

“The Clothes of the Church”: The Shared Meanings Around Trees that Drive Forest
Conservation in Rural Ethiopia

Brook Kelela

Dr. Kenneth Caine

University of Alberta

SOC 407/408



1

¹ (The Guardian: *People gather early on a Sunday morning at Robit Bahita church, near Bahir Dar*, Dodds, 2021).

Table of Contents

INTRODUCTION	5
RESEARCH QUESTIONS	5
BACKGROUND	7
THE ETHIOPIAN ORTHODOX TEWAHEDO CHURCH	7
CHURCH FORESTS	9
SHARED MEANINGS	12
LITERATURE REVIEW	13
ETHIOPIAN ORTHODOX TEWAHEDO CHURCH SHARED MEANINGS AROUND TREES.....	13
<i>Meanings of Paradise and the Garden of Eden</i>	14
<i>Meanings of Servitude</i>	15
<i>Meanings of Strength and Longevity</i>	17
<i>Meanings of Purity and Pollution.....</i>	18
HOW SHARED MEANINGS SHAPE THE CHURCH FOREST SYSTEM	20
<i>The Spatial Organization of Church Forests</i>	20
<i>Rules and Regulations of Church Forests.....</i>	23
THREATS TO ETHIOPIAN ORTHODOX TEWAHEDO CHURCH SHARED MEANINGS AROUND TREES	25
<i>Threats to the Church Forest System</i>	25
<i>Shifts in Attitudes and Meanings Around Church Forest Protection</i>	27
CONCEPTUAL FRAMEWORK.....	30

DISCUSSION	33
CHURCH FORESTS AS ‘SYMBOLIC CAPITAL’: VALUE, STATUS, PRESTIGE AND HONOR.....	34
IS THERE A CHANGE IN HOW CHURCH FORESTS ARE BEING KNOWN AND RECOGNIZED TODAY?	36
THE REINTEGRATION OF NATURAL RESOURCES INTO THE WIDER SOCIAL AND POLITICAL CONTEXT.....	38
<i>How Do We Perceive Church Forests in Their Own Historical and Social Context?</i>	<i>41</i>
CONCLUSION	44
REFERENCES	47

List of Tables and Figures

Figure 1: Sketch of a Church Forest in South Gondar	9
Figure 2: Photographs of <i>Goha Mariam church</i> and <i>Debre Mihret Arbiatu Ensese church</i>	11
Figure 3: Diagram of the Spatial Organization of an Ethiopian Church Forest.....	21

Introduction

“In Ethiopian Orthodox teaching, a church- to be a church- should be enveloped by a forest”

- Dr. Alemayehu Wassie, a forest ecologist (Emergence Magazine, 2020)

In Ethiopia, trees have an integral role in cultural, social, and religious identity. For instance, among the Guji community, “trees are perceived as [a] sacred gift of God to cover [the] nudity of the land, and to facilitate human wellbeing” (Roba, 2021, p.10). Additionally, trees are critical components of certain events, ceremonies, rites, and rituals (Roba, 2021, p. 13). Therefore, the protection of these perennial plants is essential to the survival of Ethiopian culture. This is especially true with the intensive agricultural development and cattle-grazing that has cleared nearly all the country’s native forests over the past century (Emergence Magazine, 2020).

A notable way that rural communities within Ethiopia are conserving native trees is through church forests. Church forests are essentially forest sites that surround some sort of religious relic, building, or statue (Cardelús, et al., 2017, p. 727). The idea here is that the surrounding forest is now protected under the pretense of its sacredness to the Christian Orthodox Tewahedo Church (Cardelús, et al., 2019, p. 3). To put it another way, because native trees hold significance to the Orthodox church and local people, their maintenance naturally becomes a responsibility for the surrounding community.

Research Questions

My thesis focuses on shared meanings around trees and how these social understandings drive certain methods of forest conservation. More specifically, I assess the shared meanings around trees that exist in Ethiopian church forests. I ask the following questions:

How do shared meanings around ‘trees’ shape the conservation efforts employed by rural communities in Ethiopia? In addition, I examine the following subquestions:

- a. What are the cultural and religious aspects of tree symbolism within the North and South Gondar regions of Ethiopia?
- b. How do these context-specific values shape the way that rural communities define environmental and societal relations?
- c. How do these green pockets of biodiversity relate to indigenous belief systems and knowledge carriers?
- d. How does this culture of tree symbolism bridge partnerships between rural communities, the Ethiopian Orthodox Tewahedo Church, scientists, and the surrounding ecosystems?

In answering these questions, I hope to understand the cultural and religious meanings around church forests that exist within the northern regions of Ethiopia, as well as how these context-specific values shape the way that rural communities define environmental and societal relations. Additionally, I explore where these meanings around trees come from, how they reflect themselves within the church forest system and how they are perceived and acknowledged by the communities which interact and engage with these spaces daily. In the end, I believe that this topic is important because it contributes to a growing body of research that strives to decolonize the politics of knowledge. Indeed, the efforts by communities in Ethiopia to preserve native trees through church forests represents a different approach to

conservation; one that is not centered around Western science or a fenced-off ‘national park’ model. Rather, this style of preservation is guided by theology, stories, and traditions (Roba, 2021, p. 12). And as a result, it allows for rural communities to not only maintain the biodiversity of existing ecosystems, but to also sustain those shared meanings around trees that hold cultural and religious significance.

This paper is structured as followed: Section 1 offers a background on the Ethiopian Orthodox Tewahedo Church, church forests, and shared meanings. Section 2 presents a literature review. Section 3 provides the conceptual framework for the discussion. Section 4 explores the changing cultural meanings around church forests, and Section 5 concludes.²

1. Background

The Ethiopian Orthodox Tewahedo Church

To better understand the shared meanings around trees in the church forest system, we must first gain some background on Christianity’s place in Ethiopia. Ethiopia, a polyreligious country located in East Africa, is full of “rich traditions and affinities of religious habits and culture” (Tamene, 1998, p. 89). In fact, the toponym ‘Ethiopia’ was coined by Greek geographers to refer “to a sacred territory after various references to it in the Old and New Testaments” (Ancel & Fiquet, 2015, p. 65). A 2007 census outlined that the most popular traditions that made up Ethiopia’s religious composition, besides Orthodox Christianity, were Protestantism (18.6%), Islam (33.9%), Traditional Religions (2.6%), and Catholicism (0.7%) (Federal Democratic Republic of Ethiopia Population Census Commission, 2008, p. 17). The same report also

² Before I continue, I would like to make note of the fact that I will be interchanging between two spellings of the same word: *Tewahedo* and *Tewahido*. The difference in spelling does not imply varying meanings, but instead reflects that the literature on church forests is filled with both versions of the word.

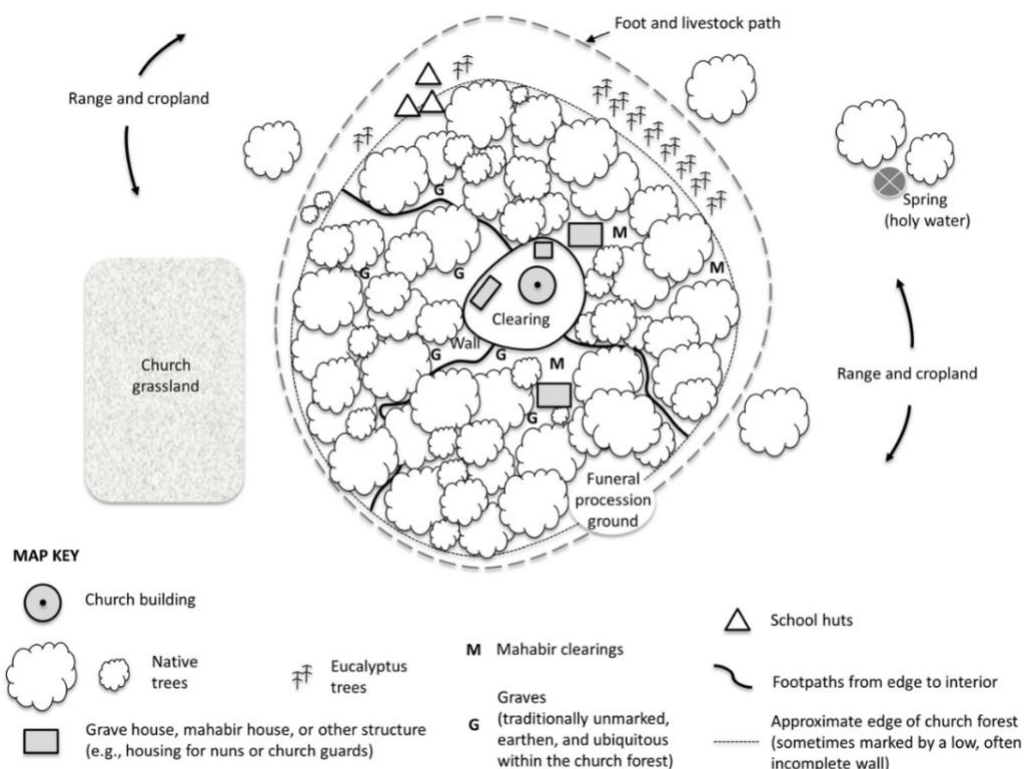
exhibited that from a population of 73,918,505 Ethiopians, there were 32,138,126 people (43.5%) practicing Orthodox Christianity (p. 17)³. Although most of these practitioners are Amhara and Tigray people (inhabitants of the highlands), the Church's gradual expansion southward is resulting in growing numbers of Christianized Oromos, as well as other tribes (Tamene, 1998, p. 89). Together, these Ethiopian Christians refer to themselves as a *beta-kristian*, which translates to “house of Christians” or “church” in *Ge'ez* (an ancient Ethiopian Semitic language) (Ancel & Ficquet, 2015, p. 64). For them, this term means “a community that gathers around a building at the centre of a sacred geography” (p. 64).

Moving along, my paper is specifically concerned with the *Ethiopian Orthodox Tewahedo Church* (EOTC). The Ethiopian word “*Tewahido*” translates to ‘made’, and this is fitting as the EOTC is known for prioritizing the “inseparable unity of the Godhead and Manhood in the Person of Christ” (Eshete, 2007, p. 3). To put it another way, what differentiates this institution from other churches in Ethiopia is that it uses the older formula of “One Incarnate nature of God the Word”, as well as believes “in the full Divinity and the true Humanity of Jesus Christ and is, therefore, perfectly Orthodox in its christological teaching” (Tamene, 1998, p. 89). Another important fact about the EOTC is that it is one of the oldest Churches in the world (with 40 million practitioners, 35,000 churches, and 500,000 clergies), as well as both an indigenous and integral Christian Church of Africa (Eshete, 2007, p. 3). On top of that, the EOTC is also the largest non-Chalcedonian Eastern Church (historically known as “The Oriental Orthodox Churches” or “The Lesser Eastern Churches”) – the others being the Coptic, the Syrian, the Indian and the Armenian (Eshete, 2007, p. 3; Tamene, 1998, p. 89). For the purpose of this paper, it is to the church grounds of the EOTC that we will turn our attention to next.

³ This is less practitioners than what the religion had in 1996 (56.7 million people) (Tamene, 1998, p. 89)

Church Forests

In Ethiopia, there are about 21,000 dry Afromontane Forest⁴ fragments (ranging from 3 to 300 hectares in size) surviving in the northern highlands, and this is roughly 5% less of what used to preside in this nation (Goodin et al., 2019, p. 2). Although these remnants of old-aged Afromontane forests can sometimes be found enveloping monasteries and other ecclesial lands, they are almost entirely only found around EOTCs (Goodin et al., 2019, p. 1). And this should not be surprising as the EOTC has a long history of forest conservation, namely through *church forests* (also known as *atsede betekristian* in Amharic, *debr*, or *geddam*) (Bongers et al., 2006, p. 39; Orlowska & Klepeis, 2018, p. 677; Eshete, 2007, p. 3). Put simply, church forests are forests which surround EOTCs and are managed and protected by the clergy (Goodin et al., 2019, p. 2).



⁴ Afromontane forests are located in the Afromontane region (a subregion of Afrotropical realms) (Daba et al., 2022, p. 2). They exist between the 1500 and 2600 elevation range on the southwestern part of Ethiopia's highlands, and they are separated from each other by low-lying areas (p. 2). These forests are made up of plant species which are found in the mountains of Africa and the southern Arabian Peninsula (p. 2). And they are a significant source of biodiversity conservation, as well as various ecological services (p. 2).

Fig. 1. This is a simplified sketch of what the average Ethiopian church forest looks like in South Gondar (Klepeis et al., 2016, p. 719).

The main purpose of church forests is to provide spaces for worship, burials, and religious festivals (Bongers et al., 2006, p. 39). The trees offer vital materials for spiritual practice, such as the construction of worship places, the illumination of celebrations, the preparation of special foods and the fashioning of musical instruments (Ruelle et al., 2018, p. 291). Additionally, church forests also provide charcoal for internal church services, traditional medicine for monks, shade for practitioners during religious festivals and meditations outside the church buildings, and they also signify the presence of churches from a distance, reminding Christians passing by to bow (Goodin et al., 2019, p. 3). Equally important is that they are home to communities made up of priests and peasants (i.e., small landholders who farm in a subsistence-oriented nature) (Orlowska & Klepeis, 2018, p. 677). These members often organize themselves into three to four *gots* (villages) (Orlowska & Klepeis, 2018, p. 677). All things considered, church forests represent holy spaces in a religious, social, and institutional sense (Bongers et al., 2006, p. 39).

Alongside offering spaces for religious and cultural practices, church forests are also responsible for protecting various ecological services. Of course, the title of '*islands of biodiversity*' is earned as many of the plant and animal species which exist on these sites have disappeared in most other parts of northern Ethiopia (Bongers et al., 2006, p. 39). Their disappearance over centuries is mainly due to lands being converted into farms at a growing rate, increasing cattle-grazing (mainly by goats and cows), cutting, droughts, and fires which are taking place at growing intensities and frequencies (Bongers et al., 2006, p. 39). Thus, the Ethiopian church forest's ability to protect trees, birds and mammals while being surrounded by

growing areas of poor biodiversity due to decades of biodiversity-eroding processes is strong proof of their resilience (Doffana, 2014, p. 62).



Fig. 2. Photographed here are the *Goha Mariam church*, near Bahir Dar, left, and *Debre Mihret Arbiatu Ensesa church*, close to the eastern shore of Lake Tana, right. Both church forests are in the Amhara province (Dodds, 2021).

The church forest approach to conservation does not solely occur in Ethiopia. For example, we have the existence of sacred groves in south-west Nigeria which contribute to biodiversity conservation, as well as the maintenance of religio-cultural values (Adeyanju et al., 2022, p. 101). These sites are used for traditional and community festivals, as well as provide a space for worship and kingmaking rituals (Adeyanju et al., 2022, p. 101). Likewise, we can also look towards the remnant patches of dry forest in the Zambezi Valley of northern Zimbabwe which are being preserved because of their sacredness to the traditional African religion of *Shona* (Beyrs et al., 2001, p. 187). In the Western Ghats of southern India and the Meghalaya state in north-eastern India, you can also find sacred forests which are responsible for protecting

certain lands that are both culturally and religiously significant to these communities (Ormsby, 2010, p. 320). The examples do not stop there as sacred natural sites exist all over the world, such as in China, Iran, Tanzania, etc. (Zeng, 2018; Plieninger et al., 2020; von Hellermann, 2016).

Shared Meanings

In this study I explore the shared meanings around trees which exist within Ethiopian church forests. Therefore, it would be helpful to start this conversation by looking at what a ‘shared meaning’ is. We can approach the concept in a multitude of ways. For Gauri et al (2012), shared meanings are essentially the concepts, arguments, beliefs, and judgements which; (1) are the shared property of groups of human beings, (2) arise from the rules that constitute social practices; and (3) are rooted in the fact of social coordination (Gauri et al., 2012, p. 161). In other words, a shared meaning begins at the precise moment that a common intersubjective meaning has been ascribed to a situation, process, or event (Gauri et al., 2012, p. 160).⁵

Weeden adds to this when she explains that the presence of “meaning” connotes that language and symbols are made manifest through practices (Weeden, 2002, p. 722). This is expressed in the following statement:

“Systems of signs are inscribed in material, observable practices; semiotic practices produce material effects, the observable implications of which are so important for positivist social science. And material affects reproduce systems of signification, which are communally intelligible and therefore open to interpretation” (Weeden, 2002, p. 723)

Weeden’s work on the social, political, philosophical, and anthropological accounts of socially rooted meaning-making practices is also especially insightful for anyone looking to understand

⁵ In their research on the role of shared meanings development work and the management of common pool resources, the authors use the terms ‘shared meaning’ and ‘intersubjectivity’ interchangeably (Gauri et al., 2012)

what a shared meaning is. This is because her research shifts “our conceptualization away from culture as a fixed system of meaning to culture as the practices of meaning-making through which social actors attempt to make their worlds coherent” (Weeden, 2002, p. 720).⁶

Overall, both these perspectives on shared meanings provide us with a starting point for analyzing how Ethiopian Orthodox Christians make meaning of trees in church forests. Even more, they also encourage us to incorporate the social, political, philosophical, historical, and anthropological accounts of these meaning-making practices. Ultimately, I will be looking for concepts, arguments, beliefs, and judgements that are the shared property of these individuals, and I will be critical of the rules and social practices from which they arise. Now that we have background information on Ethiopian church forests and shared meanings, we can turn our attention to what the literature has to say on the shared meanings around trees which exist in the church forest system.

2. Literature Review

3.1. Ethiopian Orthodox Tewahedo Church Shared Meanings Around Trees

Church forests are full of shared meanings. There are meanings which concern religion, social life, nature, politics, and many other matters. In this literature review, I focus on the shared meanings around trees. More specifically, the shared meanings around trees which are rooted in the EOTC religious tradition (Kent & Orlowska, 2018; Votrin, 2003; Orlowska & Klepeis, 2018; Ruelle et al., 2018). This is essential as it is the EOTC that is behind the conservation of these sites (Ruelle et al., 2018, p. 292). Since the academic literature on church forests offers various religious meanings around trees, it would be insightful to turn our attention to these next. Surely,

⁶ For Weeden, semiotic practices are a version of culture that “refers to the processes of meaning-making in which agents’ practices interact with their language and other symbolic systems” (Weeden, 2002, p. 713).

each of these shared meanings contribute to a larger body of knowledge on the religious interests behind Ethiopian church forest conservation.

Meanings of Paradise and the Garden of Eden

Paradise, as a shared meaning, is a common theme found in the literature on church forests. That is, various sources utilized words, images and symbols which channeled church forests as resembling ‘Gardens of Eden’ (Kent & Orlowska, 2018; Orlowska & Klepeis, 2018; Votrin, 2003; Ruelle et al., 2018). For example, in Kent & Orlowska’s study on the norms, beliefs and practices of church forests in their social and religious context, (2018), they found that priests perceived church forests as these miniature ‘gardens of Eden’, as well as symbols of *genet* (paradise) (Kent & Orlowska, 2018, p. 118-120). Another way that church forests mirror the spiritual world is by having *menagn* (spirits who carry one’s prayer to heaven) reside in the crowns of their trees (Votrin, 2003, p. 13; Kent & Orlowska, 2018, p. 130). In fact, clergies in both North and South Gondar voiced through interviews that the compound surrounding their churches were either inhabited or planted by *menagn* (Orlowska & Klepeis, 2018; Ruelle et al., 2018). Moreover, even though Ethiopian church forests parallel the Garden of Eden in various ways, it is important to recognize that EOTC theology does not view the trees, themselves, as sacred (Klepeis et al., 2016, p. 722; Orlowska & Klepeis, 2018, p. 678). This is conveyed in the belief that if the forests were to disappear, then the spirits would simply find a new place to live (Klepeis et al., 2016, p. 722; Orlowska & Klepeis, 2018, p. 678). Ultimately, insights such as these help us to gain a deeper understanding of how Ethiopian Orthodox Christians view and engage with these spaces.

Church forests also symbolize ‘Gardens of Eden’ or paradise in conversations that take place outside of academic scholarship (Dodds, 2021; Emergence Magazine, 2020; Hewitt,

2019). To illustrate this, Kieran Dodds offers the following insight in his 2021 photo essay on the EOTC's role in conservation:

“The symbol of the tree is at the heart of the Christian story, from the tree of life standing in the Garden of Eden in Genesis to its redemptive role in Revelation, bridging the river of life and bearing fruit for the healing of nations” (Dodds, 2021).

For Dodds, the presence of trees around churches fulfils a type of biblical prophecy. In addition to this, the imagery of Ethiopian church forests as ‘paradise’ is also showcased in an Emergence Magazine film (Emergence Magazine, 2020). The film specifically develops this meaning by employing heavenly-like sounds and lighting techniques, as well as by using shots of children running and playing in these forests (Emergence Magazine, 2020). In like manner, Sarah Hewitt's BBC travel article on the sacred forests of the Debre Tabor district also depicts church forests as these spaces where children listen to stories underneath the shade of African juniper trees, run along dusty paths, jump over low rock walls and duck under branches (Hewitt, 2019). All these descriptions suggest that the forest ecology near the northern region of Ethiopia resembles ‘paradise’. Additionally, the use of children in these depictions are notable because within the EOTC doctrine, children are recognized as ‘innocent’ (Orlowska & Klepeis, 2018, p. 682). Therefore, there is a popular understanding that church forests are not only reflections of the Garden of Eden or paradise but are also filled with the spiritually deserving.

Meanings of Servitude

Another value that the trees within church forests hold for Ethiopians is that they serve the church community (Votrin, 2003; Klepeis et al., 2016; Orlowska & Klepeis, 2018; Berhane-Selassie, 1994). They provide a place of withdrawal for monks that are striving to reach sainthood or be disconnected from people and the temptations of the world (Orlowska & Klepeis, 2018, p. 681). The following is an expression used by Ethiopian monks who depart into

these forests; “*Alem beqagn*” (translation: I have had enough of the world, I have withdrawn) (Orlowska & Klepeis, 2018, p. 681). The idea that the trees in church forests are meant to serve the clergy is also highlighted in the story of Gebre Menfes Qidus, an indigenous Ethiopian saint. Qidus was only able to tame the wild creatures in the wilderness once he had withdrawn into a church forest, achieved saintly status, and entered covenant (Orlowska & Klepeis, 2018; p. 681). Thus, his story offers evidence for how church forests have provided for the clergy in the past. Furthermore, the notion that church forests should serve the community goes hand-in-hand with the Ethiopian Orthodox theological belief that man is the center of God’s creation (Votrin, 2003, p. 13). Similar thoughts are also echoed in the following biblical notion: “the Earth belongs to the Lord and humans are responsible stewards assigned the duty to work for creation and care for it” (p. 19). Essentially, this passage expresses that humans must protect nature so that it may enhance man’s welfare (Votrin, 2003; Berhane-Selassie, 1994). And this is what is ultimately occurring in church forests: trees are being conserved so that they may continue to meet the needs of the EOTC clergy.

Alongside serving the clergy, the trees that exist in church forests also play a critical role in protecting the church (Orlowska & Klepeis, 2018; Klepeis et al., 2016). Of course, the forest is often described as a form of symbolic protection as it provides respectful ‘cover’ or ‘clothing’ for the church (Klepeis et al., 2016, p. 722; Orlowska & Klepeis, 2018, p. 677). In other words, the forest is basically giving the church honor and *tsega* (grace/virtue) by preserving the institution’s modesty (Kent & Orlowska, 2018, p. 121). This culturally significant idea of “covering out of respect” in the Ethiopian Orthodox tradition is further explored by Orlowska and Klepeis (2018) through the collection of interviews and informal conversations conducted in Amharic (the local language) with clergy, church guards, the local government, and laymen of

both sexes from South Gondar (Orlowska & Klepeis, 2018, p. 677)⁷. Through these conversations, they found two other examples of covering to maintain modesty; (1) Ethiopian religious paintings are always veiled by curtains; and (2) the wooden container which holds God's commandments must be clothed with layers of luxurious fabric (p. 677). In addition, this vital pillar of the Ethiopian Orthodox religion is also exhibited in "the white robes worn by congregants when they attend church and the ornate umbrellas used to cover the *tabot* when it is taken out in procession" (Klepeis et al., 2016, p. 722). These examples express to us the importance of modesty to the EOTC tradition and confirm the imperative role trees play in perpetuating this value. They also speak to the larger meanings of servitude that are placed onto these natural resources as they not only protect the church, but also provide for the EOTC community.

Meanings of Strength and Longevity

A key shared meaning around trees in the church forest system relates to strength and longevity (Ruelle et al., 2018; Orlowska & Klepeis, 2018)⁸. Here, I examine how indigenous tree species are signifiers of the church's long history and resilience. In Ruelle et al's (2018) investigation into why and how Ethiopian lay people protect and promote woody plants within their sacred spaces, they found that trees are famous representations of strength, as well as endurance (Ruelle et al., 2018, p. 291). This is because "many species can live for centuries, bearing witness to the

⁷ An interesting aspect about Orlowska & Klepeis' study (2018) is that the "[f]ieldwork was planned around key religious celebrations in the Orthodox calendar in order to observe socio-religious activities" (Orlowska & Klepeis, 2018, p. 677). This choice showcases that the researchers were able to recognize that Ethiopian church forests are not fixed environments. On top of that, their insights provide a lens into the socio-religious parts of church forests, which is crucial because most of the other research on these sites is dominated by ecological literature.

⁸ Although the meanings of strength and longevity in indigenous tree species only came up in two articles, I still chose include it in this paper because it reminds us to resist generalizing any meanings across all species of trees found around churches. Church forests are complex systems, and therefore, full of a myriad of meanings which are all worthy of analysis.

durability of traditions and providing a sense of continuity across generations” (p. 291). Some examples of these species include *tsid* (African juniper, indigenous) and *weyra* (African olive, indigenous) which are valued for their ability to beautify church compounds and their capacity to attest “to the longevity of the church as both a physical space and an institution” (p. 294).

Orlowska and Klepeis also mention that *wef zerash* (wild or native trees) are more respected than introduced species because they cannot be planted by people (Orlowska & Klepeis, 2018, p. 681). In other words, because indigenous trees are created by God, people feel more inclined to protect them (p. 681). What is of note here is that such shared meanings are not only encouraging the protection of trees on church compounds. This is apparent in how “the influence of the church extends beyond its stone walls into the surrounding landscape, inspiring farmers to protect woody plants within their farmlands” (Ruelle et al., 2018, p. 297). Overall, the findings mentioned above showcase that the indigenous trees species which surround Ethiopian churches symbolize strength and longevity. Even more, these meanings make the perennial plants more valuable to the EOTC and worthy of their protection.

Meanings of Purity and Pollution

The final shared meaning around trees within church forests regards purity and pollution (Kent & Orlowska, 2018; Klepeis et al., 2016; Ancel & Ficquet, 2015, p. 64). Because this specific meaning begins with the *tabot*, I start by providing a quick overview of the religious artifact (Kent & Orlowska, 2018, p. 117). In the EOTC tradition, what makes a church sacred is that it possesses a *tabot* (a replica of the tablets that are inscribed with the teachings that Moses received from God on Mount Sinai) (Ancel & Ficquet, 2015, p. 64; Klepeis et al., 2016, p.

722)⁹. The *tabot* is a signifier, as well as a material embodiment of the Church's role as "the mediator of divine grace" (Klepeis et al., 2016, p. 722). The artifact has also been described as a representation of divine authority, wrath, and mercy (Klepeis et al., 2016, p. 722). And it is this divine nature of the *tabot* that radiates outwards from the church and makes the surrounding forest sacred (Klepeis et al., 2016, p. 722).

Put simply, the conservation of the forested ring around an Orthodox church is meant to protect the EOTC's purity (which is embodied in the *tabot*) so that the institution remains a legitimate portal to the divine (Kent & Orlowska 2018; pg. 117). This implies that the trees which surround an EOTC signify cultural logics of purity and pollution. Although there is not much literature that examines this shared meaning in-depth, I was able to find other examples of how an Ethiopian Orthodox logic of purity and pollution plays out in the church forest system. For example, there are rules around whose presence is permitted in the clearing between the church and the forest (Klepeis et. al 2016). In fact, Klepeis et al's study (2016) found that with close proximity to the *tabot*, certain forms of "purity" had to be met by visitors (pg. 722). For instance, "people who have recently eaten or had sexual relations are considered too impure to enter, as are menstruating women" (pg. 722). What made these actions a form of "pollution" was that they signified a lack of self-control (Kent & Orlowska 2018; pg. 126). That is, food, semen, and blood were irreversibly flowing in and out of the human body (Kent & Orlowska 2018; pg. 126). Therefore, these examples convey that the EOTC values the ability to control oneself and resist the temptations of the human world (i.e., food, sex, etc.) (Kent & Orlowska 2018; pg. 126). With this in mind, it would be interesting to see more literature generated on

⁹ According to Ancel & Ficquet (2015), "the Ethiopian national myth locates the real Ark in Axum, the old capital of the kingdom, regarded as the site of the establishment of the first church" (Ancel & Ficquet, 2015, p. 64).

how cultural logics of purity and pollution shape the way that trees around the EOTC are recognized.

To summarize, the literature illustrates that there are several shared meanings around trees which exist in church forests. These include meanings of paradise and the ‘Garden of Eden’, meanings of servitude, meanings of strength and longevity, and meanings of purity and pollution. Each of these shared meanings are embedded in EOTC theology and play a critical role in how Ethiopians recognize trees around churches and, moreover, highlight the religious interests that shape these conservation efforts. I now turn my attention to the ways in which these EOTC meanings shape the church forest system.

3.2. How Shared Meanings Shape the Church Forest System

As I have outlined above, there are various EOTC shared meanings around trees which exist in church forests. In what follows, I will assess how exactly EOTC shared meanings take form on these conservation sites by exploring literature around the spatial organization of church forests and the associated rules and customs of these sacred spaces. This investigation is necessary for my study because previous literature has exhibited that Ethiopian Orthodox Christians define their environment in terms of biblical meanings (Berhane-Selassie, 1994, p. 155).

The Spatial Organization of Church Forests

The first way that EOTC shared meanings around trees shape the church forest system is through its spatial organization (Ruelle et al., 2018; Klepeis et al., 2016). For example, shared meanings of purity and pollution structure “the spatial organization of the site outward into a series of concentric circles of diminishing purity” (Kent & Orłowska, 2018, p. 117). The order of the parts of a church forest from purest to least pure would be the Church, the inner circle, the inner

periphery, and the main forest (Klepeis et al., 2016). Ruelle et al (2018, p. 297) refer to this spatial organization as an ‘embedded sanctuary’ because there is a pattern of nested circles within the church forest that extend out. Those who live in the inner circle are nuns, monks, and guards and this makes sense because increased proximity to the *tabot* equates to more purity (Klepeis et al., 2016, p. 722)¹⁰. However, while the spaces closest to the *tabot* are perceived as the purest, the area outside of the church which consists of low stone walls and rings of trees is still recognized as sacred (Ruelle et al., 2018, p. 297). This is exhibited in how Orthodox Christians, when passing a church, will stop to kiss the outer walls or touch these walls with their foreheads (p. 297). This is also made apparent when attendees who participate in the liturgy from outside the church - standing or sitting under the shade of the surrounding trees- are still considered by the EOTC to have attended the mass (p. 297). All things considered, it remains evident that shared meanings of pollution and purity play a role in shaping how church forests are physically laid out.

¹⁰ However, Klepeis et al. emphasizes that these are not individuals who have dedicated their entire lives to religious learning, but rather lay men, women, or widows who have usually lost their livelihoods (Klepeis et al., 2016, p. 722)

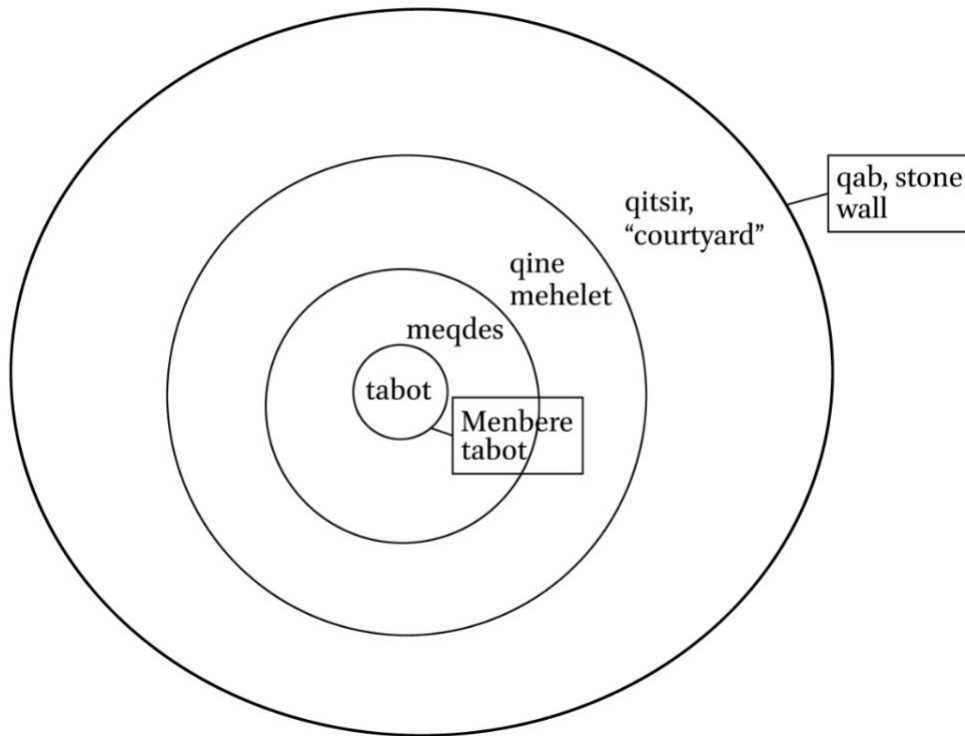


Fig. 3. A diagram of the spatial organization of a rural EOTC forest based on the cultural logics of purity and pollution. The center of the church forest, which is where the *tabot* is situated, is the purest part of the compound. And extending from the *tabot* are concentric circles of diminishing purity and increasing pollution. In other words, the further away one found themselves from the center of the church forest, the closer they became to the temptations of the human world which signified a lack of self-control (Kent & Orłowska, 2018, p. 128).

Ethiopian Orthodox Tewahedo Church shared meanings of strength and longevity also influence the spatial organization of church forests. Namely, these meanings ensure that old indigenous trees, including *tsid* and *weyra*, have more of a presence closer to the center of the compound, while introduced species like *bahirzaf*, are commonly found at the edges of these sacred sites (Ruelle et al., 2018, p. 297). After conducting interviews at 11 different churches in the Debark District of North Gondar, Ruelle et al (2018, p. 297) found that physical layout was not only driven by the religious interests of the EOTC, but also by the ‘practical considerations’ of community members. For instance, because *bahirzaf* were used to generate income for the church, it made more sense to plant them at the end of churchyards so that they could be felled

without risking any damage to the actual building (p. 297). In the end, this example reminds us that we should not neglect the various shared meanings *outside* of the EOTC which also shape the church forest system.

Rules and Regulations in Church Forests

Ethiopian Orthodox Tewahedo Church shared meanings around trees not only shape the spatial organization of church forests, but also influence the rules and regulations which exist on these sites. Within church forests, there are rules which govern how community members access and use church grounds, as well as consequences for violating these rules (Klepeis et al., 2016; Orłowska & Klepeis, 2018; Reynolds et al., 2017). Some of these are rooted in church doctrine and are thus fairly consistent across all Ethiopian Orthodox communities (Reynolds et al., 2017, p. 361). These include rules around women's presence and prayer in certain church buildings (p. 361). At the same time, there are also rules which are determined by a committee led by local priests (Reynolds et al., 2017; Orłowska & Klepeis, 2018). It is important to note that these local rules may vary from one church community to another (Reynolds et al. 2017; pg. 361). Such rules are put together during *Mehabir* gatherings at the *margeja* (a place that sits under the shade of the biggest tree just outside the church forest - usually a *warqa* tree – *Ficus vasta*)” (Orłowska & Klepeis, 2018, p. 678-679). Here is where the local priests discuss matters such as “who can harvest fruits, seeds, and firewood, and the circumstances under which trees can be harvested or land cleared” (Reynolds et al., 2017, p. 361-362).

A common offense that is agreed upon by local priests is the cutting down of live trees, as this is perceived as stealing from the church (Klepeis et al., 2016; Orłowska & Klepeis, 2018). In addition, the use of forest resources for private or individual benefit is also restricted (Klepeis et al., 2016, p. 723). These are the sorts of rules which also exist in other sacred natural

sites around the world. For example, researchers who were studying the conservation and management of sacred groves in Northern India found that *Cedrus deodara*, a sacred tree, was prohibited from being cut down among the Gond tribes in Madhya Pradesh (Kandari et al., 2015, p. 5). This was because the sacred plant had religious zeal and connotations of the Hindu religious tradition (p. 1). Therefore, these sacred groves, just like Ethiopian church forests, see the cutting down of trees as a religious offense. However, it is also worthy of note that the cutting of native trees in Ethiopian church forests and the selling of cash crops may be bypassed “if it benefits the church in some way” (Klepeis et al., 2016, p. 723). Orlowska and Klepeis (2018, p. 680) found this to be true when they observed nuns and monks gathering tree limbs which had fallen or sticks for firewood. Although the general action was banned and considered a serious offense, it was allowed this time because it was perceived as “directly beneficial to the church” (p. 680). Similarly, the clearing of trees is also allowed around the church (the inner circle) for the purpose of providing a space where rituals, like the *tabot* procession, can occur (Klepeis et al., 2016, p. 722). Each of these findings highlight that EOTC shared meanings around trees play a prominent role in what activities are restricted in church forests and how they may be bypassed.

In terms of the punishments for violating church forest rules, these “can range from a public apology to monetary fines, or even formal alienation from the church through a process called *gizet*” (Reynolds et al., 2017, p. 362). Another common punishment is *wugz* (Klepeis et al., 2016; Orlowska & Klepeis, 2018). *Wugz* is a curse that causes someone to experience a sudden acute accident, such as the loss of their sight or even a death in their family (Klepeis et al., 2016, p. 723). The *wugz* punishment essentially illustrates that the Ethiopian Orthodox community perceives the mistreatment of the forest as “an issue between the transgressor and

god” (p. 723). Therefore, it reinforces the idea that EOTC shared meanings shape the way that rules and regulations around church forest use and access are approached. It is also notable that, in Klepeis et al.’s research (2016, p. 723), none of the community respondents stated that they knew anyone who has ever been cursed or punished by divine law. Likewise, 60% of Orłowska & Klepeis’ respondents also did not know of the *wugz* having actually happened in their community (Orłowska & Klepeis, 2018, p. 680). To add, the literature on church forests conveys that although rules and taboos around church forest use exist, there does not seem to be strict implementations (Klepeis et al., 2016; Orłowska & Klepeis, 2018; Reynolds et al., 2017). In fact, the main point of the guards on these sites is to protect the church and its artifacts, not the forest (Klepeis et al., 2016, p. 724). It is important that we keep these points in mind when considering how EOTC shared meanings shape the rules and regulations around church forest use and access.

3.3. Threats to Ethiopian Orthodox Tewahedo Church Shared Meanings

The literature reveals that there are EOTC shared meanings around trees which influence the spatial organization of church forests, as well as the employed rules and regulations. Next, I investigate the threats that the church forest system is facing, and how these are causing shifts in attitudes and meanings around forest protection.

Threats to the Church Forest System

To begin, the literature highlights that church forests have shown major resilience in the face of land degradation and development in Ethiopia (Cardelús et al., 2019; Scull et al., 2016). In other words, the EOTC shared meanings around trees which drive church forest conservation are protective (Cardelús et al., 2017; Doffana, 2014; Scull et al., 2016). This was confirmed in an

article by Scull et al (2016, p. 450) which utilized historical air photos from the period of the Italian occupation of Ethiopia (1935-1941) to measure the changes in church forests over a roughly 80-year time span. Although previous literature on church forests indicates that the conservation sites were vulnerable to degradation due to their small size and isolation, little evidence showed up in the study that the church forests in the Debra Tabor region were decreasing in size (p. 450). In fact, Scull et al (2016, p. 450) interpret their data as evidence that church forests have shown significant resilience despite the threats posed to them. For this reason, they believe that it is fair to say that religion-based forest stewardship is effective (p. 450).

Although EOTC shared meanings around trees have exhibited effective forest protection in the past, there are still a significant number of researchers who raise the point that these meanings are not enough to preserve the ecological integrity of these sites on their own (Cardelús et al., 2017; Reynolds et al., 2017; Scull et al., 2016; Woods et al., 2017). After all, the literature on these systems have pointed to a myriad of threats which church forests are facing today. These include modernity, economic pressure, the increasing affluence of the population and its diaspora (an increase in private assets, landholdings, and woodlot ownership), a shift in perceived dominance in governing from the church institution to the state, firewood collection, grazing that is destroying efforts to replant trees, clearing of passages for electric lines, lack of funds for replanting initiatives, an increase in drier conditions, an increase in resource access, a general decrease of trees and bushlands due to their increased isolation and vulnerability, local land use and cover changes, growing transformations of bushland into intensive cultivation, delimited pasture, and the planting of exotic trees (Orlowska & Klepeis, 2018; Cardelús et al., 2019; Reynolds et al., 2017; Scull et al., 2016). Indeed, these are only

some of the forces which are posing issues for the church forest system today. And they are a vital part of our conversation around shared meanings in church forests. This is because they have the potential to shift attitudes and meanings around the trees which exist on these sites.

Shifts in Attitudes and Meanings Around Church Forest Protection

As a result of the growing threats mentioned above, the worldviews of Ethiopian Orthodox Christians are shifting and thus, transforming the ways in which they value and protect trees (Orlowska & Klepeis, 2018; Kent & Orlowska, 2018; Reynolds et al., 2017). This shift in attitude is especially prevalent among the younger generations of Ethiopians who are a part of these church forest communities (Orlowska & Klepeis, 2018; Reynolds et al., 2017; Kent & Orlowska, 2018). For example, while older members are more likely to take on the individual responsibility of enforcing regulations around church rules, younger people (in their 20s) are feeling less and less urgency to protect natural forests (Reynolds et al., 2017, p. 376-377). To add, while older members are less likely to support the extraction of benefits from these sacred sites, younger generations are actively supporting developmental goals put forward by the Ethiopian government which require the cutting of trees for the construction of roads, dams, electricity, irrigation, chemical inputs, drinking water, health centers, etc. (Reynolds et al., 2017; Orlowska & Klepeis, 2018). Altogether, these shifts in the attitudes of younger people highlight that secular authorities (such as the government) are becoming more involved in their lives (Orlowska & Klepeis, 2018, p. 682). This means that younger generations of Ethiopians are gradually perceiving the government as the dominant authority in the community as opposed to the church (p. 682). In other words, “[i]ncreasingly, the young associate the church with religion and authority with local government (*kebele*)” (Orlowska & Klepeis, 2018, p. 682). This shift in

authority may have the potential to transform how younger generations understand the EOTC's role in forest conservation.

Nevertheless, the growing threats to church forests are not only causing shifts in attitudes around forest protection, but also resulting in changes around the shared meanings of trees in these spaces. For one, younger community members (in their 20s) are not certain of who the *menagn* are and are even less sure if they actually inhabit the forest (Orlowska & Klepeis, 2018, p. 682). In Orlowska & Klepeis' study (2018, p. 682) for example, 87% of the respondents believed that the saintly *menagn* are more likely to be dwelling in spiritual places of higher value, such as the forests which surround monasteries. Kent and Orlowska's fieldwork (2018, p. 121) also hinted at changes in shared meanings when nothing came up in their findings which would support the notion, often shared in non-scholarly conversations, that the forests which surround churches are "miniature Edens" that the community was entrusted with by God. Moreover, the younger generations perception on how important it is to have old, thick, and native forests around churches is also decreasing (Orlowska & Klepeis, 2018, p. 682). Likewise, the prestige associated with churches that have old and dense forests is a notion which young people are also struggling with because to them, "*tabot is tabot*" (p. 682). To put it another way, they believe that all churches, which possess the *tabot*, should be treated equally regardless of their tree cover (p. 682). Altogether, these findings paint the picture that, today, shared meanings around trees in church forests are shifting among younger generations.

It is not only among younger generations that we see a shift in shared meanings around trees, but also among the clergy (Orlowska & Klepeis, 2018; Kent & Orlowska, 2018). Orlowska and Klepeis (2018, p. 680) suggest that this shift is the result of EOTC meanings around forests not fully being received by other clergy members in the way they were

intended to. This is confirmed by the ordinary priests in their study who were not able to offer a clear answer for why church forests existed (p. 680). In the same way, Kent and Orlowska's study (2018, p. 121) also found that "only some of these ideas about the significance of church forests are trickling down to rural priests and laypeople". Equally important is that actions like cutting down trees for firewood, which would have been perceived as a violation of social norms in the past, are now being understood by locals as a 'simple business transaction' (Reynolds et al., 2017, p. 378). This is illustrated by a church in South Gondar (*Debresena*) that takes part in the selling of deadwood from their compound in order to generate an income (p. 378). The same study also observed that there was a shift in 'the centuries-old-historical preference' for native trees in church compounds (p. 378). Now, these communities were looking towards more exotic tree species which threaten the biodiversity of church forests, such as *Eucalyptus spp.* (p. 378). And according to Reynolds et al (2017, p. 379), this shift has the potential to transform views of the church forest as a common pool resource that provides benefits for all members to "an economic enterprise that can protect itself". Ultimately, these observations made in the literature provide insights into how shared meanings around trees are also shifting among the clergy.

Overall, the research on the threats to church forests conveys that there are a growing number of economic, political, and spiritual forces confronting the church forest system. These threats are resulting in a shift in attitudes and meanings around forest protection among younger community members and the clergy - all of which will pose various challenges for the church forest system. On a final note, it is imperative that we do not mistake shifting attitudes and meanings around trees as a sign that younger generations of Ethiopians or the clergy are becoming less religious (Orlowska & Klepeis, 2018). Of course, young people still fast and continue to highly regard a traditional church education, and Ethiopian Orthodox Christians still

value that the EOTC provides them a strong identity in the face of a growing Pentecostal movement (Orlowska & Klepeis, 2018, p. 682).

To summarize, I began this literature review by looking at the following shared meanings around trees that exist in the church forest system: meanings of the Garden of Eden and paradise, meanings of servitude, meanings of strength and longevity, and meanings of purity and pollution. Then, I explored what the literature had to say about how these meanings take form in the spatial organization of church forests, as well as in the rules and regulations around church forest use and access. And finally, I investigated some of the economic, spiritual, and political threats which pose challenges for church forests today as they result in a shift in attitudes and meanings around forest protection.

3. Conceptual Framework

When I initially thought of concepts and theories to apply to the study of shared meanings in church forests, my mind automatically went to words such as ‘sacred geography’, ‘spiritual commons’ and ‘community-based protection models’ as they were the most prominent terms in the existing literature. However, these concepts, if solely relied on, do have the potential to neglect the understanding of church forests as socially, culturally, and religiously dynamic sites (Orlowska & Klepeis, 2018, p. 677). Moreover, they may inhibit researchers from “identifying emic categories driving change dynamics” (p. 677). By this, I mean that these concepts can potentially keep us from understanding change through the point of view of those who are participating in the church forest system. Therefore, I bring together ideas and concepts which take into account culture, meanings, dynamic environmental spaces, and change.

The first concept I will engage with is Pierre Bourdieu’s ‘*symbolic capital*’ (Bourdieu, 1986, p. 15). Bourdieu describes symbolic capital as “capital—in whatever form—insofar as it is

represented, i.e., apprehended symbolically, in a relationship of knowledge or, more precisely, of misrecognition and recognition” (p. 27).¹¹ For Bourdieu, the interesting thing about symbolic capital is that it does not focus on ‘reality’ itself, but instead the ways in which agents make form of reality and the representations it holds for them (p. 293). To put it another way, symbolic capital assesses the conceived ‘reality’ of a social world (p. 293). Provided that, this concept is beneficial here because I explore the meanings people associate with trees in church forests. In other words, how people know and recognize these natural resources. On top of that, the notion of symbolic capital will also enhance this conversation because it considers the religious, political, and cultural definition of common property resources, as well as “asks how its management connects to systems of authority and prestige, both locally and in relation to the state” (Mosse, 2008, p. 943). In the end, this concept aids us in avoiding socially disembodied views of resources, narrow perceptions of human agency, and understandings of common property as being driven by rational choice as these all provide a limited perspective of resource use and change (p. 943).

To help dissect the changing cultural shared meanings in church forests, a *socio-ecological systems (SES) perspective* will also prove to be useful. This is because an SES perspective understands an ecological system as being “intricately linked with and affected by one or more social systems” (Anderies et al., 2004, p. 3). According to Anderies et al (2004, p. 3), social and ecological systems interact interdependently, and therefore, “some interdependent relationships among humans are mediated through interactions with biophysical and non-human biological units”. And in instances where both social and ecological systems are closely linked, the socio-

¹¹ ‘Capital’ is essentially “accumulated labor (in its materialized form or its “incorporated,” embodied form) which, when appropriated on a private, i.e., exclusive, basis by agents or groups of agents, enables them to appropriate social energy in the form of reified or living labor” (Bourdieu, 1986, p. 15).

ecological system can become a complex and adaptive system which consists of various subsystems and is also embedded in a multitude of larger systems (p. 3). Ultimately, this concept is insightful because the term “resilience” tends to be used in the literature to describe church forests (Reynolds et al., 2017; Scull et al., 2016; Woods et al., 2017). Thus, it would be beneficial to see how church forest systems, as socio-ecological systems, have responded to disruptions, as well as the role of shared meanings in this adaptability (Anderies et al., 2004, p. 1).

The final concept I will apply in this study is *cultural ecology*. But in order to employ this idea, I must first outline a shared definition of culture. According to Sutton and Anderson (2010, p. 5), *culture* is learned and shared behaviour which is largely transmitted through language. Every person is a part of a culture, “a group of people who share the same basic pattern of learned behavior, the same values, views, language, and identity” (p. 5). As for cultural ecology, this is a concept which examines adaptation through cultural means (Sutton & Anderson, 2010, p. 3)¹². That is, cultural ecology gives the researcher the tools to determine “how the adaptation of a culture to its environment may entail certain changes” (Steward, 2016, p. 17). Essentially, this notion is “seeking to explain the origin of particular cultural features and patterns which characterize different areas rather than to derive general principles applicable to any cultural-environmental situation” (p. 12). The role of ‘cultural ecology’ in this research is to inform us that humans and their cultures are a vital aspect of the environment as human activity and the environment are constantly engaging with one another (Sutton & Anderson, 2010, p. 2). Now that we have a conceptual framework which considers culture, meanings, dynamic

¹² Cultural ecology is a branch of human ecology, which is “the study of the relationships and interactions among humans, their biology, their cultures, and their physical environments” (Sutton & Anderson, 2010, p. 3)

environmental spaces, and change, I will now examine at the changing cultural meanings of Ethiopian church forests.

4. Discussion

In this discussion, I focus on the changing cultural meanings of Ethiopian church forests. As I have gathered from the literature review, the shared meanings around trees which drive church forest protection in Ethiopia are primarily defined as being embedded in the EOTC tradition. At the same time, I also noticed that there are other social, political, and economic perspectives around trees within these sacred spaces. All of these perspectives play a vital role in how church forests are recognized and perceived by the surrounding communities. As such, I examine these cultural meanings in more-depth. Such an analysis will be insightful because I believe that the existing literature tends to impose narrow definitions of economic interest, utility, and value when discussing how Ethiopian Orthodox Christians engage with these sacred natural resources (see also Mosse, 1997). For instance, when the research explores why there is an increased planting of Eucalyptus trees on church compounds, it gravitates towards highlighting a simple economic interest (the generation of income for the church). To me, this approach fails to situate behaviours that occur in church forests within the wider Ethiopian social, political, and economic context. It is this narrow context of how Ethiopian church forests operate that I avoid in the following discussion.

Before I continue, I want to acknowledge that my discussion is guided by David Mosse's historical and ethnographic investigation of indigenous tank irrigation systems in Tamil Nadu, South India (Mosse 1997). In his exploration, he utilized Bourdieu's notion of 'symbolic capital' to argue for a more historical and politically grounded approach to understanding water resources in this region. Equally important is that he encouraged scholarship to reconceptualize

common property so that it moves beyond an economic-institutional modelling and recognizes symbolic and material interests. Mosse's exploration contributes to this analysis because he recognizes that resources are a part of the village 'public domain' in that they articulate, reproduce, and challenge social relations. For this reason, an institutional analysis of church forests would be ineffective unless it has "first correctly characterized the social relations and categories of meaning and value in a particular resource system" (Mosse, 1997, p. 472). And that is what I will turn our attention to next.

Church Forests as 'Symbolic Capital': Value, Status, Prestige, and Honor

An analysis of church forests as 'symbolic capital' will aid us in characterizing its categories of meaning and value because the concept provides us with a lens through which to observe how Ethiopians recognize and perceive these institutions. This is supported by the idea that symbolic capital essentially exists in "the individuals or groups endowed with schemata of perception and appreciation that predispose them to *recognize* (in the twofold meaning of the term) these properties, that is, to constitute them into expressive styles, transformed and unrecognizable forms of positions in relations of force" (Bourdieu & Wacquant, 2013, p. 297). Moreover, if church forests are understood as symbolic capital, then the question we want to ask, as per Bourdieu and Wacquant (2013, p. 297) is: how do church forests increase the value, status, prestige, and honor of the Ethiopian Orthodox Tewahedo Church? To start answering this question, we must first familiarize ourselves with the prestigious and respectable position that the EOTC holds in the eastern African country.

Certainly, the Ethiopian Orthodox Church has and still exerts a powerful influence in Ethiopia, alongside being the biggest landowner (Votrin, 2003, p. 13). This reality is even more profound considering the decades of anti-religious rule that occurred in Ethiopia's past (p.

13). For this reason, to say that the EOTC is a highly respected institution would not be an overstatement. The high status that the EOTC clergy hold in Ethiopian society is also evident in how, during a Darwin Initiative Project that looked at the status of some of the woodlands in church monasteries, a monk at the site of Lalibela managed to persuade the whole community to plant trees by stating that “the church can not be bare therefore everybody has to grow plants to obey the God’s law” (Desissa et al., 2002). The monk perceived his tree planting to be appreciated and himself to be respected by everyone because the community agreed with his ideas, sayings, and beliefs (Desissa et al., 2002). Another example which highlights the prestige of the EOTC is that, when community members violate rules and regulations around church forests, they are supposed to apologize to the congregation (Klepeis et al., 2016, p. 724). These are only some examples that showcase the value, status, prestige, and honor of the Ethiopian Orthodox Tewahedo Church.

One way that the status, prestige, and honor of the EOTC is strengthened is through the institution’s access and authority over church forests. For one, the clergy is only able to embrace the role as ‘mediators between heaven and earth’ due to the presence of church forests (Klepeis et al., 2016, p. 721). This means that if the church forests were to disappear, their legitimacy would be challenged. On top of that, church forests provide the EOTC a space where they can conduct a respected traditional church education in *Ge’ez* (an encoded language reserved for the clergy)¹³ (Klepeis et al., 2016, p. 721). This is an education which is highly revered in the Ethiopian community and brings status to the EOTC. In other words, the power that this religious institution holds is strengthened through its possession of a ‘higher learning’ (Bourdieu & Wacquant, 2013, p. 296). Indigenous trees such as *tsid* and *weyra* also bring prestige to the

¹³ Recently, there are growing efforts for the utilization of the local language (Amharic) in the church (Klepeis et al., 2016, p. 721)

church compound as they attest to its longevity and resilience (Ruelle et al., 2018, p. 298)¹⁴.

Taking all these findings into account, I argue that church forests act as symbolic capital for the EOTC as they increase the institution's prestige, honor, and status, as well as warrants them profit and power (Bourdieu & Wacquant, 2013, p. 297).

Is There a Change in How Church Forests Are Being Known and Recognized?

As I outlined above, church forests act as symbolic capital for the EOTC. After all, Ethiopian Orthodox Christians recognize these conservation sites as bringing even more prestige, honor, and status to an already highly respected institution. Next, I explore the possibility that there is a change in how church forests are being known and recognized by Ethiopian Orthodox Christians today.

This argument arises from observations made in the literature review which express that there are shifts in attitudes and meanings around forest protection among both younger generations of Ethiopians and the clergy. Even more, this thinking is also fuelled by the scholarship on how church forests are not solely driven by religious interests. For instance, Orlowska and Klepeis (2018, p. 679) show us that “church forests are places where the social and the spiritual merge, which creates an environment conducive to strong social capital. Therefore, people want to protect church forests because they present spaces where neighbours, saints, and secular authorities can come together and interact (p. 679). And equally important is the observation that church forests also act like economic entities as they offer food, medicine, and at times firewood, timber, and fodder to the surrounding community (Reynolds et al., 2017, p. 379). Both these findings highlight that there are interests outside of the EOTC

¹⁴ What is also of note is that, while evaluating the effectiveness of walls at protecting the ecological conditions of sacred forests, Woods et al (2017) observed that the construction of larger walls around the church forests also added to the prestige of the church (Woods et al., 2017, p. 211).

theology which encourage Ethiopians to preserve church forests. They also convey that the cultural meanings around church forests today are not solely rooted in the EOTC tradition. To put it another way, the cultural meanings in church forests are changing.

That the cultural meanings in church forests are changing should not surprise us because these are dynamic and complex social-ecological systems which offer diverse cultural, ecological, and economic benefits for both the church and its surrounding community (Reynolds et al., 2017, p. 358). Of course, church forests are neither static physical nor static social systems, as they are influenced by humans (Ruelle et al., 2018, p. 292). In fact, church forests have been changing and evolving ever since their creation. The first example of this is the ongoing shifts of centuries-old social norms and tools of rule enforcement within the church forest system (Reynolds et al., 2017, p. 380). Klepeis et al (2016, p. 725) observed that church communities in South Gondar actively responded to the instabilities caused by the Derg Regime¹⁵ through planting Eucalyptus. When the government was confiscating and redistributing land, the planting of these exotic trees helped to distinguish and separate the church from peasants who were looking to appropriate their land (p. 725). Another way that church forests have been evolving is by building low walls along the forest periphery to discourage surrounding farmers from advancing (p. 725). The larger point to be made here is that church forests have changed historically and continue to transform gradually even today. Indeed, it is this dynamic nature which has preserved their resilience all these years.

Nevertheless, these changes have evoked some thoughts in me about the fate of the church forest system. For starters, I am curious as to whether the religious meanings in church

¹⁵ The Derg Regime was a Marxist-Leninist government that ruled Ethiopia from 1974 to 1991. Moreover, the natural resource conservation strategies that were introduced in the 1960s were further developed under this rule (Klepeis et al., 2016, p. 717).

forests are weakening, and if this signifies that the institution will collapse. This thought, according to Rutte (2011, p. 2390), is logical because sacred natural sites have the potential to collapse if there is a change or weakening of values. Other literature has also declared that an ignorance to the norms, beliefs, and practices which foundation sacred geographies may be a key factor in ecological degradation (Orlowska & Klepeis, 2018; Reynolds et al., 2017). For instance, in Lynch et al.'s study (2018, p. 2), there was a concern with how changes in belief systems around sacred forests in Kaboli, Togo would impact the ecological integrity of these conservation sites. In the end, the researchers found that shifts in meanings, which were provoked by the introduction of proselytizing religions (Christianity and Islam), were reducing the respect that communities in Togo had for sacred forests (p. 2). In the end, these insights convey that if we want to protect the ecological integrity of church forests, then we must examine the weakening religious values of these sites. I would like to add on to this by saying that such an investigation would be enhanced if we also analyze how people are making meaning of church forests today, if not solely through a religious lens. As we will see in the next section, such an analysis will begin with the re-integration of church forests into the wider social and political context of Ethiopia.

The Reintegration of Natural Resources into the Wider Social and Political Context

In previous research on the changes in church forests, there is a clear over-dependency on analyzing sensory photographs, historical aerial photographs, and modern satellite imagery to assess ecological integrity (Cardelús et al., 2017; Scull et al., 2016; Ruelle et al., 2018).

Naturally, this heavy reliance on 'physical changes' in church forests neglects the shifts in cultural meanings that we see taking place, as well as the transformations occurring in the wider Ethiopian context. Therefore, an essential step towards a rich investigation into the changing

meanings in church forests would be what Mosse calls the re-integration of natural resources into the wider set of exchanges and social and political relationships (Mosse, 1997, p. 473). That is, we must perceive the management of resources by a community as a part of the ‘village public domain’ (p. 473). Basically, if we can reconceptualize common property resources, such as church forests, as part of the material *and* symbolic domain of public villages, then this will allow for more insightful assessments into the cultural meanings that exist within these sites (p. 473).

The first step to re-integrating a natural resource into the village public domain is to acknowledge that relationships exist between this resource and society. Mosse recognizes the capacity for water to build relationships with society when he expresses “that water shares the complexity of land (from which it is rarely separable) as a medium of meaning and material relations, while adding movement and the dimension of time and process to the relationality that is inherent in space” (Mosse, 2008, p. 939). Mosse essentially is making the point that culture and water are constantly interacting with one another, and this thought is further developed in the following statement:

“Culture matters to water, and water matters to culture. Issues of power are at the centre of the double relationship, but so is the materiality of water. Water systems involve the interplay of past and present embedded in a landscape that is a store of antecedent political systems, residues of meaning, as well as ecological constraints... But this is not a counsel of traditionalism or an appeal to the wisdom of indigenous systems. These are often ill-adapted to new stresses, or inequitable (for example, in south India, giving privileged water rights to upper castes and excluding Dalits and women). Indeed, because water is so deeply embedded in society, negotiating new institutions for water management proves to be a complex and contested task; one that is never just about water as an economic resource, but about water as a symbol of identity, power and citizenship. The water systems studied in this journal issue are as much about the state as they are about communities of users, and the wider political-administrative systems within which struggles over rights and responsibilities take place” (Mosse, 2008, p. 947-948).

Similarly, I also believe that there is a relationship between church forests and the Ethiopian communities in which they are situated. As mentioned earlier, church forests are dynamic and complex socio-ecological systems which influence humans and are shaped by them in return. They also have physical properties, physiological functions and a fundamental relationality which is reflected and socially organized in a multitude of ways (Mosse, 2008, p. 939). As such, it is imperative that we also study church forests as cultural systems. Surely, a ‘sensitive cultural understanding’ of church forests will aid us in resisting decontextualizing universal frameworks (p. 939). That is, by acknowledging how Ethiopian Orthodox Christians experience church forests, we can avoid generalizations for how these conservation sites operate and gain a deeper understanding of the cultural meanings which exist within these spaces.

The second step to re-integrating a natural resource into the village public domain is moving past simplistic descriptions of its functions. In his work (2008, p. 939), Mosse mentions that there are two generalizing frameworks which have and continue to define water resources in Africa and Asia - both of which emphasize the use function instead of the meanings of water. These include an ‘engineering paradigm’ and a ‘management framework’. For the purpose of this discussion, I examine the latter. Within a management framework, “water technology is viewed not as a fixed arrangement specified by engineering science but in terms of *what people do*, the focus being human behaviour” (Mosse, 2008, p. 940). And I see this lens being applied to church forests as the literature puts significant focus on the various human behaviors which take place in these spaces, such as the planting of Eucalyptus trees, council meetings, religious rituals, etc. Moreover, Mosse argues that the problem with this framework is that it ignores the wider social and political processes that are involved in water systems (Mosse, 2008, p. 940). I also notice this in the context of church forest research as little is said about the

wider social and political context within which these actions are situated. And for this reason, I agree with David Mosse in encouraging academia to seek regionally and historically explained cultural ecologies of church forests (Mosse, 2008, p. 940). If we can acknowledge how church forest systems both developed and extended from the Ethiopian political system and are thus a function of it, then we will acquire the tools to witness how church forest systems simultaneously shape and are shaped by social and political relations (Mosse, 2008, p. 940-941). To put it another way, perceiving resource management in its own historical and social context will allow us to see the role that political relations and culture play in how people make meaning of natural resources (Mosse, 1999, p. 304).

How Do We Perceive Church Forests in Their Own Historical and Social Context?

As I approach the end of this paper, I investigate how we could potentially craft a study which successfully perceives Ethiopian church forests in their own historical and social context. To start, I believe that this research would include a political and historical analysis of the EOTC. This is because, “[f]or centuries, the Christian Orthodox Tewahedo Church of Ethiopia was considered the dominant framework through which Ethiopia could be understood” (Ancel & Ficquet, 2015, p. 63). An example of a political and historical analysis of the EOTC is Tamene’s (1998) archival overview of the Church and the development of Orthodox Christianity in Ethiopia. Tamene demonstrates that the history of the Ethiopian Orthodox Church, as one of the oldest Christian Churches in Africa, goes hand-in-hand with the historical development of Ethiopia as a country (p. 87-88). This is illustrated in how the contemporary image of the Ethiopian Orthodox Church is the result of a long history of indigenization within the cultural social background of Ethiopia (p. 90). In fact, this nearly 2000 year long indigenization of the Ethiopian Orthodox Church has allowed for the institution to attain *Ethiopianism* status (p.

90). In other words, the institution is “almost accepted as a contribution to African cultural nationalism and particularism based on a self-conscious cultivation of African indigenous values and attitudes” (p. 90). Ultimately, historical insights like this help to situate the EOTC in the wider Ethiopian political and cultural context, as well as gives us the tools to best examine the larger forces that are shaping the shared meanings in church forests systems.

Moreover, while a historical and political overview of the EOTC is necessary to gain insight into the cultural meanings of church forests, there must also be an ethnographic and historical examination on the formation and conservation of Ethiopian church forests themselves. This is specifically what I noticed that the literature on church forests was lacking. For Mosse, an ethnographic and historical examination of water provided deeper insight into what the natural resource meant for the surrounding communities (Mosse, 2008, p. 944). This thought is further described in the following passage:

“Water may be a mirror into which rural society gazes or through which power operates, but it is rarely a medium of rigid social structures. Because water moves, it erases as well as makes social boundaries; it changes landscape, provides the basis of new claims and threatens established orders” (Mosse, 2008, p. 944).

In this quote, Mosse emphasizes that water is constantly moving and changing. Thus, the shared meanings held around the natural resource by the surrounding communities in Tamil Nadu, South India are also constantly shifting. The same idea applies to Ethiopian church forests. Trees grow and they die. They go extinct in some places and then are planted by people in others. With all this movement, we can also expect to see transformations in the shared meanings held around these natural resources. Even more, Ethiopian church forests are situated in larger political, spiritual, and economic changes which also influence the meanings that exist within these sites. All these points illustrate that we cannot gain a deeper understanding of the

shared meanings in church forests without a historical overview of these sacred spaces. If we can approach the study of shared meanings in church forests through an ethnographic and historical examination on the formation and conservation of these sites, then we will gain a better insight into how Ethiopian Orthodox Christians knew and recognized church forests in the past, as well as how they make meaning of them today.

Although ethnographic and historical examinations of Ethiopian church forests are lacking in the literature, we can still gain insights by looking at other examples in the world where this was executed effectively. As an illustration, we can focus on Chouin's study (2002) which assessed the formation and conservation of sacred groves in Coastal Ghana to understand the long-term regional socio-political dynamics of these spaces (Chouin, 2002, p. 39). Here, Chouin chose to treat sacred groves as *lieux de mémoire* ('places of memory') (p. 41). This was done by dissecting their *process of creation* (the chain events which lead to the formation of the grove) and their *process of usage* (the cognitive and practical dynamics that have shifted the meaning and role that sacred groves take on through time) (p. 45). Chouin additionally explored oral and written sources, ecological patterns and the history and culture of the dwellers in Southern Ghana during the last millennium (p. 45). And in the end, this approach made two things clear: (1) that these sacred groves reflect old settlement patterns and trade routes; and (2) that there was a monopolization of the production of truth and a maintenance by the ruling groups who were controlling these groves (p. 45). Chouin's work reminds us that since sacred groves are historical in nature- as they were created by humans- this makes them worthy of a historical analysis (p. 45). These ideas are further explored in this passage:

"The main challenge for the archaeologist is to go beyond [the sacred groves] synchronic appearance and to conceptualise them as dynamic objects that were born at different periods of time and to consider that the historical messages they carry have been

constantly reinterpreted and re-crafted in the light of new events, new ideas and changing values” (Chouin, 2002, p. 45).

Ultimately, these are the sorts of ideas that we want to apply to the study of shared meanings in Ethiopian church forests. That is, we want to view church forests as cultural systems and reintegrate them into the Ethiopian public domain through more ethnographic and historical examinations. By doing this, we will gain better insight into their formation and conservation, as well as get a better sense of how Ethiopians make meaning of them. And finally, if we have an improved grasp on the meaning-making processes which occur in church forests, then we can actively work to preserve these systems in culturally appropriate ways.

5. Conclusion

In my research I was interested in seeing how shared meanings around ‘trees’ shape the conservation efforts employed by rural communities in Ethiopia. More accurately, I wanted to explore the shared meanings around trees which existed in the Ethiopian church forest system. The following conclusions can be drawn: first and foremost, the literature demonstrates that shared meanings around trees in Ethiopian church forests are rooted in the EOTC tradition. These included meanings of the Garden of Eden and Paradise, meanings of servitude, meanings of strength and longevity, and meanings of purity and pollution. Secondly, the scholarship exhibited that these EOTC meanings took form in the spatial organization of church forests, as well as in the rules and regulations they employed. And finally, the research around church forests mentioned that there are growing economic, political, and spiritual threats to the church forest system, those of which are causing shifts in attitudes and meanings around forest protection.

In my discussion, I focused on the changing cultural meanings in Ethiopian church forests. I used Mosse's historical and ethnographic investigation of indigenous tank irrigation systems in Tamil Nadu, South India as a starting point. Firstly, I examined church forests as 'symbolic capital' and found that these natural resources are recognized as bringing prestige, honour, status, and value to the EOTC. I investigated the idea that there is a change in how Ethiopian Orthodox Christians are perceiving church forests today. I argued that we would gain better insight into these changing cultural meanings by integrating church forests into the wider political and social context of Ethiopia. And finally, I concluded the discussion by providing some insights into how exactly church forests can be reconceptualized as a part of the Ethiopian public domain.

On a final note, I would like to acknowledge that each part of my discussion could have been further developed and explored in greater detail. The truth is I did not have the time, nor resources to touch on every dimension of shared meanings in church forests that I would have liked to. In essence, my research is a tentative investigation for how we may start a historical and political analysis of church forests. My hope is that it contributes to a body of knowledge which seeks to better understand the ways in which church forests are perceived and recognized by Ethiopian Orthodox Christians. Indeed, with a better insight into how Ethiopians value church forests, we may become better situated to continue the resilience that these institutions have already displayed for centuries.

As for the next step in this field, I encourage future researchers¹⁶ to go beyond an ecological perspective and examine how the changing shared meanings in church forests relate to the position that the EOTC holds in society today. Since church forests are situated in the wider

¹⁶ A compelling amount of literature on the church forest system is coming from a concentrated group of researchers. And although their contributions to the status church forest system is important, an area such as this would benefit from the perspectives and thoughts of a diverse group of scholars.

context of Ethiopian social and political relationships, it would be interesting to see if the shifts occurring on these sacred sites are speaking to a larger transformation occurring in the EOTC tradition. This idea brings us back to the theological belief that was mentioned at the start of this paper. If a church, in order to be a church, must be surrounded by trees, then our next question naturally becomes: what will happen to the EOTC if it loses its church forests?

“ቤተ ክርስቲያን ጫካዋን ብታጣ ራሷን ታጣለች።”

“If the church loses its forests, it will lose itself”

- Aba Gebre Mariam Alene, an Ethiopian Orthodox Priest (Emergence Magazine, 2020)

References

- Adeyanju, S. O., Bulkan, J., Onyekwelu, J. C., St-Laurent, G. P., Kozak, R., Sunderland, T., & Stimm, B. (2022). Drivers of Biodiversity Conservation in Sacred Groves : A Comparative Study of Three Sacred Groves in Southwest Nigeria. *International Journal of the Commons*, 94-107. <https://doi.org/10.5334/ijc.1143>
- Ancel, S., & Ficquet, É. (2015). The Ethiopian Orthodox Tewahedo Church (EOTC) and the challenges of modernity. *Understanding contemporary Ethiopia: monarchy, revolution and the legacy of Meles Zenawi*, 63-92.
- Anderies, J. M., Janssen, M. A., & Ostrom, E. (2004). A framework to analyze the robustness of social-ecological systems from an institutional perspective. *Ecology and society*, 1-17. <https://www.ecologyandsociety.org/vol9/iss1/art18/>
- Berhane-Selassie, T., (1994), Ecology and Ethiopian Orthodox Theology, In D. G. Hallman (Ed.), *Ecotheology: Voices from South and North* (p. 155-172), WCC Publications
- Bongers, F., Wassie, A., Sterck, F. J., Bekele, T., & Teketay, D. (2006). Ecological restoration and church forests in northern Ethiopia. *Journal of the Drylands*, 35-44.
- Bourdieu, P., (1986), The Forms of Capital, In J. Richardson (Eds.), *Handbook of Theory and Research for the Sociology of Education* (p. 241-258), Greenwood Press
- Bourdieu, P., & Wacquant, L. (2013). Symbolic capital and social classes. *Journal of classical sociology*, 292-302.
- Byers, B. A. (2001). Linking the Conservation of Culture and Nature: A Case Study of Sacred Forests in Zimbabwe. *Human Ecology*, 187-218.

- Cardelús, C. L., Dexter, S., Woods, C. L., Mekonnen, A. B., Tsegay, B. A., & Scull, P. (2019). Human disturbance impacts the integrity of sacred church forests, Ethiopia. *PLoS ONE*, 1-14. <https://doi.org/10.1371/journal.pone.0212430>
- Cardelús, C. L., Scull, P., Eshete, A. W., Woods, C. L., Klepeis, P., Kent, E., & Orlowska, I. (2017). Shadow conservation and the persistence of sacred church forests in northern Ethiopia. *Biotropica*, 726-733. <https://doi.org/10.1111/btp.12431>
- Chouin, G. (2002). Sacred groves in history: pathways to the social shaping of forest landscapes in coastal Ghana. *IDS Bulletin* 33, 39-46.
- Daba, D. E., Dullo, B. W., Soromessa, T. (2022). Effect of Forest Management on Carbon Stock of Tropical Moist Afromontane Forest. *International Journal of Forestry Research*, 1-14, <https://doi.org/10.1155/2022/3691638>
- Desissa, D., Binggeli, P., Smith, J., (2002) Aba Hailegebresilasse - Lalibela's tree planting monk. *Newsletter of the Ethiopian Wildlife and Natural History Society*, 4-6.
[http://www.mikepalmer.co.uk/woodyplantecology/ethiopia/sacredgrove/publications.htm](http://www.mikepalmer.co.uk/woodyplantecology/ethiopia/sacredgrove/publications.html)
1
- Dodds, K. (2021, November 8). Gardens of Eden: the church forests of Ethiopia – a photo essay. *The Guardian*. <https://www.theguardian.com/environment/2021/nov/08/gardens-of-eden-the-church-forests-of-ethiopia-aoe>
- Doffana, Z.D. (2014). “Dagucho [Podocarpus falcatus] Is Abbo!” Wonscho Sacred Sites, Sidama, Ethiopia: Origins, maintenance motives, consequences and conservation threats [PhD Dissertation]. <https://kar.kent.ac.uk/id/eprint/48086>
- Emergence Magazine. (2020, February 2). *The Church Forests of Ethiopia* [Video]. YouTube. <https://youtu.be/8fGe-CPWZIE>

Eshete, A. W. (2007). *Ethiopian church forests: opportunities and challenges for restoration*.

Wageningen: Wageningen University and Research.

Federal Democratic Republic of Ethiopia Population Census Commission. (2008). Summary and Statistical Report of the 2007 Population and Housing Census: Population Size by Age and Sex.

https://web.archive.org/web/20120604045256/http://www.csa.gov.et/pdf/Cen2007_firstdraft.pdf

Gauri, V., Woolcock, M., & Desai, D. (2013). Intersubjective Meaning and Collective Action in Developing Societies: Theory, Evidence and Policy Implications. *Journal of Development Studies*, 160-172. <http://dx.doi.org/10.1080/00220388.2012.700396>

Goodin, D. K., Wassie, A., & Lowman, M. (2019). The Ethiopian Orthodox Tewahedo Church Forests and Economic Development. *Journal of Religion & Society*, 1-23. <http://hdl.handle.net/10504/121318>

Hewitt, S. (2019, May 21). The ‘sacred forests’ of northern Ethiopia. *BBC Travel*.

<https://www.bbc.com/travel/article/20190520-the-sacred-forests-of-northern-ethiopia>

Kandari, L. S., Bisht, V. K., Bhardwaj, M., & Thakur, A. K. (2014). Conservation and management of sacred groves, myths and beliefs of tribal communities: a case study from north-India. *Environmental Systems Research*, 1-10. <https://doi.org/10.1186/s40068-014-0016-8>

Kent, E. F., & Orłowska, I. (2018). Accidental Environmentalists. *Worldviews: Global Religions, Culture & Ecology*, 113-142. <https://www.jstor.org/stable/26552304>

- Klepeis, P., Orlowska, I. A., Kent, E. F., Cardelús, C. L., Scull, P., Eshete, A. W., & Woods, C. (2016). Ethiopian Church Forests: A Hybrid Model of Protection. *Human Ecology*, 715-730. <https://doi.org/10.1007/s10745-016-9868-z>
- Lynch, L., Kokou, K., & Todd, S. (2018). Comparison of the Ecological Value of Sacred and Nonsacred Community Forests in Kaboli, Togo. *SAGE Journals*, 1-11. <https://doi.org/10.1177/1940082918758273>
- Mosse, D. (1997). The symbolic making of a common property resource: history, ecology and locality in a tank-irrigated landscape in south India. *Development and Change*, 467-504. <https://doi.org/10.1111/1467-7660.00051>
- Mosse, D. (1999). Colonial and Contemporary Ideologies of 'Community Management': The Case of Tank Irrigation Development in South India. *Modern Asian Studies*, 303-338. <https://doi.org/10.1017/S0026749X99003285>
- Mosse, D. (2008). Epilogue: The Cultural Politics of Water – A Comparative Perspective. *Journal of Southern African Studies*, 939-948. <https://doi-org.login.ezproxy.library.ualberta.ca/10.1080/03057070802456847>
- Orlowska, I., & Klepeis, P. (2018). Ethiopian church forests: a socio-religious conservation model under change. *Journal of Eastern African Studies*, 674-695. <https://doi.org/10.1080/17531055.2018.1519659>
- Ormsby, A. A., & Bhagwat, S. A. (2010). Sacred forests of India: a strong tradition of community-based natural resource management. *Environmental Conservation*, 320-326.
- Plieninger, T., Quintas-Soriano, C., Torralba, M., Mohammadi Samani, K., Shakeri, Z., & Palmer, C. (2020). Social dynamics of values, taboos and perceived threats around sacred

- groves in Kurdistan, Iran. *People & Nature*, 1237-1250. <https://doi-org.login.ezproxy.library.ualberta.ca/10.1002/pan3.10158>
- Reynolds, T. W., Stave, K. A., Sisay, T. S., & Eshete, A. W. (2017). Changes in community perspectives on the roles and rules of church forests in northern Ethiopia : evidence from a panel survey of four Ethiopian Orthodox communities. *International Journal of the Commons*, 355-387. <https://www.jstor.org/stable/26522918>
- Roba, G. O. (2021). Trees symbolism, conservation and threat in Guji Oromo, Southern Ethiopia. *Cogent Social Sciences*, 1-14.
- Ruelle, M. L., Kassam, K. A., & Asfaw, Z. (2018). Human ecology of sacred space: Church forests in the highlands of northwestern Ethiopia. *Environmental Conservation*, 291-300. <https://doi.org/10.1017/S0376892917000534>
- Rutte, C. (2011). The sacred commons: Conflicts and solutions of resource management in sacred natural sites. *Biological Conservation*, 2387-2394. <https://doi.org/10.1016/j.biocon.2011.06.017>
- Scull, P., Cardelús, C. L., Klepeis, P., Woods, C. L., Frankl, A., & Nyssen, J. (2016). The Resilience of Ethiopian Church Forests: Interpreting Aerial Photographs, 1938-2015. *Land Degradation & Development*, 450-458. <https://doi.org/10.1002/ldr.2633>
- Steward, J., (2016), The Concept and Method of Cultural Ecology, In N. Haenn, R. R. Wilk & A. Harnish (Eds.), *The environment in anthropology: a reader in ecology, culture, and sustainable living* (p.12-17), New York University Press
- Sutton, M. Q., & Anderson, E. N. (2010). *Introduction to cultural ecology*. Lanham: AltaMira Press.

- Tamene, G. (1998). Features of the Ethiopian Orthodox Church and the clergy. *Asian and African Studies*, 87-104.
- von Hellermann, P. (2016). Tree Symbolism and Conservation in the South Pare Mountains, Tanzania. *Conservation and Society*, 368-379.
- Votrin, V. (2005). The Orthodoxy And Sustainable Development A Potential For Broader Involvement Of The Orthodox Churches In Ethiopia And Russia. *Environment, Development and Sustainability: A Multidisciplinary Approach to the Theory and Practice of Sustainable Development*, 9-21. <https://doi.org/10.1007/s10668-003-5053-9>
- Wedeen, L. (2002). Conceptualizing culture: Possibilities for political science. *American political science review*, 713-728. <https://doi.org/10.1017/S0003055402000400>
- Woods, C., Cardelús, C., Scull, P., Wassie, A., Baez, M., & Klepeis, P. (2017). Stone walls and sacred forest conservation in Ethiopia. *Biodiversity & Conservation*, 209-221. <https://doi.org/10.1007/s10531-016-1239-y>
- Zeng, L. (2018). Problematizing Ideas of Purity and Timelessness in the Conservation Narratives of Sacred Groves in Xishuangbanna, China. *Journal for the Study of Religion, Nature & Culture*, 172-200. <http://doi.org.10.1558/jsrnc.34555>