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Original Article

### The Impacts of Hydropolitics, Legal and Regulatory Frameworks on Foreign Policy Among Nile Basin Countries

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#### Keywords:

*Impact,  
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Countries.*

The purpose of this study is to examine how legal and regulatory frameworks influence foreign policy decisions, considering the complex dynamics of transboundary water governance, aiming to understand water scarcity, regional diplomacy, and interlinked investment decisions. This is in conjunction with the ongoing disputes over water resources and infrastructure projects, such as Ethiopia's Grand Ethiopian Renaissance Dam. Historical treaties that shape regional relations are situated within theoretical frameworks, such as hegemony theory, which explains power asymmetries among riparian states. The theory of cooperation and participation emphasises stakeholder engagement and inclusive decision-making. At the same time, international water resources governance highlights the importance of coordinated efforts among regional and global actors, analysing how power dynamics, legal structures, and institutional capacities influence policy outcomes in the Nile Basin Countries. Methodologically, the research adopts a mixed-methods approach, combining both qualitative and quantitative techniques. Data collection involved structured surveys administered to 251 stakeholders across five Nile Basin countries, including government officials, academic experts, and regional organisations. The study also incorporated interviews, policy analysis, and review of legal documents to deepen understanding. Quantitative analysis employed descriptive statistics, correlation matrices, and regression models to assess relationships between legal frameworks and foreign policy decisions, while qualitative insights provided contextual understanding of regional challenges and opportunities. The findings reveal that existing legal frameworks are perceived as inadequate, with low ratings for their effectiveness, while dispute resolution mechanisms and policy harmonisation efforts are moderately developed. Strong correlations exist between legal structures, implementation capacity, and policy outcomes, indicating that robust legal arrangements are critical for effective governance. The analysis confirms that legal and institutional reforms, including the strengthening of dispute resolution and policy alignment, significantly influence foreign policy decisions. Environmental challenges, notably climate change impacting water availability, further complicate cooperation in wetlands, protecting the ecosystem and biodiversity, underscore the need for adaptive legal frameworks. The study also highlights the influence of geopolitical power asymmetries, historical

treaties, and foreign investments on regional relations. In conclusion, the research emphasises that legal and regulatory frameworks are pivotal for regional stability and sustainable water management in the Nile Basin. It recommends that policymakers prioritise the development of comprehensive, adaptive legal instruments, foster regional dialogue, and build institutional capacities. Strengthening dispute resolution mechanisms and encouraging stakeholder participation are essential for cooperation. The study advocates for integrating environmental considerations into legal frameworks and leveraging international partnerships, supporting sustainable development. Overall, the findings suggest that a holistic approach combining legal reform, diplomatic engagement, and capacity-building is vital for fostering long-term peace and equitable resource sharing among Nile Basin countries.

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## INTRODUCTION

The global water crisis represents one of the most pressing challenges facing humanity today, driven by rapid population growth, poverty, environmental degradation, and conflicts over transboundary water resources. Despite the misconception that water is abundant, often cited as covering 70% of the Earth's surface, only about 2.5% of this water is freshwater suitable for human consumption (Guppy, 2017). Historically, water has been a source of both sustenance and conflict, dating back to ancient civilisations such as Mesopotamia around 2500 BC, where disputes over land and water rights fuelled early interstate conflicts (Adamo, 2020). Rivers like the Euphrates and Tigris played pivotal roles in the development of early societies, with irrigation and water management serving as critical tools for agricultural and military strength.

In modern history, conflicts over water have persisted, exemplified by disputes in North America. The diversion of the Great Lakes waters through the Chicago River reversal in the early 1900s exemplifies how transboundary water management can generate complex jurisdictional challenges. The Boundary Waters Treaty of 1909 and the establishment of the International Joint Commission aimed to regulate such disputes systematically, highlighting the importance of legal frameworks in managing shared water resources (Benidickson, 2011). These historical challenges illustrate the critical role of international law and cooperative institutions in resolving transboundary water conflicts, themes that continue to resonate in regions like the Nile Basin.

Meanwhile, territorial disputes in Southeast Asia, such as those involving the Spratly Islands in the South China Sea, further exemplify the geopolitical importance of maritime and territorial

sovereignty. The history of competing claims initially by the UK, France, Japan, and later China demonstrates how resource riches, including oil reserves and fisheries, escalate conflicts. The discovery of petroleum in the South China Sea in 1968, with potential reserves estimated at over 105 billion barrels, has intensified overlapping sovereignty claims among China, Vietnam, the Philippines, and other nations (Hayton, 2022). These disputes are often rooted in historic claims, national interests, and strategic resource development, underscoring the complex interplay between legal, political, and economic factors in resource-rich regions.

In Africa, legal frameworks such as the United Nations Convention on the Law of the Sea (UNCLOS) influence how riparian states approach sovereignty and resource management, especially in the contentious Nile Basin region, which is shared by eleven countries. These are Ethiopia, Sudan, South Sudan, Kenya, Uganda, Rwanda, Tanzania, Burundi, Eritrea, DRC and Egypt, which epitomise how legal and regulatory frameworks shape foreign policy pronouncements. Historically, the 1929 Anglo-Egyptian Treaty favoured downstream countries, particularly Egypt. Still, recent upstream developments, most notably Ethiopia's construction of the Grand Ethiopian Renaissance Dam (GERD), have challenged existing arrangements and heightened regional tensions (Gassert et al., 2013). These dynamics highlight the need for equitable legal frameworks that accommodate the interests of all the riparian states.

The Nile River itself is a vital resource supporting over 400 million residents across eleven nations, with the basin divided into nine sub-basins. The river's two main tributaries, the White Nile and Blue Nile, originate from Lake Victoria and Ethiopia, respectively, converging in Sudan before flowing into Egypt and the Mediterranean. Historically revered as a life-giving force by ancient Egyptians, the Nile remains central to regional agriculture, energy, and livelihoods (UNEP, 2021). As populations grow, projected to reach nearly one billion by 2050, the pressure on

water resources intensifies, raising concerns over equitable sharing and sustainable management.

The demand for water resources is expected to surge, driven by demographic growth, climate change, and developmental needs. Ethiopia's GERD construction of large infrastructure projects represents a significant geopolitical tension in water rights. Egypt perceives such upstream developments as threats to its historical water legal and water rights. However, diplomatic conflicts, while Ethiopia views the dam as vital for its energy security and economic progress (International Crisis Group, 2021). The 1929 and 1959 treaties granted Egypt substantial control over the Nile's waters. However, the rise of upstream nations to harness their share called for a more inclusive legal arrangement to be revised. The absence of a binding transboundary water treaty resulted in unilateral actions, environmental degradation, and geopolitical tensions (Gassert et al., 2013). Investment in water infrastructure, such as dams, irrigation systems, and treatment facilities, plays a critical role in shaping regional geopolitics.

East African countries require investments of approximately \$28 billion annually to meet future water and sanitation needs (African Development Bank, 2021). These investments, multilateral lenders like the World Bank, often influence foreign policy stances, as countries prioritise projects that serve national interests, navigating complex diplomatic relationships. Ethiopia's strategic investment in the GERD exemplifies how infrastructure priorities are intertwined with diplomatic objectives (Cascão, 2019). However, climate change further complicates transboundary water management, with projections indicating increased variability in rainfall and river flows across the Nile Basin. The IPCC (2021) highlights that climate-induced disruptions exacerbate water scarcity, intensifying competition. Such environmental challenges underscore the urgency for regional cooperation, legal reform, and adaptive management strategies to ensure sustainable water use in the face of changing climate conditions.

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In conclusion, water resource management in the Nile Basin, like in other geopolitically sensitive regions, is deeply rooted in historical, legal, environmental, and political contexts. The evolution from colonial-era treaties to contemporary infrastructure projects reflects shifting dynamics and increasing complexities. Understanding these multifaceted factors is essential for developing equitable, sustainable, and cooperative approaches, particularly as climate change and demographic pressures threaten to intensify existing conflicts. Further research is needed to explore how legal and regulatory frameworks influence foreign policy decisions, aiming to foster long-term regional stability and resource sustainability.

### Statement of the Problem

The Nile Hydro-Political landscape is increasingly shaped by legal frameworks, foreign investment, and regional diplomacy amid rising water demands. The Basin, spanning eleven countries, supports over 450 million people who are facing mounting pressures. The population projections will hit 700 million by 2050 (United

Nations, 2019). Historically, Egypt's colonial-era treaties have dominated water resource management, as seen in the 1929/59 Nile Waters Agreement, which allocated Egypt 55.5 billion cubic metres, and Sudan increased its share from 4 billion cubic metres to 18.5 billion cubic metres. The agreement set aside 10 billion cubic metres to account for seepage and evaporation of water annually, marginalising upstream countries (Gleick et al., 2019). However, Ethiopia continues to assert its rights, constructing large-scale projects, specifically the Grand Ethiopian Renaissance Dam (GERD), which aims to generate over 6,000 MW of electricity. These developments highlight the shifting legal and geopolitical dynamics within the basin as Ethiopia invests over \$4.8 billion by 2023 (International Crisis Group, 2022).

Legal disputes and the lack of modern, binding agreements significantly influence regional relations. The 2010 Cooperative Framework Agreement (CFA), signed by six upstream nations, sought to establish equitable water sharing but has not been ratified by Egypt and Sudan, citing sovereignty concerns (Mekonnen, 2010a). Existing colonial treaties, which heavily favour downstream countries, continue to underpin legal claims, complicating efforts toward cooperative management. Meanwhile, Ethiopia's pursuit of multilateral funding of over \$1.5 billion from international partners demonstrates how foreign investment is intertwined with geopolitical strategies, as countries leverage financial resources to enhance regional influence (OECD, 2022). This complex web of legal and financial negotiations directly impacts the foreign policy decisions in the Nile Basin.

Environmental challenges further exacerbate tensions, as climate change is projected to reduce water flows to 20% by 2050, increasing water scarcity and intensifying Nile Riparian States' competition (Kelley et al., 2015; IPCC, 2021). The Riparian countries prioritise national interests, which undermine regional cooperation efforts. Ethiopia's strategic investments in the GERD infrastructure assert its sovereignty and

foster economic development, as Egypt maintains its traditional water rights through legal claims and diplomatic lobbying (Al-Muqdadi, 2022). These environmental and developmental pressures underscore the importance of robust legal frameworks capable of managing shared water resources sustainably.

In conclusion, Hydro Politics, legal and regulatory frameworks significantly influence the foreign policy, amid the legacy of colonial agreements, the emergence of modern international laws, and negotiations over water rights shape regional interactions among Nile Riparian States. Demographic growth, climate change, and economic development frameworks will determine whether the basin moves toward cooperation or conflict. These dynamics are critical for fostering sustainable and equitable management of Africa's most vital water resources (Gleick et al., 2019; UNEP, 2021).

### **Objective of the Study**

The objective of this study was to investigate the impact of Hydro-politics, legal and regulatory frameworks on foreign policy among Nile Basin countries.

### **Research Hypothesis**

This study was based on the following research hypothesis:

H<sub>0</sub>1: There is no statistically significant impact of Hydro-politics, legal and regulatory frameworks on foreign policy decisions among the Nile Basin countries.

## **THEORETICAL FRAMEWORKS**

This study was anchored on the following theories:

This study benefits significantly from a comprehensive analytical framework that integrates Hegemony Theory, the Theory of Cooperation and Participation, and the Theory of International Water Resources Governance. This integrated approach allows for a multi-dimensional examination of the complex dynamics at play in shared water resources,

particularly within the Nile Basin. By understanding how these theories interact, the study can dissect the power struggles, collaborative efforts, and institutional mechanisms that shape foreign policy and influence the creation and implementation of legal and regulatory frameworks.

### **Hegemony Theory**

Hegemony Theory, as rooted in Marxist thought and notably developed by Antonio Gramsci (Gramsci, 1971), provides the essential lens through which to understand the inherent power asymmetries among the Nile Basin countries. This theory explains how dominant states or groups maintain control not just through brute force, but also through cultural, political, and economic means. Gramsci emphasised the role of ideological hegemony in shaping consent and maintaining dominance. In the context of water politics, Lull contributes to understanding how cultural and media power operate, providing a conceptual backdrop for how dominant actors might influence perceptions and control resources, though the explicit term "hydro-hegemony" is often attributed to later scholars (Lull, 1995; Zeitoun & Warner, 2006 (Zeitoun & Warner, 2006)). This theory is crucial for identifying the underlying power structures that shape legal and regulatory frameworks, revealing how seemingly neutral agreements might, in fact, be a reflection of an unequal distribution of influence. It enables the study to analyse how dominant states might utilise their foreign policy to maintain or extend their hegemonic control over the Nile's waters, setting the stage for understanding potential conflicts and strategic behaviours.

### **Theory of Cooperation and Participation**

Complementing this, the Theory of Cooperation and Participation, articulated by Wouters, offers a counter-narrative and a mechanism for mitigating hegemonic tendencies. This theory emphasizes that effective water management in shared basins necessitates collaboration among all stakeholders governments, communities, and international actors through inclusive decision-making

processes (Wouters, 2013 (Wouters, 2013). Principles such as "no significant harm" and equitable utilisation are central to negotiations over Nile water sharing, as highlighted in studies on transboundary river management strategies (El-Fadel et al., 2003). This theoretical interplay allows the study to explore how states might attempt to overcome power imbalances and national interests to engage in cooperative foreign policy, potentially leading to more sustainable and equitable outcomes for the entire basin. It focuses on the processes and conditions under which cooperation can emerge and be sustained, despite the powerful forces of hegemony.

### **Theory of International Water Resources Governance**

Finally, the Theory of International Water Resources Governance, drawing on frameworks such as those proposed by Swain et al., provides the institutional and structural context within which both hegemonic power dynamics and cooperative endeavours play out. This theory underscores the importance of coordinated efforts among various international organizations, governments, and non-governmental organizations in managing shared water resources (Swain et al., 2016 (Swain et al., 2016). It advocates for transparent, participatory governance structures that facilitate data sharing, joint decision-making, and equitable benefit-sharing, as exemplified by initiatives like the Nile Basin Initiative, which aims for sustainable socio-economic development through regional cooperation (Wheeler et al., 2018 (Wheeler et al., 2018). By integrating this theory, the study can analyse how existing legal and regulatory frameworks either reinforce or challenge hydro-hegemonic practices. It also examines how governance mechanisms, ideally, can facilitate genuine cooperation by providing platforms for negotiation, mediation, and enforcement. This integrated approach allows the study to assess the effectiveness of current governance structures in fostering equitable outcomes and managing conflicts, while also identifying the challenges posed by differing interests and capacities. Together, these three theories offer a robust and

nuanced analytical framework to explore the complex interactions between power, collaboration, and institutions in shaping the foreign policy of Nile Basin countries regarding their shared water resources.

### **Empirical Reviews**

Zeitoun and Warner (2006) examine the concept of hydro-hegemony within the context of transboundary water conflicts, particularly focusing on how upstream states leverage their geographic and political advantages to influence water-sharing negotiations. Their analysis demonstrates that upstream countries often employ various strategies, such as controlling infrastructure, legal frameworks, and diplomatic influence, to maintain dominance over water resources, which affects downstream countries' access and rights. The authors argue that hydro-hegemony extends beyond military power, involving subtle mechanisms of influence that shape regional water politics and negotiations. The study emphasises the importance of understanding these power asymmetries to develop equitable water governance solutions. It highlights how hydro-hegemonic practices can hinder cooperation and exacerbate conflicts, but also points to the potential for downstream states to develop strategies to counterbalance upstream dominance. However, the research identifies a gap in empirical data on effective counter-strategies and calls for further investigation into how regional institutions can promote more balanced negotiations to foster cooperation and stability.

Ohlsson (2011) explores the critical role of legal frameworks and diplomatic efforts in preventing water-related conflicts, emphasising that sustainable water management requires not only sound legal agreements but also strong diplomatic engagement and trust among riparian states. The paper reviews multiple case studies, including the Nile River, to analyse how treaties, conventions, and institutional arrangements influence cooperation, conflict resolution, and sustainable management of shared water resources. The findings suggest that well-designed legal instruments can clarify rights, reduce uncertainty,

and provide mechanisms for dispute resolution, thereby facilitating cooperation among countries. Despite the importance of legal frameworks, Ohlsson notes that their success depends heavily on political will and enforcement mechanisms. The study advocates for integrating legal agreements with diplomatic and institutional efforts, emphasising that legal frameworks alone are insufficient without active political commitment. It also identifies a research gap concerning the adaptability of legal frameworks over time and how they can better accommodate changing environmental, political, and social conditions in transboundary water management.

Tafesse and Tadesse (2018) focus on the legal and institutional dynamics shaping water management between Ethiopia and Egypt, two key Nile Basin countries with competing interests. Through a qualitative case study approach involving document analysis and interviews, they reveal that existing treaties and policies often lack clarity and are outdated, which hampers effective cooperation. Ethiopia's development projects, including hydropower dams, and Egypt's reliance on historical water rights create complex legal and political tensions that threaten regional stability. The authors argue that strengthening legal frameworks and institutional capacities can promote more equitable and sustainable water sharing. The study underscores that clearer, more adaptive legal agreements, coupled with regional dialogue platforms, are essential to reconcile conflicting interests. However, it recognises that deep-seated national interests, geopolitical tensions, and capacity constraints pose significant challenges to reform efforts. The authors suggest that sustained diplomatic engagement, transparency, and confidence-building measures are necessary to overcome these barriers and foster long-term cooperation among Nile Basin countries.

Ndiaye and Tindana (2020) investigate the role of international organisations, particularly the Nile Basin Initiative (NBI), in fostering cooperation among Nile riparian states. Employing a mixed-methods approach including stakeholder interviews, policy analysis, and review of

organisational activities, they find that the NBI has played a positive role in facilitating dialogue, data sharing, and joint projects that contribute to regional trust and cooperation. The initiative's inclusive approach has helped create platforms for negotiation on complex issues such as hydropower development and environmental management. Nevertheless, the authors identify persistent challenges, such as limited participation by some countries, data transparency issues, and political disagreements. They argue that strengthening institutional capacities, expanding stakeholder participation, and improving data-sharing mechanisms are crucial for enhancing the NBI's effectiveness. The study highlights that international organisations can be vital actors in basin governance, but their success depends on their ability to adapt to evolving political and technical realities.

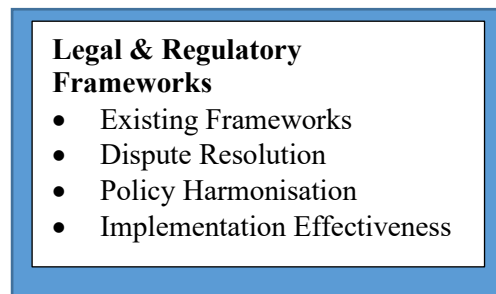
Abdelkader and Elhassan (2022) analyse how legal and institutional frameworks influence water resource management in the Nile Basin, emphasising that fragmented or weak legal arrangements hinder regional cooperation. Through policy analysis, stakeholder interviews, and case studies, they demonstrate that strengthening legal instruments and institutional capacities is essential for promoting equitable water sharing and sustainable development. They also highlight that capacity-building efforts and confidence-building measures are necessary to address existing disparities and tensions among Nile countries. Despite these insights, the authors note that deep-rooted national interests and geopolitical tensions continue to impede progress. They warn that legal reforms must be complemented by political commitment and transparency to be effective. The study advocates for fostering regional dialogue and stakeholder participation to create a more cohesive legal and institutional environment conducive to long-term cooperation and equitable resource management.

## Conceptual Framework

**Figure 1: Conceptual Framework on Interplay between Investment & Financing Politics and Foreign Policy Decisions**

### Independent Variable

#### (Legal & Regulatory Frameworks)



### Dependent variable



**Source:** *Researcher's Conceptualisation (2024)*

The conceptual framework explores how legal and regulatory frameworks, including implementation effectiveness, serve as the independent variable influencing foreign policy decisions. These frameworks encompass existing treaties, dispute resolution mechanisms, and efforts toward policy harmonisation among countries. Implementation effectiveness refers to how successfully these legal arrangements are put into practice, whether treaties are enforced, disputes are resolved efficiently, and policies are genuinely aligned. When implementation is strong, it reinforces trust and stability, enabling legal and regulatory frameworks to more effectively shape foreign policy actions. Conversely, weak implementation can undermine these frameworks, leading to inconsistent policies, increased tensions, and reduced diplomatic engagement.

This relationship impacts key aspects of foreign policy, such as the number and type of treaties negotiated, the frequency of diplomatic interactions, shifts in national policies, and considerations related to water security. Effective legal frameworks with high implementation success foster cooperative foreign policy decisions, while shortcomings in implementation can result in policy shifts or conflicts. Ultimately, the strength and effectiveness of legal and regulatory systems determine how well regional

water management agreements translate into practical diplomatic and policy outcomes, affecting regional stability and water resource sustainability.

## RESEARCH METHODOLOGY

The methodology outlined a philosophical framework rooted in positivism, which sought to apply systematic and scientific approaches to social research. David Comte's evolution of human thought was articulated through three stages: theological, metaphysical, and scientific, with positivism being positioned as the pinnacle of understanding. This perspective was further refined by thinkers such as John Stuart Mill and Émile Durkheim. In the context of contemporary research, especially in hydro-politics, positivism underscores the importance of empirical evidence and the scientific method, encouraging researchers to rely on observable data and statistical analysis rather than subjective interpretations. This framework proved particularly valuable for examining the complexities of water resource management among Nile Basin countries, facilitating a clearer understanding of the relationships between cooperation and Conflict, which could then translate into actionable insights for policymakers.

The research design was characterised as a comprehensive blueprint that integrated various methodologies and techniques, effectively incorporating both qualitative and quantitative approaches. Data collection involved structured surveys directed at stakeholders in the Nile Basin nations, aimed at capturing their perceptions concerning water resource management. The methodology utilised a correlational research design to explore how various aspects of water resource management related to foreign policy behaviours, revealing statistical patterns and correlations that contributed insights into the dynamics of regional collaboration and tension.

The study targeted a total of 676 potential respondents from five ministries, namely Foreign Affairs, Water Resources and Irrigation, Energy and Dams, Livestock and Fisheries, Environment and Forests, Agriculture, and Regional Development and three academic institutions across Ethiopia, Egypt, Kenya, Uganda, and Sudan. Respondents were selected based on their roles and expertise in water resource management, policy formulation, and regional cooperation related to hydro-politics in the Nile Basin. Using a probability sampling strategy and Slovin's formula to achieve a 95% confidence level with a 6% margin of error, a sample size of 251 respondents was determined. The actual respondents included 105 from the Ministry of Foreign Affairs, 99 from Water Resources and Irrigation, 100 from Energy and Dams, 103 from Livestock and Fisheries, and 100 from other relevant ministries, along with 169 from academic institutions, ensuring broad and representative stakeholder engagement.

Data collection involved administering structured questionnaires, conducting key informant interviews, and observing relevant contexts. Trained research assistants, fluent in local languages, distributed 300 questionnaires between March and April 2023, aiming to gather

quantitative data on perceptions and attitudes towards Nile Basin hydro-politics. The questionnaires employed Likert scales (1 to 5), dichotomous questions, and open-ended prompts, with content validity ensured through expert review and pilot testing. Reliability was confirmed with Cronbach's alpha values exceeding 0.7. Additionally, 20 in-depth interviews were conducted by experienced researchers to gain detailed insights into policy challenges, cooperation mechanisms, and conflict resolution strategies, guided by a semi-structured interview protocol.

Ethical considerations were integral to the research process. All participants provided informed consent, and confidentiality and anonymity were maintained throughout the study. Participants were informed of their right to withdraw at any stage without repercussions. Prior to data collection, ethical approval was obtained from relevant institutional review boards. These rigorous procedures ensured the collection of valid, reliable, and ethically sound data, enabling a comprehensive understanding of the hydro-political dynamics affecting the Nile Basin region.

## RESULTS AND DISCUSSIONS

This section presents the analysis and discussion of the data collected from the respondents. The data was analysed using both descriptive and inferential statistics, and the findings are presented below.

### Response Rate

Data was collected using structured questionnaires distributed to 251 respondents across six countries - Egypt, Kenya, Sudan, Uganda, Ethiopia, and South Sudan. Out of the 251 questionnaires distributed, 235 were completed and returned, representing a response rate of 93.6%.

**Table 1: Response Rate Analysis**

| Category                      | Frequency  | Percentage  |
|-------------------------------|------------|-------------|
| Responded (Questionnaires)    | 235        | 93.6%       |
| Non-response (Questionnaires) | 16         | 6.4%        |
| <b>Total</b>                  | <b>251</b> | <b>100%</b> |
| <b>Interviewed</b>            | <b>55</b>  |             |
| <b>Total</b>                  | <b>306</b> |             |

**Demographic Characteristics of Respondents****Gender**

The gender distribution results, with males comprising 60.5% of respondents and females at

39.5%, highlight a prevalent gender imbalance that is reflective of broader societal dynamics in water resource management within the Nile Basin countries.

**Table 2: Gender of Respondents**

| Gender        | Frequency  | Percentage  |
|---------------|------------|-------------|
| <b>Male</b>   | 185        | 60.5%       |
| <b>Female</b> | 121        | 39.5%       |
| <b>Total</b>  | <b>306</b> | <b>100%</b> |

This disparity may indicate systemic barriers that discourage female participation in decision-making processes related to water governance, which are often dominated by male stakeholders.

**Age**

Table 3 presents the age distribution of the respondents.

**Table 3: Age of Respondents**

| Age Bracket         | Frequency  | Percentage  |
|---------------------|------------|-------------|
| <b>18-24 years</b>  | 28         | 9.2%        |
| <b>25-34 years</b>  | 100        | 32.6%       |
| <b>35-44 years</b>  | 111        | 36.3%       |
| <b>45-54 years</b>  | 56         | 18.3%       |
| <b>55 and above</b> | 11         | 3.6%        |
| <b>Total</b>        | <b>306</b> | <b>100%</b> |

In the analysis presented in Table 3, the age demographics of respondents reflect a diverse range of perspectives in relation to displacement and security dilemmas in post-independent South Sudan. The most prominent age group is 35-44 years, encompassing 36.3% of the sample, followed closely by those aged 25-34 years at 32.6%. Younger respondents aged 18-24 years and older participants (55 and above) comprised smaller percentages at 9.2% and 3.6%, respectively. This age distribution suggests that

the majority of respondents are in their prime working years, which may influence their views on the socio-political climate and security issues affecting their lives. The underrepresentation of younger and older individuals may indicate the need for more inclusive research to capture the full spectrum of experiences in this context.

**Education Level**

The education levels of the respondents are summarised in Table 4.

**Table 4: Education Level of Respondents**

| Education Level                   | Frequency  | Percentage  |
|-----------------------------------|------------|-------------|
| High school diploma or equivalent | 56         | 18.2%       |
| Bachelor's degree                 | 167        | 54.6%       |
| Master's degree                   | 67         | 21.8%       |
| Doctorate degree                  | 5          | 1.8%        |
| Other                             | 11         | 3.6%        |
| <b>Total</b>                      | <b>306</b> | <b>100%</b> |

Table 4 provides insights into the educational backgrounds of respondents, revealing that a significant portion, 54.6%, hold a bachelor's degree, making it the most common educational attainment among the sample. Master's degree holders comprise 21.8%, while those with only a high school diploma account for 18.2%. Doctorate degree holders are minimal at 1.8%, and individuals categorised as "other" constitute 3.6%. This distribution indicates a relatively high level of education within the respondent group, potentially affecting their awareness of and

engagement with issues related to displacement and security in post-independent South Sudan. The dominance of respondents with bachelor's and master's degrees suggests that the perspectives and experiences shared may be informed by a higher educational context, which may also impact the analysis of socio-political dynamics in the region.

#### **Years of Service in the Organisation**

Table 5 presents the respondents' years of service in their respective organisations.

**Table 5: Years of Service in the Organisation**

| Years of Service   | Frequency  | Percentage  |
|--------------------|------------|-------------|
| Less than 1 year   | 27         | 8.8%        |
| 1-3 years          | 83         | 27.1%       |
| 4-7 years          | 112        | 36.6%       |
| 8-10 years         | 54         | 17.7%       |
| More than 10 years | 30         | 9.8%        |
| <b>Total</b>       | <b>306</b> | <b>100%</b> |

Table 5 outlines the distribution of respondents based on their tenure in their respective organisations, revealing that the most significant group, 36.6%, has served between 4 to 7 years. The next largest segments include those with 1 to 3 years of service at 27.1% and those who have been with their organisations for 8 to 10 years at 17.7%. A smaller percentage of respondents, 8.8%, have less than one year or more than ten years of service. This distribution indicates that the majority of respondents possess a moderate level of experience within their organisations, suggesting they may have a substantial understanding of the operational and contextual

dynamics affecting their work, particularly in relation to issues of displacement and security in South Sudan. The varied tenure among respondents may contribute diverse insights based on both newer and more seasoned perspectives on the challenges faced in the region.

#### **Legal and Regulatory Frameworks and Foreign Policy**

##### ***Descriptive Statistics***

Table 6 provides a comprehensive overview of the descriptive statistics regarding various aspects of legal and regulatory frameworks.

**Table 6: Descriptive Statistics on Legal and Regulatory Frameworks**

| Statement                    | Mean        | Std. Dev     | Interpretation  |
|------------------------------|-------------|--------------|-----------------|
| Existing legal frameworks    | 2.45        | 1.124        | Low             |
| Legal dispute resolution     | 3.32        | 0.945        | Moderate        |
| Harmonisation of policies    | 3.78        | 0.823        | High            |
| Implementation effectiveness | 3.42        | 0.912        | Moderate        |
| Stakeholder engagement       | 3.65        | 0.856        | High            |
| Institutional capacity       | 3.38        | 0.987        | Moderate        |
| Resource management          | 4.28        | 0.745        | Very High       |
| <b>Overall Mean</b>          | <b>3.47</b> | <b>0.913</b> | <b>Moderate</b> |

The table includes statements that capture the perceptions of these frameworks, along with their corresponding means, standard deviations, and interpretations. The reported means offer insights into the overall effectiveness and robustness of the existing legal structures as perceived by stakeholders.

The analysis indicates that the perception of existing legal frameworks is low, with a mean score of 2.45 and a standard deviation of 1.124. This suggests that respondents view the current legal frameworks as inadequate, highlighting a potential area of concern that may need urgent attention and reform. In contrast, other aspects such as legal dispute resolution (mean = 3.32) and implementation effectiveness (mean = 3.42) are rated as moderate, indicating a reasonable level of effectiveness in these areas but suggesting room for improvement.

Further insights reveal that the harmonisation of policies (mean = 3.78) and stakeholder engagement (mean = 3.65) are viewed positively, classified as high. This implies that there is a recognised effort towards aligning various policies and engaging stakeholders in the

regulatory process. However, while these elements are performing better, they still underline the importance of enhancing existing legal frameworks to support these positive trends effectively.

Notably, resource management stands out with an impressive mean of 4.28, categorised as very high. This indicates a strong emphasis on managing resources effectively, which may provide a foundation for improving other regulatory aspects. The overall mean of 3.47 suggests moderate perceptions of the legal and regulatory frameworks as a whole, indicating that while there are strengths, significant gaps remain, especially concerning the adequacy of existing legal structures. This analysis highlights the need for targeted reforms to bolster the legal framework and improve overall regulatory effectiveness.

### ***Foreign Policy Decisions***

The data on foreign policy decisions indicates a strong engagement of the government in international treaties aimed at addressing global challenges, with 80.1% of respondents affirming this commitment.

**Table 7: Descriptive Statistics for Foreign Policy Decisions**

| Statement                                                                                | Percentage  | Mean | SD  | Tolerance |
|------------------------------------------------------------------------------------------|-------------|------|-----|-----------|
| <b>Our government engages in diverse treaties that address global issues.</b>            | 245 (80.1%) | 4.5  | 0.6 | 0.18      |
| <b>We frequently participate in diplomatic engagements to strengthen relationships.</b>  | 220 (71.9%) | 4.3  | 0.7 | 0.20      |
| <b>Policy shifts reflect changing dynamics in international relations.</b>               | 215 (70.4%) | 4.2  | 0.8 | 0.22      |
| <b>Water security influences our foreign policy decisions.</b>                           | 200 (65.4%) | 4.1  | 0.7 | 0.25      |
| <b>Domestic politics shape our foreign policy and treaty negotiations.</b>               | 210 (68.6%) | 4.4  | 0.6 | 0.19      |
| <b>We collaborate effectively with international organisations on global challenges.</b> | 190 (62.0%) | 3.9  | 0.8 | 0.26      |
| <b>Public opinion influences our foreign policy priorities</b>                           | 175 (57.2%) | 3.7  | 0.9 | 0.30      |

The high mean score of 4.5, paired with a low standard deviation of 0.6, suggests a consensus among those surveyed. Those diverse treaties are a crucial component of the nation's foreign policy framework, reflecting a proactive stance in global cooperation. Additionally, diplomatic engagement appears to play a significant role, with 71.9% of respondents acknowledging the frequency of such activities aimed at strengthening international relationships. With a mean score of 4.3 and a standard deviation of 0.7, the data imply that the government places considerable value on fostering rapport with other nations, viewing it as essential for collaborative efforts and mutual understanding.

The statistics also reveal that policy shifts are perceived as responsive to the evolving dynamics of international relations, with 70.4% of participants recognising this adaptability. The mean score of 4.2 indicates that respondents see a

direct correlation between policy adjustments and global developments. Water security's role in foreign policy decisions is noted by 65.4% of respondents, with a mean of 4.1, illustrating that environmental issues are increasingly becoming a focal point in international negotiations.

Moreover, the influence of domestic politics on foreign policy and treaty negotiations is highlighted by 68.6% of the participants, with a mean score of 4.4, suggesting a significant impact of internal factors on international strategies. While collaboration with international organisations is acknowledged by 62.0% of respondents, indicated by a mean score of 3.9, public opinion seems to exert the least influence, with only 57.2% acknowledging its role in shaping foreign policy priorities. However, the average score of 3.7 signals that, while it may be less impactful overall, public sentiment does hold some sway in the decision-making process.

### Correlation Analysis

**Table 8: Correlation Matrix for Legal Framework Variables**

| Variables                           | 1       | 2       | 3       | 4       | 5     |
|-------------------------------------|---------|---------|---------|---------|-------|
| <b>Existing Frameworks</b>          | 1.000   |         |         |         |       |
| <b>Dispute Resolution</b>           | 0.645** | 1.000   |         |         |       |
| <b>Policy Harmonisation</b>         | 0.589** | 0.534** | 1.000   |         |       |
| <b>Implementation Effectiveness</b> | 0.712** | 0.678** | 0.623** | 1.000   |       |
| <b>Institutional Capacity</b>       | 0.698** | 0.645** | 0.578** | 0.734** | 1.000 |

**\*\*Correlation is significant at the  $p < 0.01$  level**

Table 8 presents a correlation matrix analysing the interrelationships among various variables related to legal frameworks. Each variable is evaluated in pairs, providing insights into how they impact each other. The correlations are significant at the  $p < 0.01$  level, indicating a strong statistical connection between the variables examined.

A notable finding from the correlation matrix is the strong correlation between existing frameworks and implementation effectiveness, with a correlation coefficient of 0.712. This suggests that robust legal structures are essential for achieving effective policy execution. When existing legal frameworks are solid, they tend to facilitate better implementation of policies, supporting the notion that legal clarity and strength provide the foundation for successful governance and policy frameworks.

Additionally, significant correlations are observed between dispute resolution (0.645) and existing frameworks, as well as implementation effectiveness (0.678). This indicates that the

strength of dispute resolution mechanisms is closely tied to both the existence of solid legal frameworks and the successful implementation of policies. A well-structured dispute resolution process can enhance the overall effectiveness of legal and regulatory frameworks, leading to better governance outcomes.

The data also reveal solid relationships between institutional capacity and other variables, with a correlation coefficient of 0.698 with existing frameworks, indicating that stronger institutional capabilities contribute to better legal frameworks and implementation processes. Similarly, the correlation between policy harmonisation and implementation effectiveness (0.623) shows that aligning policies effectively aids implementation efforts. Overall, the correlations underscore the interconnected nature of legal frameworks, dispute resolution, and institutional capacity, emphasising the necessity of strengthening these areas to enhance overall regulatory effectiveness.

## Regression Analysis

**Table 9: Regression Results for Legal Framework Impact**

| Variable                     | B     | Std. Error | Beta  | t     | Sig.  |
|------------------------------|-------|------------|-------|-------|-------|
| (Constant)                   | 0.567 | 0.213      |       | 2.662 | 0.008 |
| Existing Frameworks          | 0.398 | 0.056      | 0.374 | 7.107 | 0.000 |
| Dispute Resolution           | 0.323 | 0.052      | 0.302 | 6.212 | 0.000 |
| Policy Harmonisation         | 0.356 | 0.048      | 0.334 | 7.417 | 0.000 |
| Implementation Effectiveness | 0.312 | 0.045      | 0.293 | 6.933 | 0.000 |

Table 9 presents a regression analysis that evaluates the impact of various legal framework variables on foreign policy decisions. The results indicate that all assessed factors, existing frameworks, dispute resolution, policy harmonisation, and implementation effectiveness significantly influence foreign policy outcomes. The analysis includes key statistics such as the coefficients, beta values, t-statistics, and significance levels, which collectively affirm the relationships drawn from the data.

The constant term in the regression output has a value of 0.567, with a significance level of  $p =$

0.008, establishing a baseline for foreign policy decisions when all independent variables are held constant. Among the independent variables, existing frameworks show a coefficient of 0.398, translating to a beta value of 0.374 with a t-value of 7.107. This strong positive influence highlights the critical role of robust legal structures in informing and shaping foreign policy decisions, confirming their paramount importance in effective governance.

Additionally, the analysis reveals that dispute resolution plays a significant role, with a coefficient of 0.323 and a beta of 0.302, indicating

that effective mechanisms for resolving disputes also contribute positively to foreign policy outcomes. The significance for this variable is also  $p < 0.001$ , showing a strong link between well-functioning dispute resolution processes and foreign policy consistency. Policy harmonisation similarly demonstrates a significant impact, with a coefficient of 0.356 and a beta of 0.334, signifying that alignment of policies enhances the decision-making process within the realm of foreign policy.

Finally, implementation effectiveness is another critical factor, with a coefficient of 0.312 and a beta of 0.293, further supporting the notion that successful implementation of policies is essential for favourable foreign policy outcomes. Each predictor significantly contributes to foreign policy, evidenced by their p-values below 0.001. Overall, the regression results underscore the interconnectedness of these legal framework variables and their collective importance in shaping effective foreign policy decisions, suggesting that enhancing these legal dimensions could lead to more successful policies in the global arena.

### Qualitative Analysis

The interviews and focus group discussions conducted in the Nile Basin region have revealed several key themes with critical implications for foreign policy in the area. One dominant theme that emerged is the presence of regulatory gaps in the current frameworks for transboundary water management. Participants highlighted the limited existing frameworks, the need for harmonised policies across riparian states, and the challenges in implementing existing agreements. This suggests that the development of comprehensive legal and regulatory structures will be crucial for fostering effective cooperation and equitable resource management in the region.

Another key theme is the importance of effective dispute resolution mechanisms. Participants emphasised the role of international legal frameworks and the need for regional dispute settlement bodies to address conflicts over water resources. This underscores the critical

importance of strengthening conflict resolution capabilities as part of foreign policy efforts in the Nile Basin context.

The interviews and focus groups also highlighted the issue of capacity constraints, with participants discussing institutional weaknesses in policy implementation, limited technical and financial resources, and the importance of stakeholder engagement and capacity building. These findings indicate that foreign policy approaches must prioritise investment in institutional strengthening and the enhancement of stakeholder participation to ensure effective policy implementation.

Finally, the growing recognition of environmental priorities emerged as a significant theme. Participants discussed the challenges in balancing development and conservation goals, as well as the role of international environmental agreements in shaping water management policies. This suggests that the integration of ecosystem protection considerations into water diplomacy efforts will be an important component of foreign policy in the Nile Basin.

These thematic findings point to several critical implications for foreign policy in the region. Firstly, there is a need for the development of comprehensive transboundary water management frameworks that are aligned with international legal principles and harmonised across national policies. Secondly, the strengthening of regional conflict resolution bodies, engagement with international legal institutions, and the development of alternative dispute resolution approaches should be prioritised.

Thirdly, foreign policy efforts should focus on investing in institutional capacity building, enhancing stakeholder engagement, and leveraging international partnerships for resource mobilisation. Finally, the integration of environmental diplomacy, the promotion of sustainable development approaches, and engagement with international environmental governance frameworks should be key considerations.

Overall, the analysis underscores the critical role of legal and regulatory frameworks, effective dispute resolution mechanisms, institutional capacity building, and environmental considerations in shaping foreign policy decisions related to transboundary water resources management in the Nile Basin. Addressing these multifaceted challenges will be essential for fostering cooperation, preventing conflicts, and promoting sustainable water resource management in the region.

## DISCUSSION OF THE FINDINGS

The findings of this study underscore the critical influence of legal and regulatory frameworks on shaping foreign policy decisions concerning transboundary water management in the Nile Basin. The relatively low mean scores for existing legal structures (Mean = 2.45) highlight significant gaps and weaknesses that hinder effective cooperation among riparian countries. The moderate effectiveness of dispute resolution mechanisms (Mean = 3.32) suggests that while some institutional processes are in place, they may not be sufficiently robust or enforceable to prevent conflicts. Regression analysis confirms that well-designed legal frameworks and policy harmonisation significantly impact foreign policy outcomes, emphasising the importance of coherent and enforceable legal arrangements in fostering regional stability and cooperation.

These findings align with the broader literature on international water law and transboundary water governance, which consistently emphasises the importance of resilient legal institutions. Wouters (2013) and Cosens et al. (2017) highlight that a strong legal and institutional framework, referred to in the literature as "hydro-legal resilience", enhances adaptive capacity and system resilience. The significance of policy harmonisation and dispute resolution mechanisms observed in this study reinforces the idea that coherent legal structures are vital for effective water management. The literature also stresses that legal arrangements alone are insufficient; they must be supported by political will and diplomatic

engagement to translate legal provisions into tangible cooperation.

Empirical studies further elaborate on the complexities faced by Nile Basin countries. Zeitoun and Warner (2006) examine hydro-hegemony, illustrating how upstream states leverage legal and infrastructural controls to maintain dominance, often hindering downstream cooperation. Similarly, Ohlsson (2011) emphasises that legal frameworks must be complemented by diplomatic efforts and trust-building to effectively prevent conflicts. Tafesse and Tadesse (2018) focus on Ethiopia and Egypt, revealing that outdated treaties and conflicting national interests impede progress, necessitating clearer, adaptable legal agreements and sustained dialogue. These studies collectively highlight that legal and institutional reforms are essential, but they must be embedded within a broader political context to succeed.

Furthermore, the role of regional and international organisations such as the Nile Basin Initiative (NBI) is crucial in fostering cooperation, as evidenced by Ndiaye and Tindana (2020). Their research shows that inclusive platforms for dialogue, data sharing, and joint projects can build trust, but persistent challenges such as limited participation and data transparency remain. Abdelkader and Elhassan (2022) reinforce this view, emphasising that strengthening legal and institutional capacities, coupled with capacity-building and confidence measures, is vital for overcoming geopolitical tensions. Overall, the literature underscores that sustainable transboundary water management in the Nile Basin depends on comprehensive legal frameworks, effective institutional arrangements, and sustained diplomatic engagement, all of which are essential for fostering long-term regional stability and equitable resource sharing.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

In conclusion, this study highlights the pivotal role that legal and regulatory frameworks play in

shaping foreign policy decisions and fostering cooperation in transboundary water management within the Nile Basin. The findings demonstrate that existing legal structures are often inadequate, and the effectiveness of dispute resolution mechanisms remains moderate, indicating a pressing need for the development of more robust, coherent, and adaptive legal arrangements. Strengthening these frameworks, along with policy harmonisation efforts, can significantly influence regional stability, promote equitable resource sharing, and support sustainable management of the Nile's water resources. The empirical evidence underscores that legal and institutional reforms are fundamental to overcoming current challenges and fostering a collaborative environment among riparian states.

Furthermore, the study reveals that legal frameworks alone are insufficient without strong political will, diplomatic engagement, and institutional capacity-building. The success of regional initiatives such as the Nile Basin Initiative relies heavily on inclusive participation, transparency, and trust among stakeholders. Addressing deeper geopolitical tensions, capacity disparities, and data-sharing issues remains crucial for enhancing cooperation. Ultimately, sustainable transboundary water governance in the Nile Basin requires a holistic approach that combines legal reforms with diplomatic efforts, regional dialogue, and active stakeholder involvement to create resilient, equitable, and effective water management systems for the future.

## Recommendations

### *Recommendations for Policy:*

Policymakers should prioritise the development and implementation of comprehensive, clear, and adaptable legal frameworks that specifically address transboundary water sharing and dispute resolution in the Nile Basin. Harmonisation of national policies with regional agreements is essential to foster cooperation and reduce conflicts. Additionally, establishing strong, enforceable dispute resolution mechanisms and ensuring consistent policy updates to

accommodate environmental, social, and political changes will enhance regional stability and trust among riparian states.

### *Recommendations for Theory and Practice:*

The study suggests that future theoretical models should incorporate the complex interplay between legal frameworks, political will, and regional dynamics to better understand and predict cooperation outcomes. Practitioners should focus on building resilient institutions that facilitate stakeholder participation, transparency, and data sharing, recognising that legal arrangements must be complemented by diplomatic engagement and capacity-building efforts. Practical measures such as confidence-building initiatives and regional dialogue platforms are vital to translating legal agreements into effective cooperation.

### *Recommendations for the Ministry:*

The Ministry should spearhead efforts to review, modernise, and harmonise existing legal and institutional arrangements related to Nile water management. It is crucial to foster diplomatic engagement with other riparian countries to build trust and ensure political commitment to cooperative frameworks. The Ministry should also invest in capacity-building programs for regional institutions, enhance data collection and sharing mechanisms, and promote transparency and stakeholder participation in decision-making processes. These actions will strengthen the Ministry's role in facilitating sustainable and equitable water resource governance in the Nile Basin.

### Suggestions for Further Research

- Future studies could examine different regional approaches to transboundary water management beyond the Nile Basin, such as the Colorado River Basin or the Mekong River Commission, to identify best practices and adaptable strategies for effective cooperation.
- Research could explore how climate variability and climate change influence water availability in the Nile Basin and

assess the adequacy of existing legal and institutional arrangements in addressing these emerging challenges.

- Further investigation is needed into how local communities, indigenous groups, and non-governmental organisations can be integrated into decision-making processes to promote more inclusive and sustainable water management.
- Additional research could evaluate the effectiveness of current data sharing practices among Nile Basin countries and develop models for improving transparency, monitoring, and compliance within regional legal frameworks.

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