday 31 Mar 2023 - "GERD: Ethiopia continues unilateral action": In this article, Ahram Online employs framing techniques to emphasize certain aspects of the Grand Renaissance Dam controversy. The primary framing technique highlights Ethiopia's unilateral actions in filling the dam, portraying them as provocative and violative of international agreements and legal principles. This framing serves to position Ethiopia negatively as a party responsible for the ongoing dispute. It further frames Egypt as making diplomatic efforts, including warnings and international appeals, to address its concerns, portraying Egypt as a diplomatic and cooperative actor in the dispute. Additionally, international responses, particularly from the GCC and Arab League, are framed as supportive of Egypt and Sudan's water rights, thereby reinforcing the negative portrayal of Ethiopia's stance.

Regarding "Thursday 13 Apr 2023 - "Egypt accuses Ethiopia of buying time, evading legal responsibility to continue unilateral GERD filling": This article primarily focuses on the continued impasse between Egypt and Ethiopia regarding the GERD. It highlights Egypt's frustration and concerns and frames Ethiopia's stance as defiant. The framing emphasizes the absence of a comprehensive agreement, with Egypt's concerns about water security being a central point.

Regarding "Tuesday 2 May 2023 - "GERD: No longer a priority for Sudan": This article emphasizes the potential impact of the ongoing conflict in Sudan on the country's position regarding the GERD, suggesting that Sudan may have other priorities due to internal issues. The framing highlights the concerns of downstream countries, particularly Egypt, about Ethiopia's unilateral actions and the filling of the dam, portraying Egypt's concerns negatively. Regarding "Wednesday 24 May 2023 - "Ethiopia should stop misleading 'colonial agreements' claims to dodge GERD obligations: Egypt": This article frames Ethiopia's claims as "misleading" and "rife with inaccuracies," emphasizing Egypt's position based on historical agreements. It also highlights the lack of progress in negotiations. The article further emphasizes Ethiopia's criticism of Egypt's stance, portraying it as an attempt to drive a wedge between Arab and African countries,

and as an affront to the AU.

Regarding "Saturday 16 Sep 2023 - "GERD: Another disappointment": The framing in this article highlights Ethiopia's unilateral filling of the dam and the breach of the Declaration of Principles (DoP) as significant issues hindering negotiations. The article amplifies the frustrations and concerns of Egypt due to the lack of progress and the potential impact on its water supply, framing Egypt's stance negatively.

Regarding "Friday 8 Sep 2023 - "Another round of GERD negotiations": The article frames the negotiations as long-stalled, highlighting the history of failed talks and the inability to reach a comprehensive agreement. The framing emphasizes the contrast between Egypt's concerns about water security and Ethiopia's focus on development, emphasizing the core issues in the dispute. Additionally, the mention of the UAE's proposal and the hope for a satisfactory solution suggests that external actors are involved in the negotiations, adding complexity to the issue.

On Thursday, 16 Jan 2020, in the article "Egypt, Sudan and Ethiopia agree to finalize Grand Renaissance Dam agreement later this month," the prevailing tone is cautiously optimistic. The fact that the three countries have agreed to reconvene for further discussions and have made progress on certain aspects of the agreement is seen as a positive development. However, it's clear that there have been past disagreements and challenges in reaching a comprehensive agreement, introducing an element of caution.

On Tuesday, 28 Jan 2020, in the article "Grand Ethiopian Renaissance Dam: Talks about talks," the prevailing tone is one of cautious optimism. The preliminary agreement is seen as a step forward in the negotiation process. However, there is an undercurrent of vigilance, as the article emphasizes that important details are still under discussion.

On Wednesday, 26 Feb 2020, in the article "Egypt says is committed to Grand Renaissance Dam talks after Ethiopia's withdrawal from the final round," the prevailing tone is a mix of optimism and skepticism. Egypt's commitment to negotiations and its willingness to reach a final agreement convey optimism about resolving the issue through diplomatic means. However, Ethiopia's refusal to sign any agreement that compromises its rights suggests skepticism about a swift resolution, and its withdrawal from the talks adds a level of uncertainty to the process.

On Friday, 26 Jun 2020, in the article "Egypt, Ethiopia, and Sudan agree to delay filling Grand Renaissance Dam until a deal is reached," the prevailing tone is optimistic. The agreement among Egypt, Ethiopia, and Sudan to delay the filling of the dam is presented as a positive step in the negotiations. The article suggests a sense of progress and cooperation in the resolution of the GERD dispute.

On Saturday, 14 Aug 2021, in the article "Qatar's S'hail Holding Group donates \$10,000 for Ethiopia's Grand Renaissance Dam GERD," the prevailing tone is one of positivity and support. The donation is presented as a positive step, and there is no indication of conflict or disagreement in the article.

On Thursday, 26 Aug 2021, in the article "Arab countries have tools to pressure Ethiopia on its intransigence in GERD dispute: Arab Parliament speaker," the prevailing tone is one of concern and urgency. The Arab Parliament Speaker's statements indicate that there is a sense of urgency in addressing the GERD issue and applying pressure on Ethiopia to resolve. The proposal for a potential boycott of Ethiopia reflects the seriousness of the situation.

On Friday, 29 Jul 2022, in the article "Egypt records 'utter rejection' to Ethiopia's continuity of unilaterally filling GERD in letter to the Security Council," the prevailing tone is negative, reflecting Egypt's strong objection to Ethiopia's actions and its concerns about the potential consequences. The tone suggests that the situation is a source of regional and international tension, and Egypt is determined to protect its interests.

On Friday, 31 Mar 2023, in the article "GERD: Ethiopia continues unilateral action," the prevailing tone in this article is one of skepticism and concern. The situation is depicted as tense, with little progress in negotiations and Ethiopia's continued unilateral actions. There is also a sense of urgency, especially as preparations for the fourth filling are underway ahead of the rainy season, which contributes to the prevailing tone of concern.

On Thursday, 13 Apr 2023, in the article "Egypt accuses Ethiopia of buying time, evading legal responsibility to continue unilateral GERD filling," the prevailing tone in this article is predominantly pessimistic. It highlights the ongoing tensions and the lack of a comprehensive agreement on the GERD, with Egypt expressing frustration. The article suggests that the issue remains unresolved despite years of negotiations. There is also a tone of urgency as it discusses the potential impact of the GERD on Egypt's water security and population.

On Tuesday, 2 May 2023, in the article "GERD: No longer a priority for Sudan," the prevailing tone in this article is a mix of pessimism and skepticism. The ongoing conflict in Sudan is seen as a potential distraction from the negotiations regarding the GERD, and concerns about the impact of the dam on downstream countries, particularly Egypt, are reiterated. The article also hints at the potential for further challenges, especially with Ethiopia's construction of the dam continuing and concerns about the potential impact of a fourth filling.

On Wednesday, 24 May 2023, in the article "Ethiopia should stop misleading 'colonial agreements' claims to dodge GERD obligations: Egypt," the prevailing tone is one of skepticism and criticism. The article emphasizes that Ethiopia's claims regarding colonial agreements are not well-founded and accuses Ethiopia of violating international law and its moral duty to downstream countries. The tone also reflects disappointment over the lack of tangible progress in negotiations.

On Friday, 8 Sep 2023, in the article "Another round of GERD negotiations," the prevailing tone is one of skepticism and frustration. The talks are seen as lacking progress, and there is uncertainty about the basis for future negotiations. There is also a note of caution regarding the likelihood of significant breakthroughs in the next round of talks.

On Saturday, 16 Sep 2023, in the article "GERD: Another disappointment," the prevailing tone in this article is one of skepticism and frustration. The fourth filling of the dam is seen as a disappointment that dashed hopes of a breakthrough in negotiations. The lack of progress and the continued unilateral actions contribute to the tone of skepticism. There is also a sense of urgency as the article mentions the need for a binding agreement to avoid future problems and to regulate the building of new dams on the Blue Nile.

Ethiopia: The Reporter

The predominant sentiments presented in the news coverage of the Ethiopian newspaper "The Reporter" reflect the evolving dynamics surrounding the Grand Ethiopian Renaissance Dam (GERD) and the Nile River dispute. These sentiments vary from cautious optimism to deep-seated tensions and illustrate the complex nature of this long-standing issue.

In July 2019, the article "Egypt Urges Conclusion on the Nile" conveys a predominant sentiment that is positive. It emphasizes Egypt's willingness to reach an agreement with Ethiopia, highlighting Egypt's desire for a mutually acceptable solution and a positive tone of cooperation.

In October 2019, the article titled "Navigating Uncharted Water: The Nile Hype" carries a somewhat negative sentiment. It describes the rising tension between Egypt and Ethiopia, suggesting a more adversarial relationship. While it doesn't dwell on the negative sentiment extensively, it highlights the contentious aspects of the situation.

Fast forward to December 2019, the article reporting "Downstream Nile nations to convene in US once again" has a predominant sentiment that is neutral to slightly positive. It discusses the willingness of the three countries to continue discussions in Washington, indicating a cooperative approach to resolving their differences.

In May 2020, the article "Using Nile waters is a matter of survival for Ethiopia" expresses a predominantly positive sentiment towards Ethiopia. It portrays Nile waters as a matter of survival for Ethiopia, given the historical challenges of droughts and famines. It conveys a sense of urgency and necessity in implementing projects like the Grand Ethiopian Renaissance Dam (GERD) to save lives and alleviate the impact of frequent droughts. There's also a critical view of Egypt's historical benefits from the Nile.

Skipping ahead to August 2020, the article titled "'Scientific' debate on Nile" carries a predominant negative sentiment, particularly towards the Egyptian authors of the book. The Ethiopian experts criticize the Egyptian authors for their research, accusing them of "scientific misconduct" and highlighting alleged errors, flawed methodology, and misleading conclusions. There's a sense of concern and criticism directed towards Egyptian research.

In May 2022, the article reporting "Ethiopia 'foils' cyber-attack on Grand Renaissance Dam, financial institutions" carries a predominantly negative sentiment. The article describes an attempted cyber-attack on Ethiopia's critical infrastructure, including the Grand Ethiopian Renaissance Dam (GERD), portraying Ethiopia as a victim and emphasizing the need for enhanced cybersecurity and national defence measures.

In December 2022, the article titled "Egypt Bets on US to Restart Talks on Grand Renaissance Dam Dispute" reflects a predominant sentiment of cautious optimism. It discusses Egypt's hope to resume negotiations on the Grand Ethiopian Renaissance Dam (GERD) and highlights the role of the US in resolving the water conflict. The article conveys a sense of cooperation and the potential for a solution.

Stepping into January 2023, the news article titled "Sudan Backs Ethiopia's Dam" carries a predominant sentiment that is neutral to slightly positive. It reports Sudan's shift in its position regarding the GERD, seen as a significant development. The article emphasizes diplomatic efforts to address the GERD

issue and Sudan's alignment with Ethiopia.

In March 2023, the article "Ethiopia Blames Arab League over GERD Partisanship" conveys a predominant sentiment that is negative. It highlights Ethiopia's displeasure with the Arab League's stance on the GERD issue and accuses the League of supporting Egypt. This reflects a sense of frustration and disappointment on Ethiopia's part regarding external involvement in the dispute.

In the same month of March 2023, the article titled "Egypt Resumes GERD Rhetoric as Blinken Visits Addis" carries a predominant negative sentiment. It highlights the escalating tensions between Egypt and Ethiopia over the GERD, with both countries making strong statements. Egypt's declaration that "all options are open" suggests a possible military dimension, contributing to a negative atmosphere.

In May 2023, the article "GERD Standoff Divides Ethiopia, Arab World" conveys a predominant sentiment that is negative. The Arab League's resolution, which aligns with Egypt and Sudan's positions on the GERD, is perceived as unfavorable to Ethiopia. The article suggests that the Arab League's approach complicates the AU's mandate to resolve the GERD issue, adding to the negative tone.

Moving to July 2023, the article "Ethiopia, Egypt to Resume Stalled GERD Talks After Leaders Meet in Cairo" carries a predominant sentiment of positivity. The joint statement indicates that both leaders have agreed to expedite negotiations and work towards finalizing a GERD agreement, suggesting a positive tone.

In October 2023, the article "GERD Tensions Flare Again as Ethiopia, Egypt Trade Letters at UN Security Council" carries a predominant sentiment that is negative, reflecting ongoing tensions and diplomatic disputes between Ethiopia and Egypt.

The portrayal of stakeholders in the news coverage of the Ethiopian newspaper "The Reporter" provides valuable insights into how key actors are depicted in the evolving narrative surrounding the Grand Ethiopian Renaissance Dam (GERD) and the Nile River dispute. From multinational corporations to nations bordering the Nile, these portrayals shed light on the perspectives and positions of stakeholders as they navigate this complex issue.

In July 2019, the article "Egypt Urges Conclusion on the Nile" highlights Egypt's call for a diplomatic and mutually beneficial resolution to the Nile issue. The primary stakeholders are Egypt, portrayed as seeking a solution, and Ethiopia, indirectly mentioned in the context of cooperation.

In October 2019, the article titled "Navigating Uncharted Water: The Nile Hype" provides insights into the evolving dynamics of the GERD dispute. The primary stakeholders are Ethiopia, portrayed as actively engaged in the GERD project and defending its position, and Egypt, depicted as undergoing a shift in its approach.

Published in December 2019, the article "Downstream Nile nations to convene in US once again" highlights the diplomatic efforts surrounding the GERD issue. The primary stakeholders are Ethiopia, portrayed as actively engaging in the negotiations, Sudan, indirectly mentioned as a negotiating party, and Egypt, emphasizing specific proposals during the technical talks.

In May 2020, the article "Using Nile waters is a matter of survival for Ethiopia" focuses on Ethiopia's perspective in the context of the GERD. The primary stakeholders are

Ethiopia, depicted as a country in need of solutions to historical challenges, and Egypt, indirectly portrayed in a less favorable light regarding water scarcity.

In August 2020, the article titled "'Scientific' debate on Nile" highlights the scientific debate between Ethiopian and Egyptian experts. The primary stakeholders are Ethiopian scientists, portrayed as knowledgeable and critical thinkers, and the Egyptian authors, portrayed negatively with their research being heavily criticized.

Published in May 2022, the article "Ethiopia 'foils' cyber-attack on Grand Renaissance Dam, financial institutions" primarily focuses on Ethiopia's response to a cyber-attack, with no significant mention of other stakeholders such as Egypt or Sudan.

In December 2022, the article titled "Egypt Bets on US to Restart Talks on Grand Renaissance Dam Dispute" discusses Egypt's hope for negotiations on the GERD issue. The primary stakeholders are Egypt, portrayed as a concerned stakeholder, Ethiopia, depicted as promoting regional cooperation, and the US, presented as a potential mediator.

Moving to January 2023, the news article titled "Sudan Backs Ethiopia's Dam" discusses Sudan's shift in alignment regarding the GERD. The primary stakeholders are Sudan, depicted as realigning with Ethiopia, and Ethiopia, portrayed as gaining support from Sudan.

In March 2023, the article "Ethiopia Blames Arab League over GERD Partisanship" focuses on Ethiopia's criticism of the Arab League's stance on the GERD issue. The primary stakeholders are Ethiopia, portrayed as critical of external interference, and the Arab League, depicted as biased.

Also in March 2023, the article titled "Egypt Resumes GERD Rhetoric as Blinken Visits Addis" discusses the escalating tensions between Egypt and Ethiopia. The primary stakeholders are Egypt, portrayed as taking a stern stance, and Ethiopia, depicted as advocating for diplomatic engagement.

Published in May 2023, the article "GERD Standoff Divides Ethiopia, Arab World" highlights the impact of the Arab League's resolution on Ethiopia. The primary stakeholders are Ethiopia, portrayed as being negatively affected, Egypt, depicted as using regional and international platforms, and the Arab League, presented as taking a strong stance.

Moving to July 2023, the article "Ethiopia, Egypt to Resume Stalled GERD Talks After Leaders Meet in Cairo" discusses the willingness of both Ethiopia and Egypt to resume negotiations. The primary stakeholders are Ethiopia and Egypt, both depicted as committed to the negotiation process.

In October 2023, the article "GERD Tensions Flare Again as Ethiopia, Egypt Trade Letters at UN Security Council" highlights the ongoing tensions between Ethiopia and Egypt, with both countries expressing their positions at the UN Security Council. The primary stakeholders are Egypt, portrayed as expressing concerns, and Ethiopia, depicted as defending its actions.

In the news coverage provided by Ethiopian The Reporter, various framing techniques are employed to shape the narratives surrounding the Grand Ethiopian Renaissance Dam (GERD) controversy. These techniques are pivotal in influencing how readers perceive the stakeholders, sentiments, and key developments within the ongoing Grand Renaissance Dam dispute.

In July 2019, a news article titled "Egypt urges conclusion on the Nile," pointed out that Egypt is portrayed as a nation seeking a diplomatic and mutually beneficial resolution to the

Nile issue, reflecting a positive approach to negotiations.

Shifting to October 2019 with "Navigating uncharted water: the Nile hype," we see Ethiopia portrayed as actively engaged in the GERD project and defending its position. Egypt is depicted as undergoing a shift in its stance, and the focus is on the changing dynamics of the situation. Looking ahead to December 2019 with "Downstream Nile nations to convene in US once again," the article uses framing techniques to emphasize the ongoing diplomatic efforts to resolve the GERD dispute, with a focus on diplomatic solutions and cooperation among the countries involved.

Transitioning to May 2020 with "Using Nile waters is a matter of survival for Ethiopia," this article highlights Ethiopia's historical challenges with droughts and famines and portrays Nile waters as a matter of survival for the country. There's also a critical view of Egypt's historical benefits from the Nile.

Moving on to August 2020 with "Scientific debate on Nile," Ethiopian scientists are portrayed as critical thinkers who challenge the claims made by Egyptian authors. The Egyptian authors are portrayed negatively, with a strong sense that their research is flawed and misleading.

Progressing to April 2021 with "Binding agreement over the Nile equates to condemning Ethiopia's next Generation, MoFA," this article presents a negative sentiment from Ethiopia's Ministry of Foreign Affairs (MoFA), suggesting that Egypt's pursuit of a comprehensive and binding agreement is detrimental to Ethiopia's future generations.

Turning to May 2022 with "Ethiopia 'foils' cyber-attack on Grand Renaissance Dam, financial institutions," the focus is primarily on Ethiopia as a victim of a cyber-attack, with no mention of Egypt or Sudan in this specific article.

Transitioning to December 2022 with "Egypt Bets on US to Restart Talks on Grand Renaissance Dam Dispute," the article frames the Grand Renaissance Dam controversy as an issue of regional cooperation and renewable energy development. The role of the US as a mediator and the potential for a peaceful resolution are emphasized.

Moving on to January 2023 with "Sudan backs Ethiopia's dam," the article portrays Sudan as having shifted its position to support Ethiopia in the GERD issue, marking a significant diplomatic development. The article highlights Sudan's role in the GERD dispute and its alignment with Ethiopia.

Shifting to March 2023 with "Ethiopia blames Arab League over GERD partisanship," the article uses framing techniques to emphasize Ethiopia's criticism of the Arab League's involvement in the GERD issue, framing the League's actions as biased and interfering in African affairs.

Transitioning to March 2023 with "Egypt resumes GERD rhetoric as Blinken visit Addis," this article highlights the negative turn of events in the GERD dispute, with Egypt's statements suggesting a potential escalation and Ethiopia responding with a firm but diplomatic stance.

Moving on to May 2023 with "GERD standoff divides Ethiopia, Arab World," the article employs framing techniques to highlight the negative impact of the Arab League's resolution on Ethiopia's relations with Middle Eastern countries and its contradictory approach to international agreements.

Looking ahead to July 2023 with "Ethiopia, Egypt

to resume stalled GERD talks after leaders meet in Cairo," this article emphasizes the positive developments in the negotiations, with both leaders committed to strengthening cooperation and regional peace.

Lastly, in October 2023 with "GERD tensions flare again as Ethiopia, Egypt trade letters at UN Security Council," the focus is on the diplomatic tensions between Ethiopia and Egypt, highlighting the negative aspects of the dispute and its potential impact on regional peace and security.

The prevailing tone in the news coverage from The Reporter, spanning several years and key events related to the Ethiopian Grand Renaissance Dam (GERD), reflects the dynamic nature of this diplomatic and hydro-political dispute. These articles exhibit a spectrum of emotions, ranging from optimism and cooperation to concern, skepticism, urgency, and tension, providing a comprehensive view of the evolving sentiments surrounding the GERD issue.

In July 2019 with "Egypt urges conclusion on the Nile," the prevailing tone is one of optimism and cooperation. The article suggests that Egypt is taking a positive stance in its approach to the Nile issue, expressing hope for improved relations with Ethiopia. This tone emphasizes the urgency of finding a conclusion and fostering cooperation in addressing the Grand Renaissance Dam issue.

Transitioning to October 2019 with "Navigating uncharted water: the Nile hype," the prevailing tone is a mixture of skepticism, urgency, and slight negativity. It conveys skepticism about Egypt's claims and a sense of urgency regarding the need for a resolution. The tone becomes slightly negative as it describes the changing relationship between Egypt and Ethiopia and the increasing tension over the GERD.

Moving on to December 2019 with "Downstream Nile nations to convene in US once again," the prevailing tone is one of cooperation and diplomatic engagement. The article conveys the idea that the countries are actively trying to find a resolution to the GERD issue through discussions and negotiations. There's no strong tone of pessimism or urgency, but rather a sense of ongoing diplomatic efforts to address the matter.

Shifting to May 2020 with "Using Nile waters is a matter of survival for Ethiopia," the prevailing tone is one of urgency and necessity. It emphasizes the importance of the GERD in addressing Ethiopia's historical challenges, particularly related to droughts and famines. The tone is positive towards the potential benefits of the dam and its role in saving lives and improving living conditions. There's a sense of optimism regarding the dam's contribution to Ethiopia's development and survival.

Progressing to August 2020 with "Scientific debate on Nile," the prevailing tone is critical and concerned. It highlights the Ethiopian experts' concerns about the accuracy and methodology of the Egyptian research. The tone doesn't exhibit optimism but rather highlights the importance of maintaining scientific integrity in discussions related to the Grand Renaissance Dam controversy. There's a sense of urgency in addressing the flaws in the Egyptian research. Moving on to April 2021 with "Binding agreement over the Nile equates to condemning Ethiopia's next Generation, MoFA," the prevailing tone is one of concern and caution. Ethiopia's Ministry of Foreign Affairs (MoFA) expresses concern about Egypt's persistent pursuit of a binding agreement, which it views as detrimental to its future generations. The article does not exhibit tones of optimism, but rather a sense of urgency in defending Ethiopia's position and interests in the Grand Renaissance Dam controversy.

Transitioning to 7 May 2022 with "Ethiopia 'foils' cyber-attack on Grand Renaissance Dam, financial institutions," the prevailing tone in this article is one of vigilance and defence. It exhibits a sense of urgency in preventing cyber-attacks on critical infrastructure like the GERD. On the 3rd of December 2022 with "Egypt Bets on US to Restart Talks on Grand Renaissance Dam Dispute," the prevailing tone is one of optimism. The article discusses the hope for resumed negotiations and the role of the US in finding a solution. The tone is not overly pessimistic or urgent but focused on the prospect of a peaceful resolution to the Grand Renaissance Dam controversy.

Moving on to the 28th of January 2023 with "Sudan backs Ethiopia's dam," the prevailing tone is one of optimism and positive diplomatic progress. It conveys a sense of improving relations between Sudan and Ethiopia, highlighting their alignment on the GERD issue. There's no evident tone of pessimism, skepticism, or urgency, but rather a tone of positive diplomacy and cooperation.

Shifting to March 2023 with "Ethiopia blames Arab League over GERD partisanship," the prevailing tone is one of frustration and criticism. Ethiopia's statement expresses disappointment with the Arab League's stance and accuses it of interference. The article conveys a negative atmosphere in the ongoing GERD dispute, with a focus on Ethiopia's concerns and commitment to the AU-led negotiations. There's no evident tone of optimism or urgency, but rather a tone of skepticism regarding external involvement.

Transitioning to March 2023 with "Egypt resumes GERD rhetoric as Blinken visit Addis," the prevailing tone is one of heightened tension and concern. The exchange of sharp remarks between Egypt and Ethiopia suggests an escalation in the dispute. The article reflects a negative atmosphere, with no evident tones of optimism or urgency. It highlights the challenging nature of the negotiations and the potential consequences of these tensions.

Moving on to May 2023 with "GERD standoff divides Ethiopia, Arab World," the prevailing tone in this article is one of concern and criticism. It conveys Ethiopia's concerns about the Arab League's stance and its potential impact on diplomatic relations. There is no strong tone of optimism or urgency; instead, the focus is on the challenges posed by the Arab League's resolution.

Looking ahead to July 2023 with "Ethiopia, Egypt to resume stalled GERD talks after leaders meet in Cairo," the prevailing tone is one of optimism. It suggests a positive outlook on the prospects of resumed negotiations and the potential for reaching a GERD agreement within the next four months. The emphasis is on regional peace and cooperation contributes to a positive tone.

On the 7th of October 2023 with "GERD tensions flare again as Ethiopia, Egypt trade letters at UN Security Council," the focus is on the diplomatic tensions between Ethiopia and Egypt over the GERD. The prevailing tone is negative and tense, reflecting the ongoing confrontations and potential threats to regional stability.

Research Conclusion:

The analysis of Ahram Online's coverage of the Grand Renaissance Dam controversy provides valuable insights. The predominant sentiments in Ahram Online's articles fluctuate between cautious optimism and growing

frustration, reflecting the ebb and flow of negotiations and the underlying complexities of the issue. From cautious positivity during moments of progress to deep concerns about unilateral actions and the potential consequences, the articles capture a wide spectrum of emotions and viewpoints.

Ahram Online's coverage of the Grand Renaissance Dam controversy portrays key stakeholders in distinct and evolving ways. Egypt is consistently depicted as deeply concerned about the GERD's potential impact, emphasizing the need for a comprehensive agreement to safeguard its water supply, resulting in a generally negative portrayal of Ethiopia's unilateral actions. Ethiopia's portrayal varies, reflecting its changing positions, from assertive claims to willingness to negotiate, contributing to a more balanced depiction in some articles. Sudan's role is highlighted with concerns about the safety of its dam networks, but there is also the suggestion that domestic issues might distract its engagement. Qatar and the Arab League are framed as either supportive or expressing concerns about Ethiopia's approach, adding complexity to the issue. These portrayals evolve across articles, reflecting the nuanced positions of key players in this ongoing and complex international dispute.

The framing techniques employed in Ahram Online's articles effectively highlight key aspects of the negotiations and emphasize Ethiopia's unilateral actions as a central point of contention. The coverage also recognizes the roles of other international actors and organizations in the dispute, underlining the broader implications of the Grand Ethiopian Renaissance Dam (GERD) on regional and international dynamics.

The prevailing tone in the news coverage of the Grand Ethiopian Renaissance Dam (GERD) dispute, as analyzed across random samples of articles from three years, is marked by a fluid and evolving sentiment. The sentiment oscillates between cautious optimism, skepticism, frustration, and concern, depending on the specific context and the actions of the key stakeholders involved. Egypt is consistently depicted as deeply concerned about the potential impact of the GERD on its water supply and has sought a comprehensive agreement, leading to a more negative portrayal of Ethiopia's unilateral actions. Ethiopia's portrayal shifts between assertiveness and willingness to negotiate. These nuanced portrayals emphasise the complexity of the GERD dispute and the challenges in reaching a lasting resolution. The prevailing tone varies over time, reflecting the evolving dynamics of this critical issue in the Nile River basin. The news coverage from the Ethiopian newspaper "The Reporter" provides a comprehensive view of the evolving dynamics, sentiments, and portrayals of key stakeholders in the ongoing Grand Ethiopian Renaissance Dam (GERD) dispute and the broader Nile River issue.

The predominant sentiments reflected in the news coverage concerning the Grand Ethiopian Renaissance Dam (GERD) and the Nile River dispute represent a dynamic spectrum of emotions, ranging from cautious optimism and cooperative aspirations to skepticism, concern, and heightened tension. These evolving sentiments feature the intricate nature of the issue, illustrating the multifaceted perspectives and interests of the key stakeholders involved. The coverage not only encapsulates the complexities surrounding the GERD but also captures the ever-changing dynamics in the ongoing diplomatic and hydro-political discourse, emphasizing the urgency, necessity, and significance of cooperative efforts to

find a mutually acceptable resolution to this longstanding challenge.

The portrayals of stakeholders, including Egypt, Ethiopia, Sudan, and the Arab League, among others, have shed light on the shifting alliances and perceptions surrounding the GERD issue. These portrayals help readers understand the ever-evolving narrative as these stakeholders navigate the diplomatic and political landscape.

Moreover, the framing techniques used in these articles have been pivotal in shaping the readers' understanding of the issue. They have highlighted the urgency, necessity, and critical nature of the GERD while emphasizing the importance of diplomacy and cooperation to address the challenge.

The prevailing tone in the news coverage has traversed a wide spectrum of emotions, from cautious optimism, cooperation, and hope for peaceful negotiations to skepticism, concern, and heightened tension. It illustrates the ever-changing dynamics and complexities inherent to the GERD controversy, emphasizing the need for diplomatic dialogue, negotiation, and international cooperation to navigate the challenges and reach a mutually beneficial solution. These prevailing tones mirror the ongoing efforts to manage the dispute and promote regional stability while recognizing the gravity and significance of the matter for all involved parties. Regarding the research questions, it was revealed that Ahram Online's coverage often conveys a predominantly positive sentiment, reflecting Egypt's stance in favour of a diplomatic and negotiated solution to the Grand Renaissance Dam dispute. There is an emphasis on cooperation and diplomacy in Egypt's approach, contributing to a positive tone in many articles. As, in, The Reporter (Ethiopia), the predominant sentiments vary over time. While there are instances of positive sentiments, particularly highlighting Ethiopia's perspective and its need for the GERD, there is also a fair share of negative sentiments, especially concerning external actors' roles and the evolving tensions between Egypt and Ethiopia.

Concerning the Portrayals of Stakeholders, Ahram Online typically portray Egypt as a nation advocating for its water rights and emphasizing the need for a comprehensive agreement. Egypt is depicted as actively seeking diplomatic solutions, and its stance is often emphasized in a positive light. As, in The Reporter portrays Ethiopia as a nation striving for its development and emphasizing the importance of the Grand Ethiopian Renaissance Dam (GERD). Ethiopia's perspective is presented with a predominantly positive sentiment, highlighting its position as a country in need of the dam's benefits. There is also a critical view of external stakeholders, which may contribute to some negative sentiments.

About the Framing Techniques, it was revealed that Ahram Online use framing techniques to emphasize Egypt's preference for diplomacy and negotiation. Articles often frame the GERD issue as one that requires cooperation, regional stability, and responsible water use, contributing to a positive and cooperative narrative. As in The Reporter, it employs framing techniques to highlight Ethiopia's historical challenges, emphasizing the urgency and necessity of the GERD project. There is also a critical framing of external actors in some articles, reflecting Ethiopia's concerns and skepticism about their involvement.

In the Prevailing Tone, Ahram Online coverage tends to be optimistic and cooperative, with a focus on the potential for diplomatic solutions to the GERD issue. While there may be concerns, the overall tone is positive. As for the prevailing tone in The Reporter varies over time. It shifts between optimism, urgency, skepticism, and negativity. Ethiopia's perspective leans towards optimism and urgency, emphasizing the necessity of the GERD. However, there are negative tones in articles addressing external actors' roles and the evolving tensions in the dispute.

The research results share common themes with the studies mentioned in the literature review, such as sentiment analysis and its importance in understanding public perception. However, they often pertain to different contexts and subjects, which is why direct comparisons are limited.

In the context of the framing theory, the research results demonstrate how the newspapers, particularly Ahram Online and The Reporter (Ethiopia), employ framing techniques to structure the perception of the Grand Renaissance Dam controversy. The research results discuss how the news coverage portrays key stakeholders in the Grand Renaissance Dam controversy. These portrayals can be seen as frames through which the readers perceive the issue. For example, Egypt is consistently depicted as deeply concerned about the GERD's potential impact, reflecting a frame of Egypt as a defender of its water rights. Also, the research results reflect the framing theory's concept of contextual specificity. It acknowledges that different frames may come into play at different times, which is evident in the shifting portrayal of key stakeholders over time. This aligns with the theory's assertion that frames are dependent on the context of specific events.

Egypt, as a downstream nation, has significant concerns about the potential impact of the GERD on its water supply from the Nile River. Ensuring a stable and predictable flow of water is of paramount importance for Egypt's agriculture, economy, and overall well-being. As a result, Egypt's agenda is to emphasize the need for a comprehensive agreement and diplomatic solutions to safeguard its water rights and mitigate potential risks. Consequently, Ahram Online, an Egyptian newspaper, reflects these national interests and concerns in its coverage. The predominantly positive sentiment and portrayal of Egypt as an advocate for diplomacy and cooperation align with the country's agenda of seeking a negotiated settlement.

Ethiopia, as the upstream nation where the GERD is located, views the dam as a vital component of its development and a means to address its energy needs and achieve economic growth. The dam represents a symbol of national pride and progress for Ethiopia. Ethiopia's agenda is to secure its right to utilize the Nile waters for the benefit of its people and economy while minimizing negative impacts on downstream countries. Consequently, The Reporter, as an Ethiopian newspaper, reflects these national interests and objectives in its coverage. It predominantly conveys positive sentiments about Ethiopia's perspective and the importance of the GERD for the country's development. However, it also expresses skepticism and concerns, particularly regarding external actors' roles that might affect Ethiopia's agenda.

In conclusion, the coverage of the GERD dispute in both newspapers reflects the multifaceted nature of this complex international issue. It points out the need for ongoing diplomacy, negotiation, and cooperation to address the challenges and promote regional stability while recognizing

the significance of the matter for all involved parties.

Conflict of Interest: The author has no conflicts of interest to declare.

Funding : The author has not received any grant or financial support for this research.

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