A STRUCTURAL AND SEMIOTIC ANALYSIS OF GENESIS 2:15: AN ECOTHEOLOGICAL RESPONSE TO CLIMATE CHANGE

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Declaration

This thesis is my original work and has not been presented to this university or any other for the award of a degree.

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Dedication

I dedicate this thesis first and foremost to Almighty God, the Creator of heaven and earth, whose grace, wisdom, and sustaining power sustained me throughout this academic journey. His faithfulness has been my strength, and without Him this work would not have been possible.

I also dedicate this work to biblical scholars and faithful interpreters of Scripture who labor diligently in exegetical study so that believers may better understand the Word of God and faithfully embrace humanity's divine mandate, especially the responsibility to care for creation and steward the environment.

Further, I dedicate this thesis to the Church of Jesus Christ, particularly the churches in Nairobi and beyond, with the prayer that this study may contribute toward a renewed biblical understanding of humanity's calling to "work and keep" God's creation faithfully as an act of worship, obedience, and stewardship.

Finally, this work is dedicated to all individuals and communities who faithfully engage in environmental stewardship through their daily efforts, however small they may seem, to preserve and protect the environment for the glory of God, the advancement of His Kingdom, and the flourishing of creation.

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Abstract

Climate change constitutes one of the most urgent global and regional challenges of the twenty-first century, posing profound threats to ecological integrity, human livelihoods, and social stability. Although Christian theology has historically affirmed environmental stewardship as a fundamental biblical mandate, ecclesial engagement with ecological responsibility has often remained fragmented and inconsistent, revealing a persistent disconnect between theological affirmation and practical implementation. This study addresses this gap through a structural and semiotic analysis of Genesis 2:15, with the aim of developing an ecotheological response to climate change. The study investigates the literary structure and symbolic significance of key elements within the text, giving particular attention to the Hebrew verbs עָבַד (*ʿābad*, "to work/serve") and שָׁמַר (*šāmar*, "to keep/guard"), which function as central theological signifiers of humanity's vocation within creation. The findings reveal that Genesis 2:15 establishes a dual mandate of cultivation and preservation, thereby presenting a theological framework in which human interaction with the environment is simultaneously productive and protective. Consequently, the study argues that the biblical concept of dominion should be understood not as legitimizing exploitation but as embodying responsible stewardship grounded in worshipful obedience, covenantal responsibility, and ethical accountability. Situated within the broader discourse on the "greening of religions" and the emerging role of African churches in addressing ecological crises, the study identifies significant gaps in existing scholarship, including the limited application of rigorous exegetical methodologies, the absence of coherent ecotheological frameworks, and the enduring divide between theological reflection and ecclesial practice. Through a documentary analysis of selected Nairobi churches namely the Anglican Church of Kenya (ACK), the Catholic Church, the Presbyterian Church of East Africa (PCEA), and Christ Is the Answer Ministries (CITAM) the research examines the extent to which biblical exegesis is integrated with contextual theological reflection and environmental praxis. Building on these findings, the study proposes a framework that bridges doctrine and practice by providing a biblically grounded and contextually relevant model for environmental stewardship. In so doing, it contributes to contemporary ecotheological scholarship and underscores the church's potential role as a critical moral and spiritual agent in responding to the challenges of climate change. Through the integration of sound biblical interpretation with practical engagement, the study envisions a renewed ecclesial witness capable of fostering ecological responsibility and promoting the flourishing of creation.

Abbreviations and Acronyms

ACK	Anglican Church of Kenya
ANE	Ancient Near East
CITAM	Christ Is the Answer Ministries
CO_2e	Carbon Dioxide Equivalent
IPCC	Intergovernmental Panel on Climate Change
KCCB	Kenya Conference of Catholic Bishops
NGO	Non-Governmental Organization
PCEA	Presbyterian Church of East Africa
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
WMO	World Meteorological Organization

Hebrew Terms Used in the Study

Hebrew Term	Transliteration	Meaning
עָבַד	ʿābad	To work, serve, cultivate
שָׁמַר	šāmar	To keep, guard, preserve
כָּבַשׁ	kābaš	To subdue
רָדָה	rādâ	To rule, exercise dominion

Greek Terms Used in the Study

Greek Term	Transliteration	Meaning
οἶκος	oikos	House, household, dwelling; often extended to stewardship and household management
κτίσις	ktisis	Creation, created order
οἰκουμένη	oikoumenē	The inhabited earth/world
διακονία	diakonia	Service, ministry

Greek Term	Transliteration	Meaning
καινὴ κτίσις	kainē ktisis	New creation
γῆ	gen	Earth, land
κόσμος	kosmos	World, ordered universe

Definition of Terms

For the purposes of this study, the following core concepts were defined to ensure conceptual clarity and methodological precision. These definitions establish the conceptual and analytical framework for examining Genesis 2:15 and its ecotheological implications within selected Nairobi churches.

Ecotheology: Conradie (2023) defines ecotheology as a form of constructive theology that explores the relationship between religious worldviews and the environment, focusing on how faith can drive ecological preservation. In this study, ecotheology was understood as a theological discourse that examines the relationship between religion and the natural environment, emphasizing humanity's ethical responsibility for environmental stewardship grounded in biblical principles:

Stewardship Theology: From a biblical perspective, Charles Bugg, writing in the *Holman Bible Dictionary*, describes stewardship as the responsible use and management of all the resources entrusted by God for His glory and the flourishing of creation. Within the Christian tradition, stewardship encompasses the believer's duty to faithfully administer both material and spiritual gifts bestowed by God. Consequently, Christian stewardship extends beyond financial resources to include the exercise of spiritual gifts imparted by the Holy Spirit. In this sense, human beings are called to serve as God's stewards, participating in His ongoing purposes of creation, redemption, and sanctification (Fairchild, 2022).

This study defined stewardship theology as a theological model that views humans as caretakers of the earth, entrusted by God with the responsibility to manage, protect, and sustain creation. Within Nairobi churches, stewardship theology provides a biblical basis

for mobilizing congregants to integrate creation care into both their spiritual formation and practical engagement.

Climate change: Climate change refers to long-term changes in temperature and weather patterns. While these changes can occur naturally through factors such as variations in solar activity or major volcanic eruptions, human activities have been the primary cause since the nineteenth century. In particular, the extensive use of fossil fuels including coal, oil, and natural gas has been the main driver of contemporary climate change (United Nations, n.d.). In this study climate change refers to the effects of these shifts in weather patterns which cause disasters like flooding, drought and others.

Creation Care: Creation care entails a shift from an anthropocentric perspective, which places primary emphasis on human interests and needs, to a theocentric orientation that recognizes God and His purposes as central to the created order. In this understanding, the environment is valued not merely for its utility to humanity but as part of God's creation, entrusted to human beings for responsible stewardship and faithful care (Lock 2025). In this study, creation care referred to the theological responsibility of Christians to protect, sustain, and restore the natural environment as an integral aspect of their faith practice. In Nairobi churches, it reflected a holistic discipleship model that integrates spiritual growth with social and environmental responsibility.

Faith-Based Climate Action: Faith-based climate action can be defined as the mobilization of religious and spiritual values, beliefs, and practices to address the ecological crisis by promoting environmental stewardship, ethical responsibility, and sustainable responses to climate change (UNEP 2024)**.** This study understood faith-based climate action as environmental initiatives, advocacy, and community practices driven by Christian beliefs and scriptural values. In the Nairobi context, it encompassed how

churches and their members respond to climate change through preaching, discipleship, outreach, and personal lifestyle transformation.

Chapter One: Introduction and Background to the Study

Introduction

This chapter introduces the study by situating it within the broader context of climate change and contemporary ecotheological discourse. It presents the background to the study and articulates the research problem that necessitates a re-examination of Genesis 2:15 as a theological foundation for environmental stewardship. The chapter further outlines the research objectives and questions that guide the investigation, and discusses the assumptions, scope, and limitations within which the study is undertaken.

Background to the Study

Climate change constitutes one of the most pressing challenges of the twenty-first century, with far-reaching consequences for ecosystems, economies, and human wellbeing. Beyond its scientific and policy dimensions, the crisis raises fundamental theological questions regarding humanity's role within creation and the ethical responsibilities that arise from it. Accordingly, this study advances a proposition that a robust ecotheological response is necessary. This response ought to be one that is grounded not merely in contemporary ethical concerns but in a careful re-examination of biblical texts that articulate humanity's original vocation within the created order (Juma, 2025).

Within the Ecological Response Framework, this study identifies *The Holy Bible* (New International Version, 2011) Genesis 2:15 as a foundational text for articulating a theology of environmental stewardship. The passage, in which God "took the man and put him in the Garden of Eden to work it and take care of it," presents a divinely instituted mandate that integrates service (*ʿābad*) and protection (*šāmar*) as core

dimensions of human responsibility (Mpofu, 2021; Ottuh, 2022). These verbs carry profound theological significance, establishing stewardship not as a peripheral concern but as intrinsic to human identity and vocation. By employing a structural and semiotic analysis of Genesis 2:15, this research sought to uncover the deeper theological logic of the text and to delineate its implications for contemporary ecotheological discourse, particularly within select Nairobi churches grappling with the impacts of climate change.

Effective responses to climate change require inclusive and community-driven approaches that move beyond purely technocratic or policy-oriented solutions (Intergovernmental Panel on Climate Change [IPCC], 2023). While such approaches remain important, they often marginalize grassroots actors and overlook the potential contributions of faith-based institutions. In the Kenyan context, churches represent a significant moral and social force, possessing both the theological resources and communal structures necessary to influence attitudes and practices related to environmental care. Excluding these institutions from climate discourse therefore undermines the development of holistic and locally grounded responses.

This study argues that a deeper engagement with scriptural mandates especially Genesis 2:15 can serve as a catalyst for mobilizing faith communities toward proactive environmental stewardship and climate action (Kiarie, 2020). Accordingly, this research sought to bridge this gap by examining Genesis 2:15 is interpreted and applied within environmental initiatives. The study in effect contributes to the development of a contextually relevant ecotheological framework for climate change mitigation and adaptation. This engagement is particularly significant given that religious communities including African churches possess extensive organizational networks and a collective capacity that can play a vital role in safeguarding the environment (Kabongo & Stork, 2022).

In situating this study within the broader scholarly discourse, it is evident that a growing body of theological literature has increasingly engaged with the ecological crisis (Manus & Obioma, 2016). This study aligns with this trajectory while arguing that Christian theology offers rich ethical and theological resources capable of addressing environmental degradation. A shift away from anthropocentric interpretations toward a more holistic understanding of creation is essential for developing a coherent ecotheological response (Mpofu, 2021). Such a reorientation is especially pertinent in the Kenyan context, where the widespread presence and influence of the church, position it uniquely to integrate environmental ethics into its mission and practice (Magezi, 2024; Mupangwa & Chirongoma, 2024).

Finally, this study argues that viewing environmental care through the lens of biblical stewardship theology provides a compelling theological foundation for church engagement in climate action. Framing creation care as an act of worship bridges the perceived divide between faith and ecological responsibility, while reinforcing the moral urgency of environmental advocacy. This perspective calls for the intentional integration of ecological concerns into the life of the church, including its teaching, discipleship, and liturgical practices. By moving beyond a purely anthropocentric understanding of creation to one that recognizes the intrinsic value of all life and the interconnectedness of ecosystems, the church is better positioned to embody a holistic and transformative response to climate change (Chitando, 2020).

In light of the foregoing considerations, a structural and semiotic analysis of Genesis 2:15 not only deepens exegetical understanding but also provides a normative theological foundation for ecotheology. By recovering the biblical vision of humanity as divinely commissioned stewards who serve and protect creation, this research offers a framework through which Nairobi churches can engage climate change as both a

theological and moral imperative, rooted in the very purpose for which humanity was created.

Statement of the Problem

Despite clear biblical foundations for environmental stewardship, a significant gap persists between theological conviction and practical ecological engagement within many Christian communities. Although Genesis 2:15 articulates a dual mandate for humanity to serve and preserve creation, this mandate has not been consistently translated into concrete environmental action. This disconnect is largely attributable to entrenched anthropocentric biases and the historical marginalization of ecological concerns within mainstream theological discourse (Maseno & Mamati, 2021; Shaw, 2024). Consequently, theological affirmations of creation care often remain abstract, failing to generate sustained and transformative environmental practices within the life of the church (Chitando et al., 2022).

The church's engagement with climate change is further complicated by internal theological and ideological tensions. A notable segment within Christianity continues to grapple with the reality of anthropogenic climate change, a reluctance often shaped by particular doctrinal interpretations and political orientations (Nche, 2022). Where environmental engagement does occur, it is frequently driven more by contemporary socio-political frameworks than by sustained biblical reflection, thereby weakening its theological coherence and long-term impact. This underscores the urgent need to critically re-examine Christian doctrines related to creation, dominion, and redemption in order to challenge anthropocentric assumptions and cultivate a more ecocentric theological paradigm (Bühlmann et al., 2022; Sserunjogi & Achar, 2025).

Empirical evidence from the Kenyan context reinforces this disconnect. Research from Limuru Sub-County reveals that, although environmental stewardship policies exist

within churches, congregational awareness and grassroots participation remain notably limited (Warui & Kairu, 2018). Environmental stewardship largely operates at the level of institutional policy articulation, with minimal translation into lived congregational practice. Contributing factors include the absence of concrete action plans, weak monitoring mechanisms, inadequate funding, and low levels of clergy awareness.

Similar patterns are evident among urban youth. Research conducted at Parklands Baptist Church in Nairobi reveals that, despite youth participation in church-led environmental programmes such as clean-ups, tree planting, and eco-relevant sermons, the influence on personal behaviour outside the church remained unclear (Maseno & Mamati, 2021). This finding underscores a limited translation of ecological awareness into consistent individual practice, further demonstrating that formal theological commitments to creation care do not reliably generate practical environmental engagement.

These findings collectively point to a persistent gap between theological rhetoric and ecological praxis, one that necessitates the development of a robust theological framework capable of bridging belief and action (Bühlmann et al., 2022; Runtuwene, 2025). A focused examination of how specific biblical texts are interpreted and applied is therefore essential. Genesis 2:15, with its dual mandate to "work" (ʿābad) and "keep" (šāmar) the garden, offers a particularly significant locus for this analysis, since the way this text is understood hermeneutically has direct implications for how environmental stewardship is conceptualized and practiced within faith communities (Conradie, 2020; Pangihutan & Jura, 2023).

Furthermore, theological traditions that have historically failed to motivate ecological action must be critically re-examined. In particular, African Pentecostal and Charismatic traditions, often perceived as less engaged in environmental discourse,

require renewed theological frameworks that integrate creation care into their core mission and praxis (Awudi, 2025; Kgatle & Chigorimbo, 2024). This re-evaluation is necessary to ensure that theological convictions not only affirm the value of creation but also energize concrete responses to climate change and ecological degradation (Howell, 2021).

In response to these challenges, this study examines the structural and semiotic dimensions of Genesis 2:15 and their implications for ecotheological engagement within selected Nairobi churches. Specifically, it investigates how churches interpret and operationalize this foundational text in their responses to climate change, and whether such interpretations contribute to the "greening of religion" (Spence & Brown, 2018; Stork & Toit, 2022). By analysing the hermeneutical strategies employed, the study seeks to develop a contextually grounded and theologically robust framework that moves beyond anthropocentric readings of Scripture toward ecologically responsible praxis, enabling African churches to respond to climate change as a theological, moral, and ecological imperative.

Research Objectives

This study examined how Genesis 2:15 informs and shapes Christian engagement in environmental stewardship. Grounded in a structural and semiotic analysis of the text, the study pursued the following specific objectives:

i) To analyse the structural, syntactic, semantic, and semiotic dimensions of Genesis 2:15 and examine how its hermeneutical interpretations bridge the gap between doctrinal convictions and practical ecological action, including their expression in worship liturgies, theological training, and church-affiliated initiatives.

ii) To examine how selected Nairobi churches engage with creation care in their ecotheological responses to climate change and investigate how their theological

interpretations and communal practices contribute to the "greening of religions" hypothesis and promote corporate environmental responsibility.

iii) To propose actionable ecotheological frameworks that integrate biblical reflection with contemporary ecological imperatives, thereby fostering intentional creation care among selected Nairobi churches.

Research Questions

In pursuit of the specific objectives, the study was guided by the following research questions:

i) What structural, syntactic, semantic, and semiotic dimensions of Genesis 2:15 establish a theological mandate for sustainable environmental stewardship, and how are these interpretations translated into practical ecological action through worship liturgies, theological training, and church-affiliated initiatives?

ii) How do selected Nairobi churches engage with creation care in their responses to climate change, and in what ways do their theological interpretations and communal practices contribute to the "greening of religions" hypothesis and promote corporate environmental responsibility?

iii) What actionable ecotheological frameworks can be derived from the findings to integrate biblical reflection with contemporary ecological imperatives and foster intentional creation care among selected Nairobi churches?

Together, these objectives and questions provided a coherent framework through which the study integrates biblical exegesis, theological reflection, and empirical investigation, enabling a comprehensive exploration of how Genesis 2:15 can inform a contextually grounded ecotheological response to climate change within Nairobi churches.

Assumptions of the Study

This study assumed that interpretations of biblical texts, particularly Genesis 2:15, significantly influence environmental attitudes and behaviors within church communities by shaping the relationship between textual meaning and contemporary ecological realities (Kavusa, 2019). It further assumed that such interpretations can either reinforce anthropocentric views that prioritize human dominion over nature or foster biocentric perspectives that affirm the intrinsic value of all creation and promote sustainable environmental stewardship, as reflected in Genesis 1–2 (Mathu, 2025). The selected Nairobi churches, through their theological frameworks and community practices, play a pivotal role in shaping the ecological consciousness of their adherents and influencing broader societal environmental discourse (Taringa, 2014). Finally, it assumed that analyzing these interpretative frameworks can yield actionable ecotheological strategies applicable to Churches, thereby contributing to the development of informed theological responses to climate change (Adedeji & Lenz, 2024).

Scope and Delimitations of the Study

This study examined the theological foundations of environmental stewardship within selected churches in Nairobi, namely Christ Is the Answer Ministries (CITAM), the Anglican Church of Kenya (ACK), the Presbyterian Church of East Africa (PCEA), and the Catholic Church. These church traditions were purposively selected because of their extensive presence and influence within Nairobi, their established institutional structures, and their sustained engagement with social and community concerns. Geographically, the study was delimited to Nairobi County and did not extend to churches located in other regions of Kenya.

The study focused specifically on Genesis 2:15 as the principal exegetical text, viewing it as a foundational biblical basis for sustainable creation care through the dual

responsibilities of "working" (ʿābad) and "keeping" (šāmar) the earth. In so doing, it sought to demonstrate how this mandate offers an alternative to anthropocentric models of exploitation that have historically shaped theological reflection and ecological practice. Accordingly, the study was delimited to an in-depth examination of this passage and did not undertake an exhaustive analysis of other biblical texts relating to creation care.

Methodologically, the study was confined to a structural and semiotic analysis of Genesis 2:15 in order to uncover the theological significance embedded within the text and its implications for environmental stewardship. The investigation was further delimited to an examination of the theological interpretations and ecotheological practices of the selected church traditions. Consequently, the study did not attempt to investigate the ecological perspectives of all Christian denominations in Kenya, nor did it seek to provide a comprehensive assessment of every aspect of Christian environmental ethics. Rather, its focus was restricted to developing a contextually grounded ecotheological framework for understanding and promoting creation care within the selected Nairobi churches.

Limitations of the Study

This study was subject to several limitations. The findings were derived from selected church traditions within Nairobi County and, therefore, may not be fully representative of the diverse theological orientations and ecological practices of Christian communities in other regions of Kenya or across Africa. Consequently, the generalizability of the findings should be interpreted with caution.

In addition, the study relied primarily on documentary sources and theological materials to examine the interpretation and application of Genesis 2:15. As a result, it may not have captured the full range of lived experiences, attitudes, and environmental practices among individual church members and clergy. The availability and depth of

relevant documents also varied across the selected church traditions, which may have influenced the comprehensiveness of the analysis.

Moreover, the interpretation of biblical texts through structural and semiotic methodologies inevitably involves a degree of scholarly subjectivity. Although the study sought to ensure methodological rigor and consistency, alternative exegetical approaches might yield different emphases and theological insights.

Finally, the dynamic and multifaceted nature of climate change, together with the influence of cultural, social, economic, and political factors on ecological attitudes and practices, presents challenges in isolating the specific contribution of theological interpretation to environmental engagement. Accordingly, the conclusions drawn in this study should be understood within the broader context in which faith communities operate.

Notwithstanding these limitations, the study provides valuable insights into the relationship between biblical interpretation and ecological responsibility and contributes to the development of a contextually grounded ecotheological framework for addressing climate change within selected Nairobi churches.

Justification.

The study purposively selected the Anglican Church of Kenya (ACK), the Roman Catholic Church, the Presbyterian Church of East Africa (PCEA), and Christ Is the Answer Ministries (CITAM) because they represent some of the most influential and diverse Christian traditions in Nairobi and Kenya as a whole. These denominations have a significant membership base, extensive institutional presence, and a long-standing involvement in social transformation and public engagement. Their influence extends beyond the sphere of worship into areas such as education, healthcare, community

development, and advocacy, making them key actors in shaping Christian responses to contemporary societal issues, including environmental stewardship.

In addition, these denominations have exhibited varying levels of engagement with ecological concerns through their doctrinal pronouncements, pastoral teachings, and practical initiatives. Their inclusion in this study therefore provides an opportunity to examine how different ecclesial traditions understand and apply the stewardship mandate of Genesis 2:15 in the context of climate change. By drawing insights from these diverse traditions, the study facilitates a comparative assessment of the interpretation and operationalization of Genesis 2:15 and contributes to a broader understanding of ecotheological responses within the Kenyan church context.

Chapter Summary

This study begun by framing climate change as a major global and Kenyan challenge, highlighting Africa's disproportionate vulnerability and arguing that faith-based institutions remain underrepresented in climate discourse. While scripture particularly Genesis 2:15 presents environmental stewardship as a divine mandate, this study demonstrates that many Nairobi churches have yet to integrate creation care into their preaching, discipleship, and lifestyle practices. This study identified this gap between theological understanding and ecological engagement as the core problem under investigation. Accordingly, this chapter has outlined the purpose, objectives, and research questions guiding the inquiry, all centered on exploring how Genesis 2:15 can inform and inspire faith-driven responses to climate change within Nairobi's urban church context. It has further defined the study's scope, limitations, and key assumptions, thereby establishing a rigorous framework for examining the structural and semiotic dimensions of Genesis 2:15 as a foundation for ecotheological engagement. The chapter therefore set

the stage for a comprehensive analysis of how biblical interpretations of stewardship can inform contemporary efforts toward sustainable development and environmental conservation within Christian communities.

Chapter Two: Literature Review

Introduction

This chapter critically reviews existing scholarly literature on ecotheology and the biblical exegesis of Genesis 2:15 in alignment with the three objectives of this study. The review is structured in four thematic sections. The first examines the structural, syntactic, semantic, and semiotic dimensions of Genesis 2:15 and the hermeneutical frameworks through which this text has been interpreted. The second surveys how selected Nairobi churches engage with creation care in their ecotheological responses to climate change. The third explores the transition from ecotheological doctrine to practical ministry, including worship, liturgy, theological education, and church-affiliated initiatives. The fourth addresses the "greening of religions" hypothesis and its implications for corporate environmental responsibility. The chapter concludes by identifying critical gaps in existing research that this study seeks to address (Khan et al., 2025; Matandirotya et al., 2025).

The review identifies critical gaps in current research, particularly regarding the contributions of Afro-Indigenous spiritual and ecological knowledge to contemporary climate challenges, as well as the limited integration of biblical and African ecological ethics within existing ecotheological frameworks (Juma, 2025). While significant scholarship has addressed ecotheology at a global level, less attention has been given to contextually grounded interpretations that reflect the lived realities of African church communities, especially within urban settings such as Nairobi. This study therefore argues for the development of contextual ecotheological frameworks that are both biblically rooted and culturally informed, providing a comprehensive analytical foundation upon which the subsequent chapters are built.

Structural, syntactic, semantic and Semiotic Interpretations of Genesis 2:15

There are ongoing scholarly debates on Genesis 2:15, particularly regarding its implications for environmental ethics and humanity's responsibility toward creation (Tewu & Kampilong, 2026). This verse, often translated as God placing humanity in the Garden of Eden "to work it and take care of it," provides a foundational theological framework for understanding humanity's primordial relationship with the natural world. A close examination of the Hebrew text — especially the verbs עָבַד (ʿābad, to work/serve) and שָׁמַר (šāmar, to keep/guard) — demonstrates a nuanced conception of human dominion that emphasizes stewardship, interdependence, and responsibility rather than exploitation (Mufid et al., 2023).

Structural Analysis

Structural analysis of Genesis 2:15 reveals the deliberate literary arrangement of its verbal concepts, positioning human agency as central to maintaining the divinely ordered harmony of creation. The term עָבַד (ʿābad) encompasses not merely physical labour but service and worship, suggesting that human interaction with creation is inherently an act of devotion to God. Similarly, שָׁמַר (šāmar) denotes guarding, preserving, and attentive care, underscoring a protective and nurturing responsibility toward the environment (Kavusa, 2021). Structurally, the deliberate placement of these two verbs within a single divine command communicates an inseparable mandate — to cultivate and to conserve — that together constitute humanity's vocation before God.

Syntactic Analysis

From a syntactic perspective, the juxtaposition of ʿābad and šāmar within a single divine command establishes a complementary and inseparable mandate for humanity: to cultivate and to conserve. This dual imperative reflects a holistic vocation in which

productive engagement with the environment is intrinsically linked to its preservation (Ricca, 2025). The syntactic construction reinforces the theological point that neither dimension of the mandate working nor keeping is dispensable; both are integral to the faithful exercise of human stewardship. Such a formulation redefines the notion of dominion, shifting it from absolute control to responsible guardianship, and frames human-environmental interaction within a theological vision of reciprocal flourishing rather than unilateral exploitation. This interpretation stands in contrast to anthropocentric readings that have historically justified environmental degradation and instead calls for a re-evaluation of humanity's ecological obligations in view of contemporary climate crises (Taringa, 2014; Vermeulen, 2022).

Semantic Analysis

Semantically, further lexical analysis reinforces the ecological significance of Genesis 2:15. The frequent occurrence of šāmar, appearing over 400 times in the Old Testament, is indicative of a consistent biblical emphasis on vigilant preservation and protective stewardship (Fong, 2023). Its use in priestly contexts, particularly in relation to safeguarding sacred spaces, suggests that the Garden of Eden may be understood as a sanctuary requiring careful and reverent management (Tewu & Kampilong, 2026). This aligns with interpretations that identify Eden as an archetypal sanctuary, thereby elevating humanity's role to that of priestly stewards within a sacred ecological domain (Abdi & Pardamean, 2019; Yohanes, 2020).

Conversely, ʿābad, which appears extensively throughout the Old Testament, emphasizes active, purposeful engagement with the land. This engagement is not merely extractive but generative, reflecting a mode of labour that contributes to both human and ecological flourishing (Sadowski & Ayvaz, 2022). Together, these terms establish a theological paradigm in which human activity is both productive and preservative,

mirroring God's ongoing creative work (Culp, 2022; Körtner, 2021). Genesis 2:15 therefore leaves little ambiguity regarding the divine intention for humanity's role in creation: it is fundamentally one of stewardship rather than exploitation.

Semiotic Analysis

Semiotically, Genesis 2:15 functions as a foundational signifier of humanity's ecological identity. The narrative encodes a covenantal relationship between humanity and the earth, grounded in divine intention and oriented toward mutual flourishing (Rossi & Mauri, 2021). The key terms within the text operate as theological symbols that shape not only the meaning of the passage but also its ethical implications, positioning stewardship as a core dimension of human vocation. Accordingly, semiotic analysis enables a deeper engagement with the text by revealing the symbolic structures and theological meanings embedded within its language, meanings that extend beyond its immediate literary context to address the ecological responsibilities of contemporary faith communities.

Hermeneutical Implications: From Dominion to Stewardship

When Genesis 2:15 is interpreted in light of Genesis 1:28, a more comprehensive understanding of dominion emerges. The terms כָּבַשׁ (kābaš, to subdue) and רָדָה (rādâ, to rule) are reinterpreted not as licenses for domination but as responsibilities for just governance and faithful care (Puglisi & Buitendag, 2020). This interpretation resonates with the concept of humanity as bearing the image of God (imago Dei), implying a covenantal duty to represent divine authority through responsible stewardship (Okediji, 2022). Dominion is thus understood as delegated authority, bounded by divine purpose and oriented toward the preservation of creation (Seok, 2012).

While some interpretations suggest that the term “garden” limits the scope of Genesis 2:15 to an agrarian context, such a reading is reductive. Rather, the Edenic narrative functions as a prototype for creation, extending the mandate to cultivate and guard beyond agricultural settings to encompass all ecosystems (Ferreira, 2023). The command is therefore universal in scope, emphasizing humanity's responsibility for the entirety of the created order (Chibuye & Buitendag, 2020). Collectively, the structural, syntactic, semantic, and semiotic dimensions of Genesis 2:15 articulate a robust theological framework for ecological stewardship one that challenges anthropocentric paradigms and calls for a renewed theological vision in which human flourishing is inseparably linked to the preservation and wellbeing of the natural world.

Bridging Hermeneutics and Ecological Practice: Worship, Theological Training, and Church Initiatives

The hermeneutical reorientation of Genesis 2:15 carries direct implications for how environmental stewardship is expressed in the life of the church, including in worship, theological formation, and institutional initiatives. As churches increasingly recognize the environment as a site of spiritual and social concern, they are called to develop what may be described as a “green liturgy” a reorientation of worship and ministry in which environmental stewardship is not peripheral but central to the life of the church (Kiarie, 2020). Such a shift reflects a broader theological movement toward holistic discipleship, in which care for creation is integrated into the spiritual formation of believers.

Drawing on Marumo (2016), this study argues that the way sacred texts are understood and applied plays a decisive role in shaping environmental engagement. Specifically, varied interpretations of biblical passages relating to creation care often produce divergent ecological responses, not only across different faith traditions but also

within individual denominations (Hirschl et al., 2023). The integration of ecotheological content into theological education and ministerial training therefore constitutes a critical bridge between hermeneutical insight and lived ecological practice. When Genesis 2:15 is taught as a normative mandate rather than a background reference, it equips clergy and congregants to move from awareness to intentional, sustained environmental action.

How selected Nairobi Churches Engage with Creation Care

Discipleship constitutes the core of Christian life, serving as the primary means through which churches shape the spiritual, ethical, and practical orientation of their members. Within this framework, churches are uniquely positioned to influence not only personal piety but also broader societal engagement, including responses to environmental challenges. The following sections examine how Christ Is the Answer Ministries (CITAM), the Anglican Church of Kenya (ACK), the Presbyterian Church of East Africa (PCEA), and the Catholic Church each engage with creation care, and how these engagements collectively contribute to — or fall short of — the "greening of religions" hypothesis.

Christ Is the Answer Ministries (CITAM)

CITAM reflects a largely pragmatic and decentralized approach to environmental stewardship. Rather than developing a distinct ecological doctrine, CITAM integrates environmental concerns within its broader strategic framework, particularly in its Strategic Plan (2016–2025). Such an approach aligns with a model of holistic ministry in which environmental responsibility is embedded within institutional governance and operational priorities (CITAM, 2016). This orientation reflects an urban Pentecostal pragmatism that prioritizes adaptability and contextual relevance over formal doctrinal articulation.

The practical expression of this engagement is evident in CITAM's internal communication platforms, including quarterly publications and annual reports, which document localized initiatives such as sustainable resource management and community-based environmental programs. However, the absence of a clearly articulated theological motif for environmental stewardship reveals a significant gap in the church's engagement with creation care. While environmental concerns are acknowledged at a functional level, they remain insufficiently grounded in a coherent theological framework. This pattern reflects a broader tendency within many urban Pentecostal churches, where ecological responsibility is addressed pragmatically but not systematically integrated into the theological and discipleship life of the church.

Anglican Church of Kenya (ACK)

The Anglican Church of Kenya stands out as one of the more proactive models of ecological engagement within the Kenyan ecclesiastical landscape. Through initiatives such as the Green Anglicans Movement and its adoption of the Fifth Mark of Mission, the ACK demonstrates a deliberate and structured commitment to creation care. This commitment is further institutionalized in its ten-year strategic plan (2017), particularly within Pillars 9 and 10 ("Wholesome Ecology and Beauty"), which promote ecological awareness, Clean-Up Kenya initiatives, participation in environmental forums at local, national, continental, and global levels, and the advancement of affordable and sustainable renewable energy practices (Anglican Church of Kenya, 2018).

However, two critical questions arise: what is the underlying premise of these ecological initiatives, and are they primarily rooted in a biblically grounded theological conviction or driven more by contemporary environmental concerns? These questions speak directly to the depth and sustainability of ecclesial engagement in environmental stewardship. Despite the ACK's institutional intentionality, this study identified a critical

gap in implementation pathways — highlighting the broader challenge of translating theological principles into measurable and sustained ecological practices.

Presbyterian Church of East Africa (PCEA)

The Presbyterian Church of East Africa has historically exhibited limited institutional engagement in environmental stewardship. Drawing on research by Warui and Kairu (2018), PCEA's involvement is largely symbolic and intermittent, with environmental activities often confined to individual initiatives or ceremonial events such as tree planting during church functions. Although the church formally acknowledged environmental challenges during its 18th General Assembly in 2007 and established a sub-committee on environmental stewardship, these efforts have not consistently translated into comprehensive institutional action. This reflects a structural disconnect between denominational resolutions and grassroots implementation, illustrating the broader challenge of translating high-level policy commitments into sustained and integrated ecological practices within congregational life (Köhrsen et al., 2022; Tsekpoe & Awudi, 2025).

The Catholic Church in Kenya

The Catholic Church in Kenya demonstrates a more structured and integrated approach to environmental stewardship, characterized by a vertical integration of global ecclesiastical mandates and local implementation. Central to this framework is the Kenya Conference of Catholic Bishops (KCCB), which serves as a conduit for contextualizing global Catholic social teaching within the Kenyan ecological landscape (KCCB, 2012). This approach is significantly shaped by Pope Francis's (2015) encyclical Laudato si', which articulates an "integral ecology" linking environmental sustainability with social justice. The operationalization of these principles is evident in the KCCB's strategic

document Faith Commitment to a Living Planet (KCCB, 2012), which outlines institutional goals related to sustainable land use, water conservation, and environmental education.

However, it is observed that the underpinning theological framework of the Catholic response is grounded not in a rigorous exegetical analysis of Genesis 2:15 but in a socio-anthropological principle of stewardship. While this approach effectively mobilizes the Church's institutional network, it raises questions about the depth of its biblical grounding and its capacity to generate a hermeneutically coherent and exegetically robust framework for creation care.

Comparative Analysis and the "Greening of Religions" Hypothesis

Taken together, the Kenyan ecclesiastical landscape exhibits a diverse spectrum of environmental engagement. The Catholic and Anglican traditions are characterized by structured, institutionally driven approaches that integrate global theological mandates with local action. In contrast, PCEA and CITAM reflect more decentralized and administratively driven models, where environmental stewardship is incorporated into broader institutional frameworks rather than articulated as a central theological priority. Despite these differences, these traditions are increasingly moving toward a model of holistic ministry that recognizes the intersection of faith and environmental responsibility (CITAM, 2016; KCCB, 2012).

The concept of the "greening of religions" provides a significant framework for interpreting this trajectory (Spence & Brown, 2018). Religious traditions once largely framed within anthropocentric paradigms are undergoing a transformation toward ecologically conscious worldviews that emphasize care for creation as an expression of faith. In the context of Nairobi, churches occupy a strategic position due to their extensive reach and moral authority, and are increasingly called upon to foster corporate

environmental responsibility understood as collective accountability within faith communities for ecological stewardship (Conradie, 2011). Such responsibility extends beyond individual action to include institutional commitments, such as environmentally conscious policies, sustainable resource management, and advocacy for ecological justice (Stork & Toit, 2022).

Nevertheless, a persistent gap between theological commitments and practical implementation remains across all four traditions. Tangible and sustained engagement at the congregational level remains uneven (Kiarie, 2020), attributable to limited resources, insufficient integration of ecological concerns into liturgical and educational structures, and challenges in mobilizing congregants for consistent environmental action (Honig et al., 2021; Tsekpoe & Awudi, 2025). Addressing this gap requires not only institutional commitment but also a re-examination of the hermeneutical frameworks that shape how biblical texts such as Genesis 2:15 are interpreted and applied, a reorientation essential for developing a coherent and contextually grounded ecotheological response to climate change within African church contexts.

Ecotheology in Church Life and Ministry

The transition from ecotheological doctrine to tangible practice represents a critical juncture in contemporary African ecclesiology. While theological frameworks articulate the moral imperative for environmental stewardship, their significance ultimately depends on their translation into lived ecclesial realities. This transition requires the intentional integration of creation care into the fundamental pillars of church life, including worship, liturgy, theological education, and community-led initiatives. In this regard, ecotheology moves beyond abstract theological reflection to become a practical expression of faith, shaping both individual discipleship and collective ecclesial engagement.

As churches increasingly recognize the environment as a site of spiritual and social concern, they are called to develop what may be described as a "green liturgy" a reorientation of worship and ministry in which environmental stewardship is not peripheral but central to the life of the church (Kiarie, 2020). Such a shift reflects a broader theological movement toward holistic discipleship, in which care for creation is integrated into the spiritual formation of believers. However, this study argues that despite these emerging developments, a persistent "dogmatic gap" remains between theological pronouncements and practical ecological action.

Drawing on Kiarie's (2020) study on the role of the church in environmental conservation in Kenya (1963–2019), this study observes that Kenyan churches historically remained relatively inconspicuous in major environmental struggles, including conservation movements associated with Wangari Maathai and the Green Belt Movement. Nevertheless, the twenty-first century has witnessed a notable shift, with several denominations establishing dedicated environmental desks and forming strategic partnerships aimed at addressing ecological challenges. The Anglican Church of Kenya (ACK) is a primary example of this transition, particularly through its integration into the Green Anglicans Movement. Such initiatives function as structural bridges between environmental theology and congregational activism, demonstrating a deliberate attempt to translate doctrinal commitments into practical engagement.

The effectiveness of ecotheological engagement is closely tied to the role of leadership within church structures. Clergy, as primary interpreters of Scripture and shapers of congregational life, serve as critical conduits for environmental mobilization.

Drawing on the study by Honig et al. (2021) on the role of religious leaders in climate change advocacy, this study demonstrates that Christian clergy in Kenya have become increasingly vocal on issues of climate change, engaging in public advocacy and,

in some instances, organizing high-profile actions to draw attention to environmental injusticeHowever, such advocacy is often constrained by complex socio-political dynamics, including the marginalization of certain communities and the intricate relationships between church leadership and state structures. These factors can limit the extent to which churches engage in transformative ecological critique.

The internal dynamics of church denominations significantly shape the extent of environmental engagement. Interpreting the findings of Köhrsen et al. (2022), variations in ecological commitment are often more pronounced within denominations than between them. Rather than reflecting a uniform institutional stance, environmental engagement frequently depends on the personal convictions and interests of individual leaders and congregants. This suggests that while official doctrine provides an important theological foundation, the actualization of ecotheology remains uneven and, in many cases, highly individualized within the broader church body.

Given that the Bible serves as the central authoritative text within Christian faith and practice, this study interrogates why environmental care has not been accorded corresponding seriousness, despite the increasing prominence of ecclesial advocacy on environmental stewardship. This apparent paradox reveals a fundamental disconnect between biblical interpretation and actionable ecological ethics. Drawing on Marumo (2016), this study argued that the way sacred texts are understood and applied plays a decisive role in shaping environmental engagement. Specifically, varied interpretations of biblical passages relating to creation care often produce divergent ecological responses, not only across different faith traditions but also within individual denominations (Hirschl et al., 2023).

While significant progress has been made in articulating ecotheological frameworks within the church contexts, the transition from doctrine to practice remains

incomplete. Bridging this gap requires not only institutional commitment but also a reconfiguration of hermeneutical approaches that shape how biblical texts are interpreted and embodied in the life of the church. Such a transformation is essential for developing a coherent and contextually grounded ecotheological response to climate change, one that integrates theological conviction with sustained ecological action.

Leadership, Advocacy, and the Role of Clergy

The effectiveness of ecotheological engagement is closely tied to the role of leadership within church structures. Clergy, as primary interpreters of Scripture and shapers of congregational life, serve as critical conduits for environmental mobilization. Drawing on the study by Honig et al. (2021) on the role of religious leaders in climate change advocacy, this study demonstrates that Christian clergy in Kenya have become increasingly vocal on issues of climate change, engaging in public advocacy and, in some instances, organizing high-profile actions to draw attention to environmental injustice. However, such advocacy is often constrained by complex socio-political dynamics, including the marginalization of certain communities and the intricate relationships between church leadership and state structures — factors that can limit the extent to which churches engage in transformative ecological critique.

The internal dynamics of church denominations also significantly shape the extent of environmental engagement. Interpreting the findings of Köhrsen et al. (2022), variations in ecological commitment are often more pronounced within denominations than between them. Rather than reflecting a uniform institutional stance, environmental engagement frequently depends on the personal convictions and interests of individual leaders and congregants. This suggests that while official doctrine provides an important theological foundation, the actualization of ecotheology remains uneven and, in many cases, highly individualized within the broader church body.

Toward Contextual Ecotheological Frameworks for African Churches

The need for contextual ecotheological frameworks in African churches arises from the recognition that environmental theology cannot be uncritically imported from Western discourse without meaningful engagement with African worldviews, ecclesial realities, and local ecological challenges. African churches require ecotheological frameworks that intentionally integrate biblical reflection, African cosmologies, and practical environmental ethics in ways that are both theologically grounded and culturally resonant (Gabriel & Olulowo, 2025; Mamati & Maseno, 2021).

Drawing on Kavusa's (2021) work, African Christianity already possesses rich cultural and theological resources capable of supporting sustainable ecological engagement. Concepts such as Ubuntu, African moral views of nature, and traditional understandings of kingship offer important hermeneutical lenses for interpreting creation care within a Christian framework. Similarly, Howell's (2025) and Blasu's (2025) articulation of African theocology emphasizes a theocentric vision of creation in which God, humanity, and the natural world exist in a relational and interdependent framework. Together, these perspectives demonstrate that contextual ecotheology in Africa must be both biblically anchored and attentive to indigenous epistemologies.

This study identifies the work of Maseno and Mamati (2021) as a particularly significant Kenyan contribution to this discourse. Their research on Parklands Baptist Church in Nairobi demonstrates that Pentecostal and evangelical contexts can cultivate environmental consciousness through preaching, youth engagement, and congregational initiatives. Their findings reveal a critical insight: contextual ecotheology does not emerge automatically from Christian belief but must be intentionally nurtured through theological framing, institutional commitment, and practical structures. However, their

work remains largely descriptive, lacking a robust exegetical and theological foundation capable of sustaining and systematizing these efforts.

In this regard, this study argues that Genesis 2:15 provides a critical corrective by offering a foundational biblical mandate for environmental stewardship rooted in humanity's vocation to "work" (ʿābad) and "keep" (šāmar) creation. Through a structural and semiotic reading, this research reframes ecological responsibility as an essential dimension of theological identity rather than an optional activity, thereby bridging the gap between belief and practice. Several key principles must shape actionable ecotheological frameworks for African churches: creation care must be recovered as a core biblical mandate rather than an optional social concern; such frameworks must engage African communal values; they must bridge doctrine and practice by integrating environmental stewardship into preaching, theological education, worship, discipleship, and church-based initiatives; and they must remain attentive to empirical realities such as climate vulnerability, water insecurity, and land degradation within African contexts.

In addition, theological worldviews that have historically failed to motivate ecological action must be critically re-examined. In particular, African Pentecostal and Charismatic traditions — often perceived as less engaged in environmental discourse — require renewed theological frameworks that integrate creation care into their core mission and praxis (Awudi, 2025; Kgatle & Chigorimbo, 2024). This re-evaluation is necessary to ensure that theological convictions not only affirm the value of creation but also energize concrete responses to climate change and ecological degradation (Howell, 2021). Such contextual frameworks must be firmly grounded in the exegesis of Genesis 2:15 while intentionally directed toward practical ecclesial engagement, providing not only an interpretive model of the biblical text but also a normative guide for sustained and contextually relevant environmental action.

Identified Gaps

The reviewed literature reveals a growing convergence around the importance of environmental stewardship within Christian theology and practice. Biblical scholarship consistently affirms creation care as a foundational scriptural mandate, particularly through humanity's vocation as stewards of creation. Studies engaging Genesis 2:15 emphasize the theological significance of the dual mandate to "work" (ʿābad) and "keep" (šāmar) the earth, highlighting a balanced responsibility of cultivation and preservation (Conradie, 2020; Pangihutan & Jura, 2023). Furthermore, ecotheological scholarship has significantly advanced the discourse by framing environmental degradation as a moral and spiritual crisis, thereby calling the church to a more active role in addressing climate change (Spence & Brown, 2018; Stork & Toit, 2022). Within the African context, churches are increasingly engaging ecological concerns through preaching, youth programs, and localized initiatives, indicating an emerging awareness of environmental responsibility.

Despite these important contributions, this study identifies several critical gaps in existing literature. First, although biblical texts such as Genesis 2:15 are frequently cited as foundational for environmental stewardship, there is limited application of rigorous structural and semiotic exegetical methods to fully explore their theological depth and normative implications. Much of the existing work relies on thematic or generalized theological interpretations, leaving underexplored the internal textual structures and symbolic meanings that can provide a more robust and coherent framework for ecological responsibility. Second, empirical studies within Nairobi and broader African contexts remain largely descriptive, documenting existing practices without sufficiently grounding them in a systematic exegetical and theological model. As a result, ecological engagement within churches often appears fragmented, programmatic, and inconsistently integrated

into the core mission and identity of the church (Maseno & Mamati, 2021; Warui & Kairu, 2018).

A critical disconnect further exists between biblical interpretation, theological reflection, and applied environmental practice. While theological discourse increasingly acknowledges the importance of creation care, this recognition does not consistently translate into sustained institutional action within churches. Factors such as anthropocentric interpretations of dominion, limited theological training on environmental stewardship, and the absence of structured ecotheological frameworks contribute significantly to this gap (Bühlmann et al., 2022; Sserunjogi & Achar, 2025). Consequently, many churches remain at the level of awareness rather than advancing toward intentional, policy-driven, and community-based ecological engagement.

This study addresses these gaps by conducting a structural and semiotic exegetical analysis of Genesis 2:15 as the foundation for developing a contextually grounded ecotheological framework for Nairobi churches. By examining the structural patterns and semiotic meanings embedded within the text, the study recovers a deeper theological understanding of stewardship as a divine mandate. More importantly, it translates this exegetical insight into practical, church-based ecological responses, thereby contributing to the ongoing discourse on the greening of religions and the role of African churches in addressing climate change. In doing so, this study bridges the gap between text, theology, and practice, offering a coherent model for integrating biblical reflection with contemporary ecological imperatives.

Chapter Summary

This chapter has critically examined existing scholarship on ecotheology, the exegesis of Genesis 2:15, and the operationalization of environmental stewardship within selected churches in Nairobi County, organized in alignment with the three objectives of

this study. The review has demonstrated that Genesis 2:15 provides a significant theological foundation for understanding humanity's relationship with creation through the dual mandate to "work" (ʿābad) and "keep" (šāmar) the earth. Structural, syntactic, semantic, and semiotic analyses collectively reveal that the text presents stewardship not as optional ecological activism but as a divinely instituted vocation rooted in humanity's identity and responsibility before God (Objective I).

An examination of CITAM, ACK, PCEA, and the Catholic Church in Kenya reveals a diverse spectrum of environmental engagement ranging from structured, institutionally driven approaches to more decentralized and administratively driven models. While all four traditions are moving toward greater ecological awareness, a persistent disconnect between theological commitment and sustained congregational practice remains. The review further demonstrated that these emerging engagements both contribute to and are constrained within the broader framework of the "greening of religions" hypothesis and corporate environmental responsibility (Objective II).

Finally, the chapter identified the critical need for actionable ecotheological frameworks that integrate biblical reflection, African cosmologies, and practical environmental ethics. Drawing on contextual African theology and the exegetical foundations of Genesis 2:15, the study argued that such frameworks must be biblically grounded, culturally integrated, and practically oriented — capable of bridging the persistent gap between ecotheological doctrine and lived congregational practice (Objective III). The literature reviewed in this chapter provides the conceptual, theological, and analytical foundation upon which the subsequent chapters of this study are developed.

Chapter Three: Research Methodology

Introduction

This chapter presents the research methodology employed in this study. It explains the rationale for adopting the design, describes the analytical framework through which Genesis 2:15 is examined, articulates the integrated theoretical framework that guides the study, and outlines the documentary data sources and procedures used to examine how selected Nairobi churches engage with creation care. The chapter is structured to move from the research design, through the analytical and theoretical frameworks, to data sources, procedures, and ethical considerations, thereby providing a transparent and replicable account of how the study was conducted.

The overarching methodological commitment of this study is to treat Genesis 2:15 as a structured system of meaning one that communicates theological claims not only through the denotative sense of its words but through the relational patterns, symbolic elements, and narrative logic embedded within the text itself. This commitment shapes every methodological decision made in the study, from the choice of analytical tools to the selection of secondary sources and church documents.

Research Design

This study employed a structural and semiotic interpretive design. The choice of this methodology was determined by the nature of the research questions, which required exploration of theological meanings, symbolic structures, and ethical implications rather than the generation of numerical or statistical data (Creswell & Poth, 2018). This design prioritizes interpretation, meaning-making, and contextual understanding qualities that are essential for the kind of biblical and theological analysis this study undertakes.

Within this framework, the study adopted a textual-hermeneutical approach oriented toward structural and semiotic analysis. This approach is grounded in the recognition that biblical texts do not communicate meaning as a series of isolated propositions but through narrative organization, symbolic patterns, and linguistic relationships that must be read together as an integrated system. Scholars working within this tradition, including Alter (1981), Patte (1978), Barthes (1977), and Greimas (1983), have demonstrated that attending to the internal coherence and literary architecture of a text is essential for developing theologically sound and exegetically responsible interpretations. This study aligns with that tradition while extending it into the ecotheological domain.

Analytical Framework: Structural and Semiotic Analysis

The analytical framework employed in this study integrates two complementary interpretive methods: structural analysis and semiotic analysis. These methods were selected because they address two distinct but related dimensions of textual meaning how a text is organized (structure) and what its elements signify (semiotics). Together they provide a rigorous, multidimensional means of examining how meaning is constructed within Genesis 2:15, moving beyond surface-level or thematic readings to engage the internal literary logic and symbolic depth of the text.

Structural Analysis

Structural analysis proceeds from the premise that meaning in a text is generated not by its individual components in isolation but through the relationships between those components within the textual whole. Applied to Genesis 2:15, structural analysis examines the internal organization of the verse specifically the tripartite sequence of divine initiative, human placement, and assigned responsibility and identifies the literary patterns through which the text constructs its theological argument. Key analytical

features include the following: the narrative sequencing that establishes the logical and theological progression of the verse; conceptual parallelism in the paired Hebrew verbs abad and shamar, which together constitute a dual and co-equal mandate; repetition and contrast as devices through which the text reinforces its normative claims; and binary oppositions such as divine versus human, creator versus creation, and order versus disorder, which establish the text's deep semantic structure (van Aarde, 1994; Chen, 2010; Kanonge, 2009).

Structural analysis was adopted in this study because it ensures that interpretation respects the internal coherence of the text and avoids the imposition of external ideas. By attending to how the text is arranged before asking what it means, structural analysis disciplines the interpretive process and safeguards against readings that privilege selected elements while ignoring the broader literary logic that contextualizes them.

Semiotic Analysis

Semiotic analysis treats a text as a system of signs in which meaning is generated through the interaction of signifiers (linguistic forms) and their corresponding signified concepts (Mudyiwa & Mokgoatsana, 2021; Nunez, 2023). Where structural analysis examines how the text is organized, semiotic analysis examines how its key elements function as signs pointing toward deeper theological realities. In this study, semiotic analysis was applied to three primary sign-fields within Genesis 2:15: the Hebrew verbs abad and shamar as theological signifiers encoding humanity's vocation; the garden (gan) as a spatial signifier of sacred, ordered creation; and the act of divine placement as a narrative sign of intentional vocation.

The semiotic framework employed draws on Greimas's (1983) generative trajectory, which enables the analysis of meaning at three levels: the deep level of fundamental semantic oppositions (such as order versus disorder, service versus

exploitation, and preservation versus neglect); the narrative level of actantial structures (God as sender, humanity as subject, creation as object); and the surface level of specific lexical and stylistic choices. This three-level analysis ensures that the semiotic reading of Genesis 2:15 is systematic and replicable rather than impressionistic. Semiotic analysis was selected because Genesis 2:15 communicates its theology not only through discursive propositions but through narrative action, spatial symbolism, and lexically dense verbal choices that encode multiple layers of theological meaning simultaneously. A semiotic approach is therefore not merely appropriate for this text but methodologically necessary for grasping its full theological force (Merwe, 2020; Wang, 2025).

Integration of the Two Analytical Methods

Structural and semiotic analysis are applied in this study as complementary rather than competing methods. Structural analysis provides the architectural map of the text its narrative logic, literary patterns, and organizational coherence. Semiotic analysis then inhabits that architecture, examining what the text's structural elements signify and how they encode theological meaning. The integration of these two methods constitutes a methodological contribution of the study: it moves interpretation beyond either purely formal analysis (which can remain at the level of literary observation without theological application) or purely thematic analysis (which risks importing meanings without attending to the text's own communicative logic). This integrated framework directly addresses the gap identified in the literature review, where existing scholarship was shown to rely largely on thematic or generalized theological readings of Genesis 2:15 without sufficient engagement with its structural and symbolic dimensions (Thiemann, 1983; Flanagan, 1975).

Theoretical Framework

The analytical framework described above operates within a broader theoretical framework that provides the epistemological and normative foundations of the study. This study employs an integrated theoretical framework comprising three mutually reinforcing traditions: Structuralism, Semiotics, and Ecotheology. These traditions were selected not arbitrarily but in direct response to the specific hermeneutical and practical demands of the research. Each tradition is explained below, followed by an account of how they integrate into a coherent interpretive framework.

Structuralism

Structuralism is rooted in the linguistics of Ferdinand de Saussure (1916/1983), who argued that language is a system of differences in which meaning is produced not by individual units in isolation but through their relationships to other units within the system. Applied to biblical texts, structuralism holds that the meaning of a passage is generated not merely by what its words denote but by the patterns, sequences, oppositions, and relational structures through which the text is organized. This insight reorients biblical interpretation away from atomistic word studies and toward the analysis of textual wholes (Merwe, 2020). In this study, structuralism provides the theoretical basis for treating Genesis 2:15 as an integrated literary unit whose meaning is determined by the internal relationships between its component elements rather than by the denotative meaning of those elements in isolation.

Semiotics

Semiotics is the study of signs and sign systems the ways in which meaning is produced, communicated, and interpreted through the relationship between signifiers and their associated concepts or referents. Developed alongside structuralism through the

work of Saussure and Charles Sanders Peirce, and subsequently elaborated by scholars in linguistics, literary theory, and biblical studies (Peirce, 1931; Eco, 1976; Barthes, 1977), semiotics treats texts not merely as communications of propositional content but as richly layered sign systems. In biblical studies, semiotic analysis moves beyond lexical definition to examine how words, images, spatial configurations, and narrative sequences function as signs pointing toward deeper theological realities (Mudyiwa & Mokgoatsana, 2021; Nunez, 2023). In this study, semiotics provides the theoretical basis for treating the key terms and narrative elements of Genesis 2:15 as theological signifiers whose full meaning extends well beyond their surface-level denotation.

Ecotheology

Ecotheology is the theological subdiscipline that examines the relationship between religious belief and the natural environment, arguing that ecological degradation constitutes not merely a scientific or political problem but a theological and moral crisis demanding a response grounded in the resources of the Christian tradition (Conradie, 2011; Horrell, 2010). As the normative component of this study's theoretical framework, ecotheology provides the interpretive horizon within which the structural and semiotic findings are given contemporary relevance and applied to the specific context of Nairobi churches.

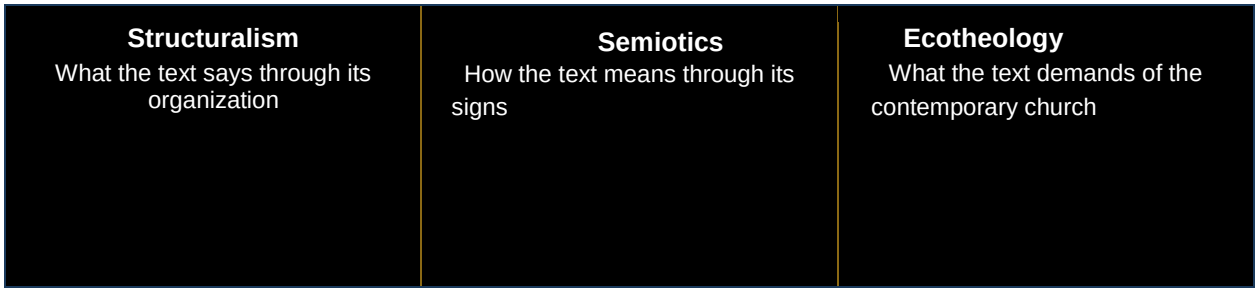
Ecotheology was selected as a theoretical component because this study does not ask merely what Genesis 2:15 means in its ancient context but how its meaning informs the ecological responsibilities of contemporary African churches. This hermeneutical move from ancient text to contemporary application requires a theoretical tradition capable of bridging the gap between exegesis and praxis. Ecotheology provides precisely this bridge, supplying a robust theological account of humanity's relationship to creation, a normative vision of stewardship, and a framework for evaluating whether and how

churches are fulfilling their ecological vocation (Spence & Brown, 2018; Conradie, 2020).

Integration of the Three Theoretical Traditions

The three theoretical traditions form an integrated hermeneutical system in which each component depends upon and reinforces the others. This integrative movement from structure to sign to application constitutes the hermeneutical spine of the study and ensures that the ecotheological conclusions are not imposed upon the text from outside but emerge from within a rigorous and systematic engagement with the text's own communicative logic. The framework is illustrated in Figure 3.1 below.

Figure 3.1: Integration of the Theoretical Framework



The structural analysis establishes the textual foundation the narrative organization, binary oppositions, and conceptual parallelisms of Genesis 2:15. The semiotic analysis deepens this by demonstrating how the text's structural elements function as theological signifiers encoding humanity's vocation within creation. The ecotheological component then takes these exegetically grounded insights and applies them to the contemporary context, asking what the theological meaning of Genesis 2:15 normatively demands of Nairobi churches facing climate change. This integration directly addresses three gaps identified in the literature review: the methodological gap, through structural and semiotic analysis; the exegetical gap, through rigorous engagement with abad and shamar as

theological signifiers; and the praxis gap, through the ecotheological component's normative application to the selected churches.

Data Sources and Documentary Analysis

This study employed documentary analysis as its primary data-gathering method for examining how selected Nairobi churches engage with creation care. Documentary analysis is a systematic procedure for reviewing and evaluating documents in order to identify, appraise, and synthesize the data they contain (Bowen, 2009). It is particularly appropriate for qualitative research that seeks to understand institutional frameworks, official theological positions, and strategic commitments, since such matters are typically encoded in written documents rather than elicited through interviews or observation alone.

The documents examined in this study were drawn from four selected Nairobi churches: Christ Is the Answer Ministries (CITAM), the Anglican Church of Kenya (ACK), the Presbyterian Church of East Africa (PCEA), and the Catholic Church in Kenya. For each church, the following categories of documents were identified and reviewed where available: official strategic plans and institutional policy documents; denominational publications and official communications addressing environmental stewardship or creation care; synodal, assembly, or episcopal statements on ecological responsibility; and relevant scholarly secondary literature documenting the ecological engagement of these specific ecclesial bodies. These documentary sources provided the information on how the selected churches interpret and operationalize the stewardship mandate of Genesis 2:15 in their theological and practical life.

The exegetical data, by contrast, were generated through the primary textual analysis described in sections 3.3 and 3.4 above: the structural-semiotic examination of Genesis 2:15 drawing on the Hebrew Masoretic Text, standard lexical resources including

the Brown-Driver-Briggs Hebrew and English Lexicon and the BDAG Greek-English Lexicon, and relevant secondary literature in biblical studies, ecotheology, and African contextual theology.

Research Procedure

The study proceeded in three sequential analytical stages corresponding to the movement from text through theory to application that defines its hermeneutical framework.

Stage One: Textual Analysis

The first stage involved a close reading of Genesis 2:15 in its Hebrew form, drawing on structural and semiotic analytical tools to examine the text's narrative organization, binary oppositions, conceptual parallelisms, and key theological signifiers. This stage engaged the text in its immediate literary context (Genesis 2:4-17) and in its broader canonical context, tracing the theological trajectory of the Edenic mandate across the Old Testament and into the New Testament. The findings of this stage are presented in Chapter 4.

Stage Two: Ecclesial Analysis

The second stage involved the documentary analysis of the selected Nairobi churches' engagement with creation care. Documents were reviewed and analyzed according to three criteria: the presence or absence of an explicit theological rationale for environmental stewardship; the degree to which the stewardship mandate of Genesis 2:15 (or equivalent biblical texts) informed the church's ecological commitments; and the extent to which doctrinal commitments translated into practical institutional action. This stage addressed Objective II of the study and its findings are presented in Chapter 5.

Stage Three: Framework Development

The third stage involved the synthesis of the exegetical and ecclesial findings into a coherent ecotheological framework for the selected Nairobi churches. This stage moved from description and analysis to normative proposal, drawing on the structural-semiotic reading of Genesis 2:15 and the ecotheological theoretical framework to propose actionable recommendations for integrating creation care into the theological, liturgical, educational, and missional life of the churches. This stage addressed Objective III and its findings are presented in Chapter 6.

Ethical Considerations

Since this study is based on textual, documentary, and library-based analysis rather than on primary data collected from human participants, the ethical obligations that govern empirical field research such as informed consent, confidentiality protocols, and participant debriefing do not apply in the same manner. Nevertheless, this study observes the following ethical principles throughout.

First, intellectual honesty: all sources are accurately cited, secondary literature is engaged fairly and charitably, and the study's conclusions are presented as interpretations grounded in the evidence rather than as definitive or exhaustive claims. Second, representational fairness: the four selected churches are represented on the basis of their own publicly available documents and official positions rather than on the basis of generalizations or caricatures. Third, hermeneutical transparency: the theoretical and methodological commitments of the study are stated explicitly so that the reader can evaluate the interpretive decisions made throughout the analysis. Fourth, acknowledgement of limitations: the study recognizes that documentary analysis has inherent limitations documents represent official positions and may not fully reflect

congregational realities and these limitations are acknowledged where relevant in the findings.

Chapter Summary

This chapter has presented the research methodology of the study in a structured sequence that moves from design rationale through analytical and theoretical frameworks to data sources, research procedure, and ethical considerations. The following points summarize the key methodological commitments established in the chapter.

The study adopted a qualitative design on the grounds that its research questions require exploration of theological meanings, symbolic structures, and normative implications rather than the generation of quantitative data. Within this design, structural and semiotic analysis were selected as the primary analytical tools for examining Genesis 2:15. Structural analysis attends to the narrative organization, literary patterns, and binary oppositions of the text; semiotic analysis treats the text's key elements as theological signifiers whose meaning extends beyond their surface denotation. These two methods are applied as complementary instruments that together provide a rigorous, multidimensional exegetical framework.

The analytical framework operates within an integrated theoretical framework comprising Structuralism, Semiotics, and Ecotheology. Structuralism provides the epistemological basis for treating the text as a relational system; semiotics provides the interpretive tools for examining how that system generates theological meaning through signs and signification; and ecotheology provides the normative horizon within which the exegetical findings are applied to the contemporary context of Nairobi churches facing climate change. The integration of these three traditions from structure to sign to application constitutes the hermeneutical spine of the study, ensuring that its

ecotheological conclusions are grounded in rigorous textual analysis rather than imposed from outside.

The study employed documentary analysis to examine how four selected Nairobi churches ; CITAM, ACK, PCEA, and the Catholic Church engage with creation care in their institutional documents, strategic plans, and official communications. The research proceeded through three sequential stages: textual analysis of Genesis 2:15 (reported in Chapter 4), ecclesial analysis of the selected churches' ecological engagement (reported in Chapter 5), and the synthesis of findings into a normative ecotheological framework (reported in Chapter 6). Throughout, the study observed the ethical principles of intellectual honesty, representational fairness, hermeneutical transparency, and acknowledgement of limitations. Together, these methodological commitments provide a transparent, replicable, and academically rigorous foundation for the study's exegetical, analytical, and normative contributions.

Chapter Four: Exegesis of Genesis 2:15.

Introduction

This chapter presents a rigorous structural, semantic, semiotic, and ecotheological exegesis of Genesis 2:15 as the primary biblical text undergirding this study. The objective is not merely to survey what scholars have said about the text but to engage the text itself directly to demonstrate, through detailed linguistic and literary analysis, how Genesis 2:15 constructs a theological vision of human vocation that is both ecologically normative and contextually applicable to contemporary Nairobi churches.

Many traditional readings of Genesis 2:15 have treated it as a general statement about stewardship, often without engaging the internal literary structure, the precise semantic weight of its Hebrew verbs, or the symbolic dimensions of its spatial imagery. This study argues that such readings, however well intentioned, leave the text's full theological force untapped. A structural-semiotic approach, as outlined in the theoretical framework, moves beyond surface readings to reveal the deeper hermeneutical and theological logic embedded within the text itself (Merwe, 2020; Wang, 2025).

Critically, this chapter functions as exegesis rather than literature review. Whereas a literature review surveys the field of scholarship, exegesis enacts interpretation: it takes the text apart linguistically, examines its structural relationships, unpacks its symbolic registers, and draws out its normative theological implications. Each section therefore moves from the text outward to its meaning, rather than from secondary sources inward to the text. The chapter concludes with a sustained ecotheological engagement that applies the exegetical findings directly to the study's research questions concerning Nairobi churches and climate change.

The Primary Text

The analysis proceeds from the following textual witnesses:

Hebrew (Masoretic Text):

וַיִּקַּח יְהוָה אֱלֹהִים אֶת־הָאָדָם וַיַּנִּחֵהוּ בְּגַן־עֵדֶן לְעָבְדָהּ וּלְשָׁמְרָהּ׃

Transliteration:

Vayyiqqah YHWH Elohim et-ha'adam vayyannihehu v'gan-Eden l'ovdah ul'shomrah

The LORD God took the man and put him in the Garden of Eden to work it and take care of it. **Genesis 2:15 (NIV, 2011)**

The Garden of Eden (gan-Eden): Structural and Semiotic Analysis

Ancient Near Eastern Context

The Garden of Eden in Genesis 2:15 is best understood against its Ancient Near Eastern (ANE) background, where gardens functioned as sacred and royal spaces symbolizing divine presence, order, fertility, and abundance. In Mesopotamian and Neo-Assyrian traditions, gardens were not merely agricultural locations but carefully ordered environments — often enclosed, irrigated, and associated with kingship and divine communion (Bauks, 2012; Kavusa, 2021; Mihaila, 2021). These gardens symbolized the intersection of heaven and earth, where divine-human interaction was mediated and cosmic order was sustained.

The Eden narrative draws on and transforms this ANE cultural vocabulary. Rather than portraying creation as a divine labor-saving arrangement (as in the Atrahasis Epic, where humanity is created to relieve the gods of toil), Genesis 2:15 presents the garden as a space of covenantal relationship in which humanity is appointed not conscripted as a steward under divine authority (Mufid et al., 2023). The ideological shift is decisive: from

creation-as-burden to creation-as-gift, and from humanity-as-servant-of-gods to humanity-as-covenantal-custodian before the one Creator.

Structural Analysis of the Garden as Sacred Space

Structurally, the garden functions in Genesis 2 as a bounded, ordered domain a microcosm of creation as God intends it. The Hebrew term gan (garden) denotes an enclosed, cultivated space, and its usage in parallel texts such as Isaiah 51:3, Ezekiel 28:13 and 31:8-9 (NIV, 2011) consistently associates the garden with divine provision, abundance, and the presence of God. This structural parallel between the Edenic garden and the prophetic imagery of divine restoration establishes the garden as a theological prototype not merely a historical location but a normative model of what creation under faithful stewardship is meant to look like.

Beale (2004) and Walton (2009) have demonstrated through close attention to ANE and biblical parallels that the Eden narrative employs the literary conventions of temple literature. The deliberate features shared between the garden and the later Tabernacle and Temple the presence of cherubim (Genesis 3:24; cf. Exodus 25:18-22, NIV, 2011), the river flowing outward (Genesis 2:10; cf. Ezekiel 47:1, NIV, 2011), the priestly commission language establish the garden as an archetypal sanctuary. Humanity's placement within it is therefore an act of priestly appointment. This structural observation carries ecotheological weight: if the earth is the sanctuary of God, then ecological negligence constitutes a desecration of sacred space, not merely a failure of environmental management.

Semiotic Analysis: gan as a Theological Signifier

Semiotically, the Hebrew term gan functions as a multi-layered theological signifier. Within the semiotic framework, a signifier is not merely a word but a carrier of culturally and textually embedded meaning that extends beyond its surface denotation. In Genesis 2:15, gan signifies simultaneously: (i) ordered life an environment of structured flourishing rather than chaotic wilderness; (ii) enclosure and boundaries responsibility humanity is placed within limits, not given unbounded dominion; (iii) divine provision the garden's abundance (Genesis 2:9, NIV, 2011) is a sign of God's ongoing generative care; and (iv) sacred presence God walks in the garden (Genesis 3:8, NIV, 2011), establishing it as a locus of divine-human encounter.

Together, these semiotic dimensions establish that humanity's relationship to the created world is not that of an owner to property but of a priest to a sanctuary. The garden does not belong to the man; the man is placed within the garden by Another. This distinction is foundational for ecotheology: it counters the anthropocentric assumption that creation exists for human use and replaces it with a theocentric framework in which creation exists for God's purposes, with humanity as its appointed custodian.

Old Testament Trajectory: Eden as Normative Vision

Within the Old Testament, the Garden of Eden functions not only as a historical account of origins but as a normative theological construct establishing humanity's original vocation. The prelapsarian harmony of Eden characterized by divine presence, ecological balance, and covenantal responsibility is not presented as an irretrievably lost condition but as the horizon toward which creation is oriented (Mathu, 2025). The prophetic texts confirm this: Isaiah's vision of the restored land as 'like the garden of Eden' (Isaiah 51:3, NIV, 2011) and Joel's comparison of desolation and restoration in

relation to Eden (Joel 2:3, NIV, 2011) demonstrate that the garden remains a normative theological reference point throughout the Hebrew scriptures.

New Testament Trajectory: Paradise Restored

The New Testament extends the Edenic imagery into an eschatological framework through the Greek term paradeisos (paradise), which appears in Luke 23:43, 2 Corinthians 12:4, and Revelation 2:7 (NIV, 2011). The term derives from the Old Persian pairidaeza (enclosed park) and was used in the Septuagint (LXX) to translate the Hebrew gan in the Eden narratives, making the semantic connection explicit. In Revelation 2:7 (NIV, 2011), the promise ‘To the one who is victorious, I will give the right to eat from the tree of life, which is in the paradise of God’ intentionally echoes Genesis 2:9 (NIV, 2011), establishing an inclusion between the opening and closing movements of the biblical narrative.

The eschatological vision of Revelation 21-22 (NIV, 2011) extends this imagery further: the river of life (Revelation 22:1-2, NIV, 2011) echoes the rivers of Eden (Genesis 2:10-14, NIV, 2011); the tree of life recurs (Revelation 22:2, NIV, 2011; cf. Genesis 2:9, NIV, 2011); and the unmediated presence of God among humanity (Revelation 21:3, NIV, 2011) fulfills the communion that the garden represented. These New Testament texts must be engaged carefully: they establish the eschatological trajectory of the Edenic mandate but do not diminish or supersede the present obligation to care for creation. The church is not called to wait passively for eschatological renewal while neglecting its present stewardship vocation. Rather, as Rossing and Buitendag (2020) argue, the eschatological vision of restored creation energizes rather than displaces present ecological engagement.

"Work" (abad) in Genesis 2:15: Structural, Semantic, Semiotic, and Ecotheological Analysis

The Hebrew infinitive construct *lʿabdah* (לעבאוה) in Genesis 2:15 is formed from the root *ʿabad* prefixed with the purposive marker *l'* and suffixed with a third-person feminine singular pronominal suffix referring to the garden. This grammatical construction is theologically significant: the purposive prefix communicates intentionality and teleology humanity is placed in Eden *for the purpose of* serving and cultivating it. Human existence within creation is therefore goal-directed, not incidental.

Ancient Near Eastern Context

In the ANE world, the concept of labor was inseparable from sacred duty. In Mesopotamian cosmology, humanity was created to perform the menial labor that the lesser gods had refused a fundamentally exploitative theology of work. Genesis reconfigures this framework decisively. Cognate terms such as the Ugaritic 'bd and the Akkadian epesu reflect a cultural understanding of labor as participation in cosmic maintenance (Balogh, 2022; Harvey, 2025). The Genesis narrative retains the idea of purposeful labor but removes its exploitative and coercive dimensions, reframing work as a free, relational, and covenantal activity within a divinely ordered world.

Semantic Analysis

The verb abad (Strong's H5647) occurs over 290 times in the Hebrew Bible and carries a semantic range extending across three overlapping domains:

Table 4.1: Semantic Range of abad in the Hebrew Bible

Domain	Key Texts	Theological Significance
Agricultural labour	Genesis 2:5; 3:23; Genesis 4:12 (NIV, 2011)	Productive engagement with the land; the physical dimension of the mandate
Service to a lord/superior	Genesis 14:4; 29:15; Exodus 1:13 (NIV, 2011)	Relational, covenantal service rendered within a hierarchical relationship
Cultic worship/service to God	Exodus 3:12; Deuteronomy 6:13; 10:12; Psalm 100:2 (NIV, 2011)	Service to God through devotion, obedience, and priestly ministry
Levitical Tabernacle ministry	Numbers 3:7-8; 4:23; 8:11 (NIV, 2011)	Priestly service within sacred space the closest structural parallel to Genesis 2:15

The theological significance of this semantic breadth is that it demonstrates the inseparability of labor, worship, and covenantal obedience in the Hebrew worldview. When God commissions humanity to abad the garden, the term activates all of these semantic registers simultaneously. Human engagement with creation is therefore framed as an act of worship not metaphorically but linguistically. This is not reading theological meaning into the text; it is reading the text's own linguistic density accurately.

Structural Analysis: Pre-Fall vs. Post-Fall abad

A structurally decisive observation is the contrast between the usage of abad in Genesis 2:15 and Genesis 3:23. In Genesis 2:15 (NIV, 2011), humanity is placed in the garden 'to work it' a context of joyful, ordered, priestly participation within sacred space. In Genesis 3:23 (NIV, 2011), the same verb appears after the Fall: God 'sent him out of the Garden of Eden to work the ground from which he had been taken.' The structural contrast is sharp: placement within versus exile from; garden versus ground; sacred vocation versus resistant toil. The verb is identical; the relational and theological context is transformed. This structural comparison demonstrates that the Fall does not eliminate the stewardship mandate but fractures it, distorting what was joyful service into burdensome labor while leaving the vocation itself intact (Mbatha, 2022).

Semiotic Analysis: abad as Theological Signifier

Semiotically, abad in Genesis 2:15 functions as a theological signifier encoding at least three layers of meaning simultaneously: (i) productive engagement active, purposeful interaction with the created order that promotes flourishing; (ii) priestly service the formal parallel with Numbers 3:7-8 (NIV, 2011) frames the mandate within a sacral register, making the garden a sanctuary and humanity its liturgical ministers; (iii) covenantal devotion the semantic overlap with worship-language ties human labor to the vertical relationship with God, making ecological faithfulness an expression of theological obedience. Environmental destruction is therefore not only ecologically harmful; it is a liturgical failure — a dereliction of priestly duty and a form of covenant infidelity.

New Testament Engagement

The New Testament preserves and deepens the theological substance of abad through several Greek terms. These texts are engaged here with care, since their primary

theological context is not ecological but Christological and ecclesiological. Their relevance to the Genesis 2:15 study lies in the trajectory they establish they demonstrate that the integration of labor, worship, and covenantal service embedded in abad is not dissolved in the New Testament but intensified and reoriented.

Colossians 3:23 (NIV, 2011) states: 'Whatever you do, work at it with all your heart, as working for the Lord, not for human masters.' The Greek ergazomai here reframes all human activity including labor within the created order as rendered before God. This is the New Testament continuation of abad's covenantal register: work is not secular but theological. Romans 12:1 (NIV, 2011) extends this further: 'offer your bodies as a living sacrifice, holy and pleasing to God this is your true and proper worship.' The term latreia (worship/service) used here directly parallels the priestly register of abad, presenting the entirety of embodied human life including our physical engagement with the material world as an act of worship. Philippians 2:7 (NIV, 2011), in describing Christ as taking 'the very nature of a servant' (Greek doulos), establishes the Christological grounding of servant-leadership that redefines what abad-shaped dominion looks like in practice.

"Keep" (shamar) in Genesis 2:15: Structural, Semantic, Semiotic, and Ecotheological Analysis

The Hebrew infinitive construct *ləšomrah* (לְשָׁמְרָהּ) is formed from the root *šāmar* with the same purposive prefix *l'* and feminine pronominal suffix as *lʿabdah*. The grammatical parallelism between the two infinitives is not accidental: it reflects a deliberate literary structure in which the two verbs constitute a unified, dual mandate. Neither term is subordinate to the other; both are grammatically coordinate expressions of a single divinely assigned vocation.

Ancient Near Eastern Context

In the ANE cultural setting, guarding and preserving sacred spaces was a responsibility typically assigned to priests, kings, or divine beings. The commissioning of humanity in Genesis 2:15 to shamar the garden draws on this cultural vocabulary while transforming it: rather than being assigned to a specialized sacred class, this responsibility is given to humanity as such the imago Dei (Genesis 1:27, NIV, 2011) indicating that the priestly-protective function is intrinsic to what it means to be human within God's creation.

Semantic Analysis

The verb shamar (Strong's H8104) is among the most theologically rich verbs in the Hebrew Bible, occurring over 460 times across a wide range of contexts. Its primary semantic registers and their key textual occurrences are shown in Table 4.2 below.

Table 4.2: Semantic Range of shamar in the Hebrew Bible

Domain	Key Texts	Theological Significance
Protecting/watching a location	Genesis 3:24; Numbers 1:53 (NIV, 2011)	Guarding sacred space from violation or corruption the closest parallel to Eden in Genesis 2:15
Covenantal obedience	Deuteronomy 4:2,40; 6:17; Psalm 119:4 (NIV, 2011)	Keeping divine commandments; obedience as faithful preservation of covenant relationship
Priestly protection of the Tabernacle	Numbers 3:7-8; 18:5 (NIV, 2011)	The Levites shamar the sanctuary the most direct biblical parallel to humanity's role in Eden

Relational/ethical guardianship	Genesis 4:9; Proverbs 4:6; Psalm 121:7-8 (NIV, 2011)	Watchful care for persons and responsibilities entrusted by God
Sabbath and land-rest	Exodus 23:10-11; Leviticus 25:1-7 (NIV, 2011)	Ecological applications of shamar in Israel's law the land itself requires guarding/preservation

The Levitical parallel in Numbers 3:7-8 (NIV, 2011) is particularly significant for the ecotheological argument. In that text, the Levites are appointed to shamar the Tabernacle using the identical verb that describes humanity's mandate in Genesis 2:15. This lexical and structural parallel establishes a formal theological equation: as the Levites guard the Tabernacle (the locus of divine presence under the Mosaic covenant), so humanity guards the garden (the original locus of divine presence). If the created world is the sanctuary of God, then ecological devastation is a desecration of sacred space a conclusion with profound implications for how the church should frame its environmental engagement.

Structural Analysis: shamar as Covenantal Boundary

Structurally, shamar establishes a boundary of protective care around what God has entrusted to humanity. Genesis 3:24 (NIV, 2011) reinforces this reading: after the Fall, God places cherubim to 'guard' (shamar) the way to the tree of life — assigning to angelic beings the protective function that humanity, through disobedience, had forfeited. The structural contrast is pointed: pre-Fall humanity was commissioned to shamar the garden from within; post-Fall angelic beings shamar it from without, keeping humanity out. This structural observation illustrates that the failure to shamar creation has

ecological consequences: when humanity ceases to function as a faithful guardian of creation, the created order itself suffers (cf. Romans 8:20-22, NIV, 2011).

The Old Testament land-law texts provide further structural grounding. Exodus 23:10-11 (NIV, 2011) mandates a sabbatical year for the land a period of rest and regeneration that institutionalizes the shamar principle within Israel's ecological practice. Leviticus 25:1-7 (NIV, 2011) extends this into the Jubilee framework. Deuteronomy 20:19 (NIV, 2011) prohibits the destruction of fruit trees during warfare. These laws are not incidental to the stewardship theme; they are its practical embodiment in Israel's law code, demonstrating that the ecological logic of shamar is woven into the fabric of Israel's covenantal life.

Semiotic Analysis: shamar as Signifier of Preservative Accountability

Semiotically, shamar in Genesis 2:15 functions as a signifier of preservative accountability within sacred space. As a semiotic sign, it encodes: (i) watchful vigilance active, attentive oversight rather than passive non-interference; (ii) covenantal fidelity the correspondence between shamar in Genesis 2:15 and its use in covenantal law (Deuteronomy 4:2, 6:17, NIV, 2011) frames ecological preservation as an expression of covenant loyalty; (iii) bounded authority humanity guards what does not belong to it; the garden belongs to God, and humanity serves as its appointed custodian, not its owner; (iv) priestly responsibility the Levitical parallel (Numbers 3:7-8, NIV, 2011) frames environmental guardianship as a sacred, liturgical duty.

Cain's question in Genesis 4:9 (NIV, 2011) ‘Am I my brother's keeper?’ illustrates the semiotic breadth of shamar in its relational dimension. The question is not merely rhetorical; it identifies the refusal to shamar as a form of moral and covenantal failure. Applied to creation, the same logic holds: ‘Are we creation's keeper?’ is the question

Genesis 2:15 answers in the affirmative and which the contemporary church is called to embody.

New Testament Engagement

The New Testament does not use shamar directly but preserves its theological substance through the Greek terms tereo and phylasso. These terms are engaged here with care: their primary New Testament contexts are ethical and soteriological (keeping commandments, guarding the gospel, preserving faith), and they must not be imported wholesale into an ecological framework without sensitivity to their original contexts.

John 14:15 (NIV, 2011): 'If you love me, keep [tereo] my commands' the covenantal-obedience register of shamar is preserved here precisely: love expresses itself in faithful preservation of what has been entrusted. 1 Timothy 6:20 (NIV, 2011): ‘Guard [phylasso] what has been entrusted to your care' this stewardship language, while directed at the apostolic deposit, carries the same structure of entrusted guardianship that underlies shamar in Genesis 2:15. Romans 8:19-22 (NIV, 2011) provides the most directly ecotheological New Testament text in this connection: creation 'groans' under bondage to decay, awaiting the ‘freedom and glory of the children of God.’ This passage does not develop a stewardship mandate per se, but it establishes that creation's current condition of suffering is linked to humanity's failure to embody its redemptive vocation a failure that reflects the post-Fall fracturing of the shamar mandate. The eschatological hope of Romans 8 therefore energizes present ecological engagement: the church, as ‘children of God,’ is called to be among those whose redemptive presence begins the liberation of creation.

Theological Implications of Genesis 2:15 for Ecotheology

The structural, semantic, and semiotic analysis of Genesis 2:15 conducted in the preceding sections yields a set of theological implications that are directly relevant to ecotheology and to the study's research context of Nairobi churches. This section does not rehearse secondary literature but draws out the implications of the exegetical findings already established.

Stewardship is Constitutive of Human Identity

Genesis 2:15 presents environmental stewardship not as one option among many but as constitutive of what it means to be human within God's creation. The divine initiative ('the LORD God took the man'), the act of placement (‘put him in the Garden’), and the purposive mandate (‘to work it and keep it’) together establish a theological anthropology in which the human vocation is defined by covenantal stewardship. Humanity is not subsequently assigned a task; humanity is constituted as a steward by the very act of creation. This has a direct implication for ecotheology: environmental neglect is not merely an ethical lapse but an ontological failure a refusal of what humanity is created to be (Conradie, 2020; Walton, 2009).

The Dual Mandate Resists Both Exploitation and Passivity

The structural pairing of abad and shamar establishes a creative tension that resists both extremes of anthropological error. A reading that privileges abad alone risks justifying exploitative dominion: productive engagement without protective restraint becomes extraction. A reading that privileges shamar alone risks a passive, preservationist theology that refuses the legitimate human calling to cultivate, develop, and inhabit the earth. Genesis 2:15 holds both imperatives in structural equilibrium: cultivation and conservation are not alternatives but co-equal dimensions of the

stewardship mandate. This theological balance directly challenges both the exploitative anthropocentrism that has historically legitimized environmental destruction and the overly passive 'hands-off' environmentalism that sometimes undervalues human responsibility for creative development (Puglisi & Buitendag, 2020; Mpofu, 2021).

Dominion Reinterpreted through abad and shamar

When Genesis 2:15 is read alongside Genesis 1:26-28 (NIV, 2011), the meaning of the dominion mandate undergoes decisive reinterpretation. The terms kabash ('subdue') and radah (‘rule’) in Genesis 1:28 (NIV, 2011) have historically been read as authorizations for unrestricted human control over nature. However, the semantic analysis of abad and shamar demonstrates that whatever dominion means in Genesis 1:28, it is defined and bounded by the vocation of Genesis 2:15. Humanity rules as a servant (abad) and guards as a custodian (shamar) under divine authority and within the limits of a covenantal relationship. Dominion is therefore not ownership but delegated responsibility; not a license for exploitation but a commission for faithful stewardship. This reinterpretation is not a modern revision of the text but a recovery of its original semantic logic (Okediji, 2022; Sadowski & Ayvaz, 2022).

Ecotheology Grounded in Creation Theology, Not Environmental Ethics

A crucial implication of the exegetical analysis is that ecotheology must be grounded in creation theology in what the text says about God, humanity, and creation rather than in borrowed environmental ethics. This distinction matters because an ecotheology built primarily on ethical grounds remains vulnerable to ideological shifts in environmental discourse; its theological coherence depends on the robustness of its biblical foundation. Genesis 2:15 provides precisely this foundation: it establishes stewardship as a covenantal, priestly, and anthropological reality rooted in the nature of

God's act of creation. Conradie (2020) is correct to insist that ecotheology must be grounded in creation theology; the structural-semiotic analysis of Genesis 2:15 demonstrates that this grounding is available and exegetically defensible within the text itself. For Nairobi churches, this means that the ecological mandate does not need to be imported from secular environmentalism; it is already present and waiting to be recovered within the biblical text they preach every Sunday.

The Fall Fractures but Does Not Annul the Mandate

The structural contrast between Genesis 2:15 and Genesis 3:23 (NIV, 2011) established in the analysis of abad above demonstrates that the Fall fractures the conditions of the mandate without abolishing the mandate itself. Post-Fall labor is marked by toil and resistance; post-Fall stewardship is exercised in a damaged and resistant creation. But the vocation remains. This has a direct implication for ecotheology: the church does not operate from an Edenic position of unbroken harmony with creation. It operates within a fractured creation, bearing the same mandate but under more difficult conditions, energized by the eschatological promise of restoration (Romans 8:21, NIV, 2011) and equipped by the Spirit's presence to embody the stewardship calling even within a world marked by ecological crisis.

Chapter Summary

This chapter has presented a detailed structural, semantic, semiotic, and ecotheological exegesis of Genesis 2:15. It has demonstrated that the chapter functions as exegesis a direct, sustained engagement with the text itself rather than as a survey of secondary literature.

The garden (gan) was analyzed as a multi-layered theological signifier encoding ordered life, bounded responsibility, divine provision, and sacred presence. Its structural

parallels with Tabernacle and Temple imagery establish it as an archetypal sanctuary, making humanity's placement within it an act of priestly appointment rather than mere location. The Old Testament trajectory of the garden as a normative vision and the New Testament trajectory through paradeisos to the eschatological restoration of Revelation 21-22 (NIV, 2011) establish the theological continuity of the Edenic mandate across the full biblical canon. The New Testament texts are engaged with sensitivity to their primary contexts: they establish canonical continuity without displacing the Genesis 2:15 mandate as the study's primary exegetical focus.

The semantic analysis of abad demonstrated its breadth across agricultural labor, relational service, cultic worship, and Levitical ministry establishing human engagement with creation as simultaneously productive, priestly, and covenantal. The structural contrast between Genesis 2:15 and 3:23 (NIV, 2011) showed that the Fall fractures but does not annul the mandate. The semiotic analysis established abad as a theological signifier encoding liturgical labor a sign that environmental work is inseparable from the worship of God.

The semantic analysis of shamar demonstrated its breadth across protective guardianship, covenantal obedience, Levitical Tabernacle ministry, and ecological land-law establishing environmental preservation as a priestly duty within the sanctuary of God's creation. The structural parallel with Numbers 3:7-8 (NIV, 2011) was shown to be the most theologically significant, and the semiotic analysis established shamar as a signifier of preservative accountability that frames ecological negligence as covenant infidelity and a failure of priestly responsibility.

The theological implications drawn from the exegetical analysis established that stewardship is constitutive of human identity; that the dual mandate resists both

exploitation and passivity; that dominion in Genesis 1:28 (NIV, 2011) must be interpreted through the lens of abad and shamar in Genesis 2:15; that ecotheology must be grounded in creation theology rather than environmental ethics; and that the Fall fractures but does not annul the stewardship mandate, which continues in a post-Fall world energized by eschatological hope.

Chapter Five: Summary of Findings, Recommendations, Areas for Further research and Conclusion

Introduction

This chapter presents recommendations arising from the analysis of Genesis 2:15 and its implications for ecotheological engagement within selected Nairobi churches. Building on the findings of Chapter 4, the persistent gap between theological affirmation and ecological praxis is not merely a matter of awareness but reflects a deeper deficiency in the translation of biblical interpretation into structured and sustained ecclesial action. While many churches acknowledge the importance of creation care, such commitments often remain at the level of doctrinal affirmation or programmatic activity, lacking the theological coherence and institutional intentionality necessary for long-term impact.

The analysis of Genesis 2:15 has demonstrated that the dual mandate of עָבַד (*ʿābad*) and שָׁמַר (*šāmar*) establishes a comprehensive theological framework in which human vocation is both productive and preservative. This study has demonstrated that this mandate is not peripheral but central to biblical anthropology, positioning environmental stewardship as an integral expression of obedience to God. Consequently, the failure to embody this mandate within church life represents not only a practical shortcoming but also a theological inconsistency. The challenge, therefore, is not the absence of biblical resources but the absence of deliberate frameworks through which these resources are interpreted, taught, and enacted.

In response, this chapter proposes a set of recommendations aimed at bridging the divide between theology and practice. These recommendations are grounded in the conviction that effective ecotheological engagement must be holistic, integrating doctrinal reflection, ecclesial structures, leadership formation, and community practice.

Accordingly, the chapter moves beyond general appeals for environmental awareness and instead advances structured, actionable, and contextually relevant interventions. Specifically, the recommendations seek to translate the theological insights derived from Genesis 2:15 into concrete ecclesial frameworks that can be adopted within the selected churches serving as sample for other churches in Nairobi and beyond. This includes the rearticulation of creation care within theological teaching, the integration of environmental stewardship into discipleship and worship, the strengthening of institutional mechanisms for implementation, and the development of leadership capacity in ecotheological engagement. In doing so, the study proposes a model in which the dual mandate of *ʿābad* and *šāmar* functions as the organizing theological principle for sustained environmental stewardship.

Ultimately, the findings position the church not merely as a passive observer of ecological crises but as an active theological community called to embody God's purposes within creation. By offering contextually grounded and theologically informed recommendations, the study seeks to contribute to the development of a coherent ecotheological praxis capable of addressing the environmental challenges facing Nairobi and, by extension, similar urban contexts.

Theological Recommendations (Reframing Doctrine)

Environmental stewardship should be approached as a core theological doctrine rather than a peripheral ethical concern within the life and teaching of the church. The structural and semiotic analysis of Genesis 2:15 has demonstrated that human vocation is inherently ecological, integrating the dual responsibilities of עָבַד and שָׁמַר as expressions of obedience to God. The mandate situates humanity not as autonomous exploiters of creation but as accountable stewards whose engagement with the earth is both productive

and preservative. As such, creation care is not an optional addendum to Christian ethics but a fundamental dimension of biblical anthropology and discipleship.

The marginalization of environmental stewardship within contemporary theological frameworks has contributed significantly to the disconnect between doctrinal affirmation and ecological praxis observed in many Nairobi churches. While stewardship is often acknowledged in principle, it is rarely articulated as a central theological theme within preaching, catechesis, or doctrinal instruction. This omission reflects what Conradie (2020) identifies as a broader theological gap in which environmental concerns are insufficiently integrated into the core doctrines of creation, sin, redemption, and eschatology. Consequently, ecological responsibility is frequently perceived as secondary to spiritual concerns, rather than as an integral expression of faithful discipleship.

In response, this research proposes a deliberate theological reframing in which creation care is embedded within the central tenets of Christian doctrine. First, the doctrine of creation must be rearticulated to emphasize the intrinsic value of the created order as sustained by God and entrusted to humanity (Bauckham, 2010). Second, the doctrine of sin must be expanded to include ecological degradation as a manifestation of human rebellion against God's ordering of creation (Conradie, 2020). Third, redemption must be understood not only in terms of human salvation but also in relation to the restoration of creation, as reflected in the biblical vision of cosmic renewal (cf. Romans 8:19–22). Finally, eschatology must affirm the future of creation as renewed rather than discarded, thereby reinforcing the present responsibility of stewardship (Wright, 2010).

The theological recovery of *ʿābad* and *šāmar* provides a critical corrective to reductionist interpretations of dominion. The integration of service (*ʿābad*) and preservation (*šāmar*) establishes a balanced framework in which human activity contributes to the flourishing of creation while safeguarding its integrity. As Bouma-

Prediger (2010) observes, authentic stewardship requires both responsible use and faithful care, reflecting the character of God as both provider and sustainer. This dual mandate, when properly articulated, resists both exploitative tendencies and passive conservationism, instead calling for an active and relational engagement with the environment.

This study therefore recommends that Nairobi churches intentionally integrate environmental stewardship into their theological teaching and doctrinal formulations. Churches such as Christ Is the Answer Ministries (CITAM), Anglican Church of Kenya (ACK), Presbyterian Church of East Africa (PCEA), and the Kenya Conference of Catholic Bishops (Catholic Church in Kenya) are uniquely positioned to lead this theological and practical reorientation within the Nairobi context. This includes the incorporation of creation care within sermons, theological education programs, discipleship materials, liturgical practices, youth ministries, and community-based initiatives, ensuring that ecological responsibility is consistently presented as an expression of obedience to God. Such integration must move beyond occasional emphasis to become a sustained and coherent theological narrative that shapes the identity and mission of the church. Furthermore, the approaches developed within these traditions can provide important models for other churches and denominations seeking to contextualize environmental stewardship within their own theological and ecclesial frameworks, thereby fostering a broader and more unified Christian response to climate change and ecological degradation

Ultimately, the recovery of environmental stewardship as a core theological doctrine is indispensable for addressing the ecological crisis. Without a robust theological foundation, practical initiatives will remain fragmented and unsustainable. However, when grounded in the biblical vision articulated in Genesis 2:15, the church is empowered

to embody a holistic and transformative ecotheology one in which care for creation is understood as an act of worship, a reflection of divine mandate, and a faithful participation in God's ongoing work within the world.

Ecclesial and Practical Recommendations

Environmental stewardship should be integrated into worship and liturgical life. Worship functions as a primary site of theological formation, shaping the beliefs and practices of congregants. Contemporary ecotheological scholarship emphasizes that liturgy has the capacity to cultivate ecological consciousness by embedding creation care within prayer, preaching, and sacramental life (Bouma-Prediger, 2010; Tucker & Grim, 2016). Accordingly, churches should intentionally incorporate themes of creation care into sermons, corporate prayers, and seasonal observances. Such integration ensures that ecological responsibility is not treated as an external concern but as an intrinsic expression of worship and devotion to God.

Additionally, there is need for systematic integration of creation care into discipleship structures. Evidence indicates that faith communities play a critical role in shaping environmental attitudes and behaviors through teaching and communal formation (Kearns, 2017; Veldman et al., 2014). However, as demonstrated in earlier sections, discipleship programs often prioritize spiritual formation in ways that exclude ecological responsibility. Creation care must be embedded within discipleship curricula as a non-optional component of Christian formation. This includes the development of teaching materials, small group discussions, and mentorship programs that explicitly connect biblical theology with ecological practice (Nche et al., 2017).

Furthermore, the need for institutional and operational alignment within church structures is essential. Churches must move beyond symbolic environmental activities toward sustained and measurable practices. This encompasses the development of internal

policies on waste management, energy use, and land stewardship, as well as the adoption of sustainable practices such as tree planting and growing, recycling initiatives, and responsible resource utilization. Research demonstrates that religious institutions possess significant social capital and organizational capacity to influence sustainability practices at both local and national levels (Koehrsen, 2021; Moyer et al., 2020). Therefore, argues that churches ought to leverage this capacity by embedding ecological responsibility within their governance and operational systems.

Moreover, the leadership formation as a critical driver of ecological engagement. Clergy and church leaders function as primary interpreters of scripture and key influencers of congregational priorities. However, studies indicate that environmental engagement within churches is often limited by low levels of theological awareness and training among leaders (Kearns, 2017; Koehrsen, 2021). This study recommends the intentional development of ecotheological training programs within seminaries, Bible schools, and leadership development initiatives. Such training should equip leaders to interpret Scripture ecologically and to guide congregations in practical environmental action (Conradie, 2020).

In addition, the establishment of monitoring and accountability frameworks to ensure sustained implementation. One of the most significant challenges identified in this research is the gap between policy and practice. While many churches articulate commitments to environmental stewardship, these commitments often lack clear implementation pathways. Arguably, that churches should develop measurable indicators, regular reporting mechanisms, and designated leadership roles responsible for environmental initiatives. Without such structures, ecological engagement risks remaining fragmented and unsustainable (Moyer et al., 2020).

Finally, is the importance of community-based ecological engagement. Ecotheology is not merely a doctrinal exercise but a lived reality that must be expressed within the social and environmental contexts of local communities. Churches should therefore engage in partnerships with local organizations, participate in environmental advocacy, and implement community-based initiatives that address issues such as waste management, water conservation, and climate resilience. As scholarship demonstrates, faith-based communities are uniquely positioned to mobilize collective action and foster long-term behavioral change in addressing environmental challenges (Tucker & Grim, 2016; Veldman et al., 2014).

It is imperative for churches to move from awareness to action, from doctrine to praxis, and from intention to implementation. The ecclesial embodiment of the dual mandate of *ʿābad* and *šāmar* requires a holistic approach that integrates worship, discipleship, leadership, institutional structures, and community engagement. Only through such intentional and structured interventions can churches effectively respond to the ecological crisis and fulfill their theological vocation as stewards of creation (Bauckham, 2010; Conradie, 2020).

Leadership and Clergy Development Recommendations

Leadership formation constitutes a decisive factor in the translation of ecotheological conviction into sustained ecclesial practice. While Chapter 4 has demonstrated that Genesis 2:15 establishes a theologically robust mandate for stewardship through the dual imperatives of *ʿābad* and *šāmar*, the effective embodiment of this mandate within church life is largely mediated through leadership. Clergy and church leaders function as primary interpreters of Scripture, shapers of theological imagination, and drivers of institutional priorities. Consequently, any meaningful and

sustained ecological engagement within churches must begin with intentional investment in leadership development (Conradie, 2020).

Foremost, the ecotheological literacy among clergy needs strengthening. Existing scholarship demonstrates that environmental engagement within churches is often constrained by limited theological awareness and insufficient training among leaders (Kearns, 2017; Koehrsen, 2021). This study therefore recommends the integration of ecotheology into formal theological education within seminaries and Bible colleges. Such integration should move beyond elective exposure to become a core component of ministerial formation, equipping clergy with the hermeneutical tools necessary to interpret Scripture in ways that foreground creation care. Leaders must be trained to engage biblical texts such as Genesis 2:15 not merely devotionally but theologically, recognizing their normative implications for contemporary ecological responsibility (Bauckham, 2010).

Additionally, the development of continuous professional formation programs for church leaders. Given that many serving clergy may not have received formal training in ecotheology, there is a need for ongoing capacity-building initiatives, including workshops, seminars, and theological forums focused on environmental stewardship. Research indicates that leadership engagement is a critical determinant of institutional response to environmental challenges, as leaders significantly influence congregational attitudes and behaviors (Moyer et al., 2020; Veldman et al., 2014). Therefore, equipping leaders with both theological understanding and practical tools is essential for fostering sustained ecological engagement within congregations.

The importance of leadership accountability structures in advancing environmental stewardship. While theological awareness is necessary, it is not sufficient in the absence of institutional responsibility. Churches must establish clear leadership

roles or committees responsible for overseeing environmental initiatives. Such structures should include defined mandates, measurable objectives, and regular reporting mechanisms to ensure that ecological commitments are translated into consistent practice. As Koehrsen (2021) observes, institutional change within religious organizations is often contingent upon the presence of structured leadership frameworks that sustain momentum and ensure continuity.

In addition, the integration of ecological stewardship into pastoral ministry and preaching. Leaders should intentionally incorporate creation care into their teaching and pastoral engagement, framing it not as an optional concern but as an integral dimension of Christian discipleship. Preaching serves as a powerful platform for shaping theological consciousness and motivating action. Studies demonstrate that religious leaders play a crucial role in mobilizing communities around environmental issues by framing them in moral and theological terms (Tucker & Grim, 2016). Hence the clergy should consistently articulate the theological basis for environmental stewardship, drawing on biblical texts and doctrinal themes to cultivate ecological awareness within their congregations.

Effective ecological engagement within churches must be rooted in local realities, addressing the specific environmental challenges faced by urban communities. Leadership formation should therefore incorporate contextual theology, enabling leaders to connect biblical teaching with the lived experiences of their congregations. This incorporates engaging issues such as waste management, urban pollution, and climate vulnerability in ways that resonate with local contexts. As Conradie (2020) argues, ecotheology must be both theologically grounded and contextually relevant if it is to produce meaningful transformation.

Finally, leadership should model ecological responsibility. Beyond teaching and policy, leaders should embody the principles of stewardship in their personal and

institutional practices. This involves adopting sustainable behaviors, promoting responsible resource use within church operations, and actively participating in environmental initiatives. Leadership by example reinforces theological teaching and enhances credibility, thereby strengthening the church's witness in addressing environmental challenges (Bouma-Prediger, 2010).

Leadership is not merely a supporting factor but a central driver of ecotheological engagement. The effective implementation of environmental stewardship within churches requires leaders who are theologically informed, practically equipped, institutionally accountable, and contextually responsive. By investing in leadership formation, the church is positioned to move from fragmented ecological efforts toward a coherent and sustained expression of its stewardship mandate (Conradie, 2020; Koehrsen, 2021).

Institutional and Policy Recommendations

The sustainability of ecotheological engagement within selected Nairobi churches ultimately depends on the strength of institutional and policy frameworks that translate theological conviction into consistent practice. While earlier sections have demonstrated that many churches articulate commitments to environmental stewardship, these commitments often remain aspirational due to the absence of structured implementation mechanisms. Consequently, the critical challenge is not the lack of theological awareness but the lack of institutional systems that operationalize such awareness (Conradie, 2020).

There is need for development of clear and actionable environmental policies within church structures. These policies should move beyond general statements of intent to include specific goals, strategies, and timelines for implementation. Evidence from faith-based sustainability initiatives indicates that organizations are more effective when environmental commitments are codified within formal policy frameworks that guide decision-making and resource allocation (Moyer et al., 2020). Accordingly, selected

churches in Nairobi should articulate policies that address key areas such as waste management, energy use, water conservation, and land stewardship, ensuring that ecological responsibility is embedded within institutional governance.

Additionally, the necessity of implementation frameworks and strategic planning. Policies without operational pathways risk remaining symbolic rather than transformative. Churches should develop structured action plans that translate environmental commitments into concrete activities. Such plans should include clearly defined responsibilities, timelines, and expected outcomes. Research demonstrates that structured planning enhances the effectiveness of sustainability initiatives by providing direction and accountability (Koehrsen, 2021). In this regard, environmental stewardship should be integrated into the broader strategic plans of churches rather than treated as an isolated or ad hoc initiative.

One of the most significant gaps identified in this research is the absence of systems for tracking progress and measuring impact. Hence, churches should adopt measurable indicators and regular reporting processes to assess the effectiveness of their environmental initiatives. Such mechanisms may include periodic audits, sustainability reports, and designated committees responsible for monitoring implementation. As Moyer et al. (2020) note, accountability structures are essential for ensuring that organizational commitments translate into sustained action.

Furthermore, environmental stewardship cannot be effectively implemented without dedicated resources. Therefore, churches should allocate specific budget lines for environmental initiatives, including infrastructure improvements, community projects, and educational programs. Evidence suggests that the success of faith-based environmental initiatives is closely linked to the availability of financial and material

resources (Veldman et al., 2014). By prioritizing resource allocation, churches signal institutional commitment and enhance the viability of their ecological programs.

Besides, ecological responsibility must be reflected not only in policy documents but also in everyday institutional practices. This contains embedding sustainability principles within procurement processes, facility management, and operational decision-making. As Koehrsen (2021) reflects, institutional transformation occurs when environmental values are internalized within organizational culture and routines. Stewardship must become a defining characteristic of church identity rather than an occasional initiative

Finally, the need for contextually relevant policy frameworks that address the specific environmental challenges faced by selected Nairobi churches. Urban contexts present unique ecological issues, including waste management, pollution, and climate vulnerability. Institutional policies must therefore be tailored to these realities, ensuring that environmental initiatives are both practical and impactful. As Conradie (2020) explores, ecotheological engagement must be contextually grounded if it is to produce meaningful and sustainable outcomes.

The institutionalization of environmental stewardship therefore is indispensable for bridging the gap between theology and praxis. Effective ecological engagement requires more than theological affirmation; it demands structured policies, strategic planning, accountability mechanisms, and sustained resource commitment. By embedding these elements within their institutional frameworks, churches can move from fragmented and symbolic actions toward coherent and transformative ecological practice (Conradie, 2020; Moyer et al., 2020).

Contribution to Knowledge

This study contributes to ecotheological scholarship by demonstrating that a structural and semiotic reading of Genesis 2:15 provides not only exegetical clarity but also a normative theological basis for ecological responsibility. Meaning in the text emerges through the interplay of structure and signification particularly the coordinated imperatives of *ʿābad* and *šāmar* thereby recovering a coherent account of human vocation as both service and preservation within creation. In doing so, the study moves beyond thematic readings of stewardship to a more rigorous, text-centered framework that grounds ecological ethics in the internal logic of Scripture (Conradie, 2020; Merwe, 2020).

Methodologically, this study advances the field by integrating structural and semiotic analysis within biblical exegesis. While ecotheological literature frequently affirms the importance of creation care, it has often relied on generalized theological claims without sufficiently engaging the internal structures and symbolic dynamics of the text. This study addresses that gap by showing how narrative sequencing, conceptual parallelism, and binary oppositions interpreted through a semiotic lens generate theological meaning with normative implications. In this regard, the study demonstrates the viability of multidimensional hermeneutical approaches for ecotheological inquiry (Mudyiwa & Mokgoatšana, 2021; Núñez, 2023).

Theologically, the study contributes by rearticulating environmental stewardship as a central component of biblical anthropology and discipleship. By foregrounding the dual mandate of *ʿābad* and *šāmar*, it challenges reductionist interpretations of dominion and offers a balanced paradigm that integrates productive engagement with preservative responsibility. This reframing aligns ecological concern with core doctrines of creation,

sin, and redemption, thereby situating environmental stewardship within the broader narrative of God's purposes for the world (Bauckham, 2010; Wright, 2010).

Contextually, this study makes a significant contribution to African ecotheology by proposing a framework that is both biblically grounded and culturally resonant. It demonstrates that the integration of structural and semiotic exegesis with African socio-cultural perspectives such as communal responsibility and relationality provides a more contextually relevant approach to environmental stewardship. In doing so, the study bridges the gap between global ecotheological discourse and local ecclesial practice within the Nairobi context (Conradie, 2020; Mugambi, 2020).

Practically, the study contributes by linking exegesis to ecclesial application. It identifies the persistent disconnect between theological affirmation and ecological praxis and offers a structured pathway for translating biblical insight into institutional and community-based action. By proposing an *ʿābad–šāmar* ecotheological framework, the study provides churches with a coherent model for integrating doctrine, discipleship, leadership, and institutional practice in addressing environmental challenges.

This study contributes to knowledge at four interrelated levels: methodological, theological, contextual, and practical. It demonstrates that a careful engagement with the structure and symbolism of Scripture can yield a robust theological vision capable of informing contemporary ecological responsibility. In doing so, it positions the church as a theologically grounded and contextually responsive agent in addressing the ecological crisis (Conradie, 2020; Spence & Brown, 2018).

Areas for Further Research

While this study focused on a structural and semiotic analysis of Genesis 2:15 within selected Nairobi church context, it also opens several avenues for further scholarly

inquiry. Depth and breadth of ecotheological engagement require continued exploration across biblical, contextual, and ecclesial dimensions.

Further research is needed on other biblical texts that contribute to a theology of creation care. While Genesis 2:15 provides a foundational framework, texts such as the Psalms 24 and Romans 8:19–22 offer rich theological insights into the relationship between humanity, creation, and divine redemption. A broader canonical approach would deepen the theological foundation for environmental stewardship by integrating themes of creation, lament, and eschatological restoration (Bauckham, 2010; Wright, 2010).

There is need for comparative research between urban and rural church contexts. The present study focused on selected Nairobi churches, where ecological challenges are shaped by urban dynamics such as pollution, waste management, and rapid population growth. However, rural contexts present distinct environmental realities, including land use, agriculture, and resource dependency. This study therefore recommends further investigation into how different socio-ecological contexts influence theological interpretation and ecological practice, thereby providing a more comprehensive understanding of ecotheological engagement across diverse settings (Conradie, 2020).

The need for comparative denominational studies that examine how different Christian traditions interpret and operationalize environmental stewardship is another area to consider. Further research could explore variations across denominations in terms of theological emphasis, institutional structures, and practical engagement. Such studies would provide valuable insights into the strengths and limitations of different ecclesial approaches, contributing to a more nuanced understanding of the role of theology in shaping environmental responsibility (Spence & Brown, 2018).

Finally, further research on the implementation of ecotheological frameworks within church life could be considered. Future research could examine how such models

are adopted, adapted, and sustained within specific church contexts. This includes evaluating the effectiveness of leadership training, policy frameworks, and community-based initiatives in fostering long-term ecological engagement. Ecotheological inquiry remains a dynamic and evolving field. Continued research across biblical texts, contextual settings, and denominational traditions is essential for developing a more comprehensive and practically relevant theology of environmental stewardship.

Conclusion

This study sought to demonstrate that Genesis 2:15, when read through a structural and semiotic lens, offers a coherent and compelling theological framework for environmental stewardship. By attending to the internal dynamics of the text its narrative structure, conceptual pairings, and symbolic depth this study has argued that the dual mandate of *ʿābad* (to serve/work) and *šāmar* (to keep/guard) defines the essence of human vocation within creation. Far from being a marginal concern, stewardship emerges as an integral component of biblical anthropology, rooted in divine intention and sustained through responsible human participation.

The central thesis of this study was that a structural and semiotic reading of Genesis 2:15 not only provides exegetical clarity but also yields a normative theological basis for ecological responsibility. This approach has revealed that meaning is embedded not merely in isolated terms but in the relational and symbolic coherence of the text itself. Consequently, environmental stewardship is understood as a theological imperative that integrates service and preservation, productivity and protection, within a unified vision of human responsibility before God.

At the same time, a persistent gap between theological affirmation and ecological praxis within Nairobi churches exists. While many ecclesial contexts acknowledge the importance of creation care, such commitments often remain insufficiently translated into

structured and sustained practice. This disconnect reflects broader challenges related to theological prioritization, leadership formation, institutional frameworks, and contextual engagement. In response, a series of recommendations have been proposed aimed at bridging this divide, emphasizing the need for integrated approaches that encompass doctrine, discipleship, leadership, institutional policy, and community engagement.

By proposing a contextual *ʿābad–šāmar* ecotheological framework, this study has sought to provide a pathway through which biblical interpretation can inform practical action. This framework integrates structural and semiotic insights with African socio-cultural realities, offering a model that is both theologically grounded and contextually relevant. In doing so, the study positions the church as a transformative agent capable of addressing ecological challenges through a coherent and sustained expression of its theological mandate.

Ultimately, environmental stewardship is not an optional dimension of Christian faith but a fundamental expression of humanity's created purpose. To "work and keep" the earth is to participate in God's ongoing care for creation, and the church, as a theological community, must embody this mandate with urgency, coherence, and faithfulness.

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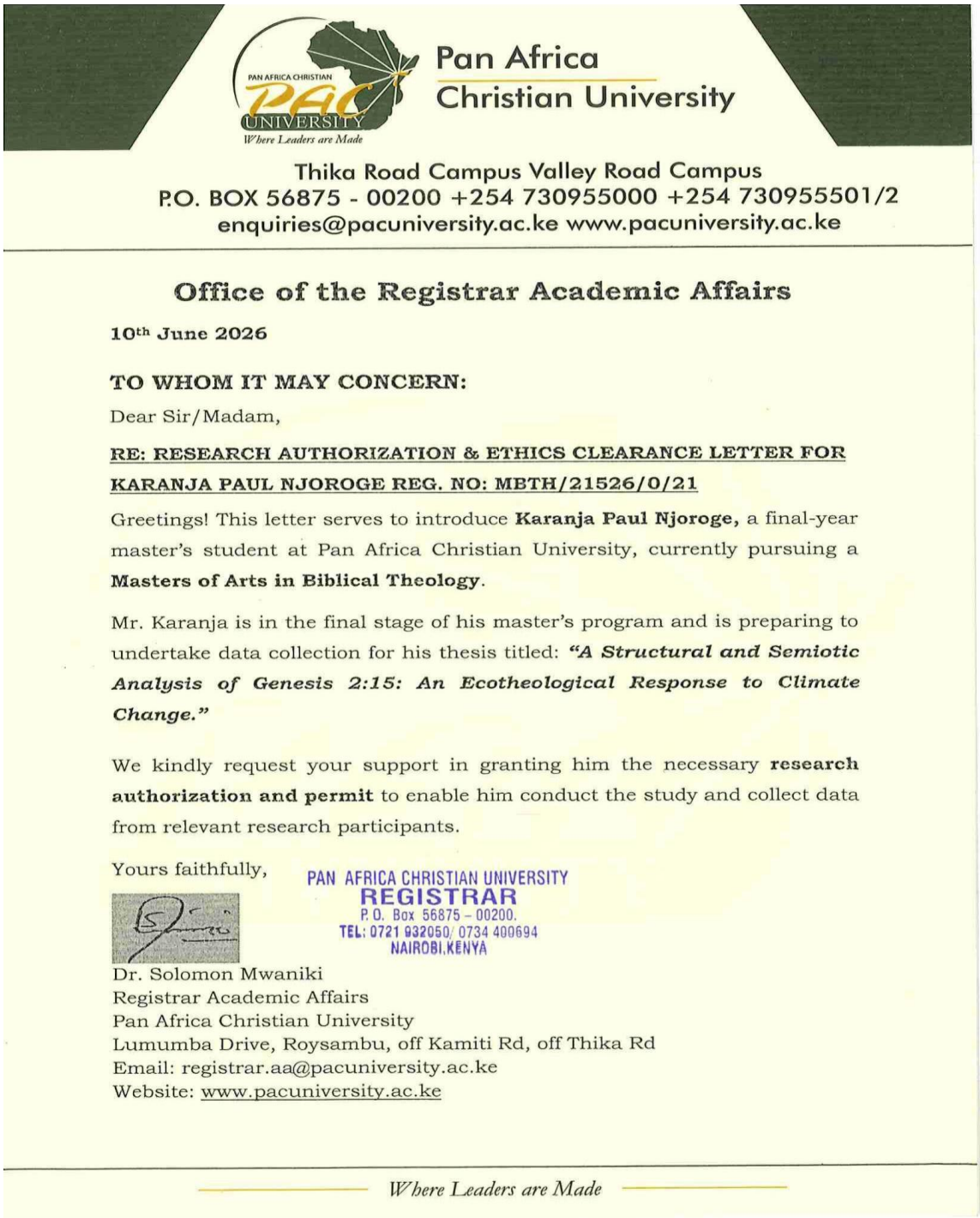
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Appendices

Appendix I: PAC University Research Authorisation Letter



Pan Africa Christian University

Where Leaders are Made

Thika Road Campus Valley Road Campus
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enquiries@pacuniversity.ac.ke www.pacuniversity.ac.ke

Office of the Registrar Academic Affairs

10th June 2026

TO WHOM IT MAY CONCERN:

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION & ETHICS CLEARANCE LETTER FOR KARANJA PAUL NJOROGE REG. NO: MBTH/21526/0/21

Greetings! This letter serves to introduce **Karanja Paul Njoroge,** a final-year master's student at Pan Africa Christian University, currently pursuing a **Masters of Arts in Biblical Theology**.

Mr. Karanja is in the final stage of his master's program and is preparing to undertake data collection for his thesis titled: ***"A Structural and Semiotic Analysis of Genesis 2:15: An Ecotheological Response to Climate Change."***

We kindly request your support in granting him the necessary **research authorization and permit** to enable him conduct the study and collect data from relevant research participants.

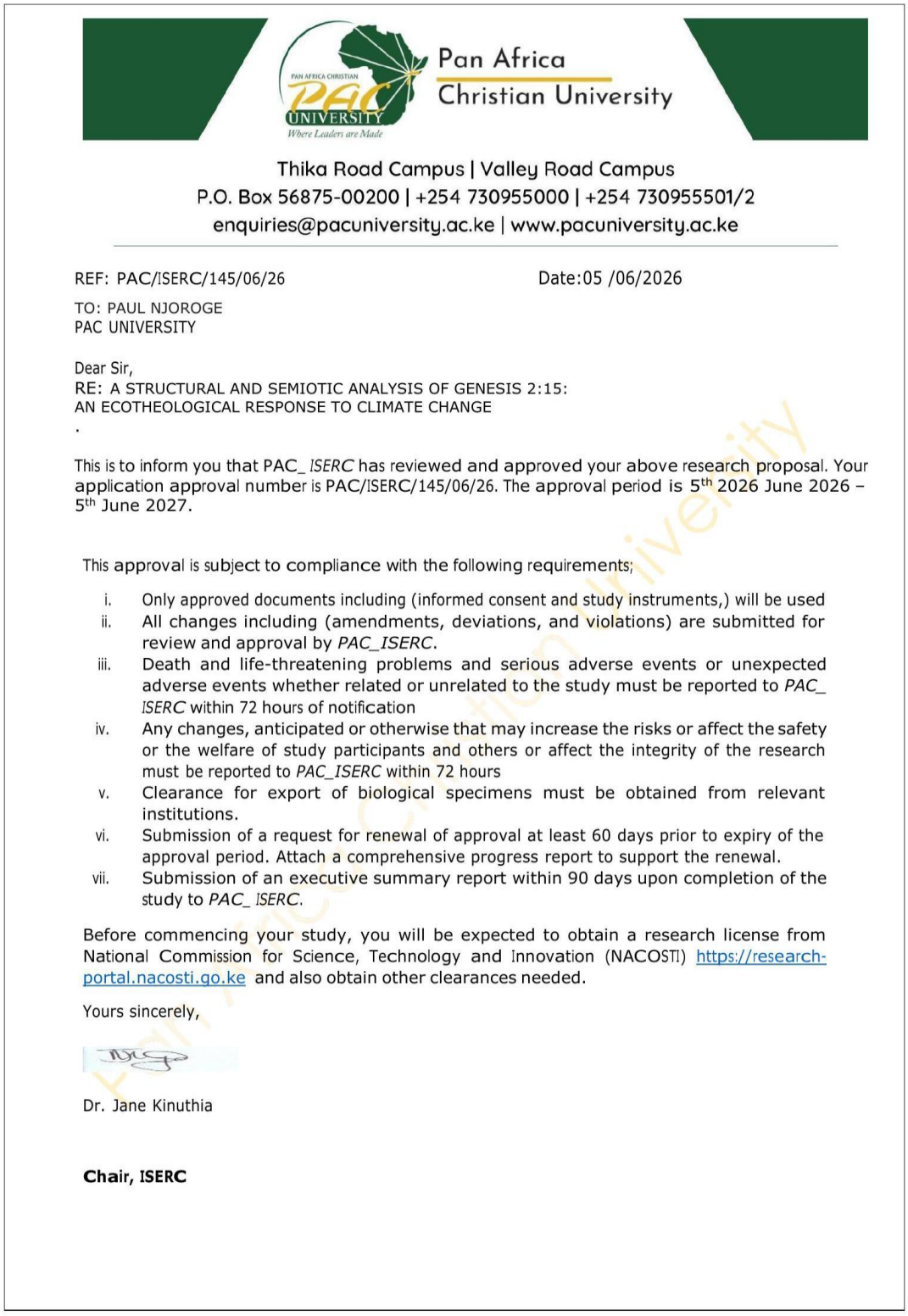
Yours faithfully,

PAN AFRICA CHRISTIAN UNIVERSITY
REGISTRAR
P. O. Box 56875 – 00200.
TEL: 0721 932050/ 0734 400694
NAIROBI,KENYA

Dr. Solomon Mwaniki
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Where Leaders are Made

Appendix II: PAC University ISERC Ethical Review Approval Letter



Pan Africa Christian University

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REF: PAC/ISERC/145/06/26 Date:05 /06/2026

TO: PAUL NJOROGE
PAC UNIVERSITY

Dear Sir,
RE: A STRUCTURAL AND SEMIOTIC ANALYSIS OF GENESIS 2:15: AN ECOTHEOLOGICAL RESPONSE TO CLIMATE CHANGE
.

This is to inform you that PAC_ *ISERC* has reviewed and approved your above research proposal. Your application approval number is PAC/ISERC/145/06/26. The approval period is 5th 2026 June 2026 – 5th June 2027.

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consent and study instruments,) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by *PAC_ISERC*.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to *PAC_ ISERC* within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or the welfare of study participants and others or affect the integrity of the research must be reported to *PAC_ISERC* within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to *PAC_ ISERC*.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

Dr. Jane Kinuthia

Chair, ISERC