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## Spirituality in Forest Management: A Conceptual Framework for Empirical Research

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### Abstract

International forest policies are increasingly recognizing spiritual values as criteria for sustainable forest management. However, knowledge on how spiritual values are articulated in practice is scarce. Because most evidence remains anecdotal, the study of spiritual values in forest management remains unsystematized and under-theorized. Research is complicated by the widely diverging interpretations of the concept of spirituality in relation to forests. Drawing upon Saler's family resemblances approach (2000 [1993]) and the dimensions of religion posed by Smart (1996, 2002), a framework with seven dimensions is proposed. The framework structures spiritual phenomena relevant to forest management so that they can be

\* Sadly, our colleague, Dr. Birgit Elands, had to retire for medical reasons during the writing of this article. This work is to honour her encouragement, her dedication to the subject matter, and her ability to inspire those around her and many others.

studied systematically. It attempts to accommodate the various ontologies and epistemologies connected to spirituality in forest management. We discuss the pros and cons of the framework and make recommendations for its application in the analysis of forest management plans and practices.

### **Keywords**

Spiritual values, spirituality, forests, sustainable forest management, family resemblance approach, dimensions of religion, nature experience

### *Introduction*

Major global forest-related policies and strategies include spiritual values as part of the concept of sustainable forest management often in combination with social and/or cultural values (FSC 2015; PEFC 2018; MCPFE 2002; IUFRO 2007). Herein, we raise the question how spiritual values are translated into the practice of forest management and what problems are encountered in doing so. In order to help answer this question, this study presents a conceptual framework to study spiritual phenomena relevant to forest management. Driver et al. (1999) discussed the implications of including spiritual values in the management of public lands in the United States. We share their conclusion that in order to accommodate the diversifying needs of society, land managers would have to recognize users' deeper spiritual values and incorporate them in management practices (List and Brown 1999). Driver et al. (1999: 5) define spiritual values as indicating 'hard-to define nature-based values that help maintain and renew the human spirit', and characterize them as 'hard to measure', 'intangible', 'ethereal', or 'psychologically deep' values associated with land. This article adopts Driver's definition and the characteristics mentioned, with the understanding that non-human spirits are included.

Over the past twenty years much has changed in terms of recognizing the importance of spiritual values in the conservation of forests, nature, and biodiversity. Even the postmodern sciences which study this phenomenon in practice have seen a considerable paradigm shift; the 'ontological turn' (Holbraad and Pedersen 2017). Globalization has led to growing interaction between interest groups from different parts of the world who have different perspectives on nature and forests (Wiersum and Sands 2013). As a consequence, forest managers are confronted with increasingly diverse demands from an ever-changing society. In many countries, forest management has evolved from formal, centralized management executed by professionals into a diverse range of participatory management arrangements involving a variety of stakeholders,

especially local communities and Indigenous people (Gilmour 2016). Citizens' direct or indirect influence on forestry practices is growing, and ranges from voluntary co-operation in silvicultural work (Mattijsen et al. 2017) to activist opposition against tree cutting or hunting. Spiritual values informed by deep-seated worldviews—Indigenous, Western nature-based, mainstream religious, or secular—are at the core of people's underlying concerns for forests (De Pater, Scherer-Rath, and Mertens 2008; Verschuuren et al. 2021; Taylor 2010a; Terhaar 2009). Divergence in worldviews is therefore often at the root of forest conflicts (Buijs 2009; Redmond 1999; Satterfield 2002). While awareness of diverging worldviews could mitigate such conflicts (Howitt and Suchet-Pearson 2006), the nature and role of worldviews—including spiritual values—in citizen–forester interactions remains insufficiently understood (Driver and Ajzen 1999; Lewis and Sheppard 2005; Konijnendijk 2008).

Indigenous peoples have used their growing political influence to have cultural and spiritual values incorporated in the conceptualization of sustainable forest management within the above-mentioned global policies and certification schemes. Despite the fact that there is little systematic knowledge about how spiritual values have informed practices of sustainable forest management (see, for instance, Agnoletti and Santoro 2015), progress has been made in three related areas. First, there is a growing body of literature that conceptualizes cultural and spiritual values and looks at their role in protected areas and conservation management (Harmon and Putney 2003; Verschuuren and Brown 2019; Verschuuren et al. 2021). Second, the field of Traditional Forest-Related Knowledge, of which spiritual values are an important part, has progressed (Trosper and Parrotta 2012). Third, participatory forest management arrangements with local and Indigenous peoples, such as community-based and social forestry, have expanded considerably over time (Gilmour 2016). These three fields offer some empirical evidence demonstrating the incorporation of spiritual values in forest conservation and management. However, the evidence derived from the above areas remains anecdotal, specifically in relation to forest management. Consequently, the study of spiritual values in forest management remains unsystematized and under-theorized.

Current research displays several notable knowledge gaps. First, forest managers' perspectives on spiritual values have, on the whole, been less researched than users' perspectives, at least in the West. Exceptions are a large foresters' oral history project in Finland (Paaskoski 2010), a study of foresters' and users' spiritual values in the USA (Terhaar 2009), and a small study of foresters' spiritual concerns in the Netherlands (De Pater, Scherer-Rath, and Mertens 2008). In collaborative forms of forest

management, spiritual values are sometimes factored in, but often in combination with cultural, social, or economic factors (Bulkan 2016; Gilmour 2016).

Second, most empirical studies have focused on spiritual experiences in nature by users and to some extent on the consequences for changes in behaviour and ethics. These studies predominantly cover the Western world and revealed a positive though often complex relationship between spiritual experiences and nature-oriented activities (Hedlund-de Witt 2011; Heintzman 2009, 2011; Muhar et al. 2017). This field shows several knowledge gaps. For one, only part of this research focused on forests. Furthermore, while there is increasing proof of the *restorative* effects of nature on human health (for instance, Summers and Vivian 2018), there is insufficient focus on the role of spiritual experiences in nature on health (Buzzell and Chalquist 2009). Thirdly, although place attachment and place identity are emerging as important factors underlying forest management, the spiritual roots of people's connection with land are under-researched (Hay 1998; Lewis and Sheppard 2005; Roberts 1999). In general, while *human-nature connections* are increasingly recognized as conducive to pro-conservation behaviour, the role of spirituality in human-nature connections is still poorly understood (Zylstra et al. 2014).

Third, across Europe, growing public interest in spirituality has led to a growing and diversifying market for spiritual practices (Knippenberg 2015; Heelas and Woodhead 2005). For example, increasing numbers of private and public forest owners open their estates for retreats and meditative walks, and natural burial sites in forests are steadily gaining popularity (Nugteren 2018; Pedroli and During 2019). Demands on forests are also changing with increasing ethnic diversity and concomitant diversity in worldviews. Urban greenspace worldwide is shared by a growing diversity of migrant and non-migrant groups with different requirements for their spiritual needs (Byrne and Goodall 2013). The expansion and diversification of these spiritually driven demands pose specific requirements to the management of forests. Forest managers need to reconcile these demands in their work and acquire new knowledge about multiple forest-related worldviews and intercultural dialogue (Jay et al. 2012). Conceptual research on spiritual governance of sacred forests and landscape elements (Studley and Horsley 2019) could inspire research on its merits for spirituality-inclusive forest management arrangements.

In order to facilitate knowledge creation and sharing on spirituality-inclusive forest management, the abovementioned knowledge gaps have to be investigated. This requires a conceptual framework that combines

the identification of relevant spiritual values across the appropriate practices of forest management, such as management plans, management strategies, field interventions, and policies. Two recent initiatives support this idea. IUCN developed a set of best-practice guidelines for the management of ‘cultural and spiritual significance of nature based on a framework of cultural and spiritual values’ (Verschuuren et al. 2021). In addition, UNESCO hosts the Initiative on Heritage of Religious Interest, which involves preparing guidelines for the management of religious elements in natural, mixed, and cultural World Heritage Sites (UNESCO: n.d.). These cases demonstrate that efforts to develop practicable approaches already exist, but they do not guarantee a systematic review of scientific literature and method with a focus on forests. Other value assessment frameworks are either too broad or too specific. For instance, Zylstra’s four-quadrant model (2018) serves well as a meta-framework for the whole of reality. Heintzman’s model for nature-based spiritual experiences (2009) works well for studying the specific process of spiritual experience in recreation. A conceptual framework to study not only recreation but the full range of spiritual phenomena relevant to forest management, however, does not yet exist.

#### *Conceptual Framework: Theoretical Approach*

In this study we propose a conceptual framework for studying spiritual values in forest management using a theoretical approach that recognizes the complexity of the subject while yielding a manageable tool for analysis. To construct such a framework, we discuss, consecutively, its theoretical approach, components, and design. Components are researchable units—in this case phenomena commonly attributed with spiritual values, such as sacred trees, ceremonial places, or forest-related myths on the one hand, and elements of forest management, such as management objectives, zoning, or interventions, on the other.

The theoretical approach underpins the selection and placing of components in the framework. We believe that a ‘family resemblances approach’ (FRA) is adequate for this purpose. The FRA was first adopted by Saler (2000 [1993]) as an approach to study a wide range of religious phenomena on the basis of multiple characteristics without emphasizing definitional boundaries. It was proven useful by other authors (for instance, Taylor 2010a, 2016; Crews 2019: 350) and even underpinned the editorial scope of this journal (Taylor 2007). While Saler and Taylor use the term ‘religion’, we will apply the FRA to ‘spirituality’ instead. The FRA is useful since it allows many different conceptualizations of ‘spirituality’, as we saw above. Most conceptualizations are somehow

engaged with a non-material element that is hard to define and is expressed in many different forms: as transcendental, 'supernatural' beings, a 'higher power', 'Spirit' (Emmons 2003: 93); as a this-worldly divinity, for instance, Otto's 'numinous' (1958 [1917]); or as a sacrality in one's inner self, the goal of one's 'mystical' inward quest (Smart 1973, 1996, 2002). All forms, especially immanentistic ones, are manifest in nature-related spirituality: nature as imbued with 'divine immanentism' (McFague 2000: 31), 'the Goddess Earth' (Harvey 2006: 85-87), 'spirit power' (Anderson 1996: 62), 'ch'i' (Anderson 1996: 16-52) or 'extraordinary forces' (Taylor 2007: 15). Scholars have proposed various umbrella terms to capture this variety of notions without unduly bringing in a theistic or otherwise ontological bias: the Absolute (Waaajman 2001: 1), Paul Tillich's 'Ultimate Concern' (Saler 2000 [1993]: 105-15; Emmons 2003: 96), 'the ultimate' (Carey 2018), or simply 'Focus' (Smart 1973: 67-73; 1995: 9).

The advantage of the FRA is that one does not have to apply a sharp definition to each term as long as the abovementioned 'hard-to-define' core (Driver et al. 1999) is somehow present. The requirement of such a core follows from the fact that even the FRA requires boundaries (Taylor 2010b) to enable a robust framework. When, for instance, is a nature experience 'spiritual' and when is it only superficially pleasant? We wish to include as many spiritual phenomena as possible, but also distinguish them from non-spiritual phenomena as far as possible. The boundary will remain blurred, but we agree with Heintzman (2009) and others that in practice it is often the practitioners themselves who identify its nature.

The FRA also enables accommodation of all spiritual traditions on an equal basis. It is important to recognize the broad ontological diversity underlying spiritual traditions among managers of forests worldwide, especially since they are often intermingled with unequal power balances in governance (Timko and Webbe 2020). For the framework to be applicable as broadly as possible, its construction should not be tainted by preferencing some traditions above others, and certainly not by the Eurocentric bias that religious scholarship has long sought to cast off (Saler 2000 [1993]; von Stuckrad 2003). Instead, we take an open view and recognize whatever ontological perspectives are professed by those engaged in forest management. A case in point are ontologies attributing agency to non-human persons, for instance in the governance of Indigenous sacred sites ('spiritual governance'—Verschuuren and Brown 2019: 300-301). Such and other ontologies will all be accommodated in the proposed conceptual framework.

*Conceptual Framework: Spiritual Values*

Components for the conceptual framework can be divided in two groups: dimensions of spiritual values and elements of forest management. As for spiritual values, various lists of attributes or characteristics exist that served as inspiration (Alston 1967; Southwold 1978; Taylor 2007). The best list for our purpose—not too long while comprising all necessary traits—is the list of dimensions of religion theorized by Ninian Smart (1996, 2002). Smart grounded religious studies on a cross-cultural and non-essentialist basis, much in line with the FRA (1973; Harrison 2006: 151 n. 31). He distinguished seven dimensions of religion, respectively: (1) the practical and ritual dimension; (2) the experiential and emotional dimension; (3) the narrative and mythical dimension; (4) the doctrinal and philosophical dimension; (5) the ethical and legal dimension; (6) the social and institutional dimension; and (7) the material dimension. Smart’s ordering of these dimensions was ‘random’ (Smart 1996: 10) and varied in his publications (Smart 1996, 2002). Consistent with the FRA, he posed that religious and spiritual phenomena could show some, many, or all dimensions. They could be expressed to varying degrees of clarity, and some phenomena could feature in more than one dimension.

Table 1. Dimensions of spirituality and their relations with forests

Dimension of Spirituality	Sub-dimension / Relation with Forest & Nature (in theory) <sup>1</sup>	Relation with Forest & Nature (in practice) <sup>1</sup>
1. Experiential/emotional	1a. Aesthetic: The Sublime, beauty, awe, fear, the numinous	<ul style="list-style-type: none"> <li>• Wilderness experience</li> <li>• Forests in art</li> <li>• ‘dark forest’</li> </ul>
	1b. Restorative: tranquillity, rest, contact with inner self, ‘spiritual’ healing in nature	<ul style="list-style-type: none"> <li>• Forest retreats</li> <li>• Vision Quests</li> <li>• Ecotherapy</li> <li>• <i>Shinrin yoku</i> (forest bathing)</li> </ul>
	1c. Relational: Connection (with the surrounding world or with the Ultimate), sense of place, meaning of life	<ul style="list-style-type: none"> <li>• Education (e.g. <i>Natuurwijs</i> children’s education in NL)</li> <li>• Forest career choice as a vocation</li> <li>• Meaning making through nature walks</li> </ul>

	1d. 'Lifeforce' / 'vital energy' in forests and trees	<ul style="list-style-type: none"> <li>• <i>Fengshui</i></li> <li>• Geomancy</li> <li>• Ley lines</li> <li>• Restoring the energetical balance of forests &amp; nature</li> </ul>
2. Practical/ ritual	<ul style="list-style-type: none"> <li>• Forests &amp; trees as locus / object of ritual practice</li> <li>• Ancestral forests/trees</li> </ul>	<ul style="list-style-type: none"> <li>• Tree worship</li> <li>• Healing Trees</li> <li>• Shamanism</li> <li>• Vedic rituals</li> <li>• Forest monks (SE Asia)</li> <li>• Animal/bird rituals &amp; augury</li> <li>• Natural burials</li> </ul>
3. Narrative/ Mythical	<ul style="list-style-type: none"> <li>• Creation &amp; cosmology</li> <li>• Forest &amp; tree symbolism</li> <li>• Mythical foundation of sacred sites</li> <li>• The Universe Story</li> </ul>	<ul style="list-style-type: none"> <li>• Tree symbolism &amp; stories</li> <li>• Myriads of creation &amp; nature spirit stories</li> <li>• Linked to (2): rituals to bring narratives &amp; myths to life</li> </ul>
4. Philosophical	<ul style="list-style-type: none"> <li>• Environmental theology</li> <li>• Env'l philosophy, e.g. biophilia</li> <li>• Worldviews</li> <li>• <i>Gwi'ilas</i> eco-spiritual ethical system (Heiltsuk Nation)</li> <li>• Views on nature, e.g. <ul style="list-style-type: none"> <li>– Deep Ecology</li> <li>– Nature-based spiritualities, e.g. Druidism, Wicca</li> <li>– Animism</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Traditional Ecological Knowledge</li> <li>• Respect for &amp; hence no exploitation of old-growth forest</li> <li>• Selective cutting instead of clearcut on spiritual motives</li> <li>• Taboos on sacred sites</li> <li>• Chipko Movement, India</li> <li>• Movements for Indigenous peoples' rights to land and resources</li> </ul>
5. Ethical	<ul style="list-style-type: none"> <li>• Rules for access &amp; use of sacred forests &amp; trees</li> <li>• Arthashastra (Hindu books on agriculture &amp; forestry)</li> <li>• Injunctions to conservation, tree planting, restoration</li> <li>• (to a wider extent) religious food laws</li> </ul>	<ul style="list-style-type: none"> <li>• Plantation movements, e.g. Earth Keepers Zimbabwe</li> <li>• Spiritual values of forests in sustainable forest mgt. certification schemes</li> <li>• <i>Gwi'ilas</i> eco-spiritual practices (Heiltsuk Nation, BC Canada)</li> </ul>

6. Social-institutional	<ul style="list-style-type: none"> <li>• (Underlying) drivers of Community &amp; Social Forestry and conservation movements</li> <li>• Charismatic leadership</li> </ul>	<ul style="list-style-type: none"> <li>• Interfaith Rainforest Initiative</li> <li>• Spiritually inspired forest restoration, e.g. Trees for Life, Scotland</li> <li>• Faith-based env'l movements, eg Franciscan Env'l Proj (NL)</li> <li>• Pilgrimages to sacred nat'l sites</li> <li>• 'Spiritual governance' of Sacred Sites</li> </ul>
7. Material	<ul style="list-style-type: none"> <li>• Sacred forests, rivers, mountains, etc.</li> <li>• Forests as provider of sacred materials</li> </ul>	<ul style="list-style-type: none"> <li>• Sacred trees and sites</li> <li>• Sacred (forest) plants for healing and food</li> <li>• Osun-Oshogbo Sacred Forest, Nigeria (and many others)</li> <li>• Totem poles &amp; other sacred objects</li> </ul>

<sup>1</sup> Examples, not exhaustive.

While Smart focused on religions in a broad sense, his dimensional division also serves our more specific purpose to accommodate spiritual values related to forests in our conceptual framework. We therefore used Smart's dimensions as a starting point. Each dimension was examined as to how well it accommodated spiritual phenomena related to forest management. Most dimensions were adopted unchanged, while others had to be adapted. Table 1 presents the resulting dimensions. In order to clarify the relation of each dimension with forests and nature, we assembled examples of forest-related spiritual phenomena, which could be roughly divided into theoretical and practical examples. All phenomena were placed in the table next to the best corresponding dimension, to serve as examples for the discussion below. These examples are not exhaustive and not meant as default. The dimensions of forest-related spiritual values are discussed here step by step. One or two typical examples are highlighted for each dimension; other examples are noted with keywords in the table.

First, the experiential and emotional dimension encompasses all people's spiritual experiences in nature. Nature was identified as especially conducive to spiritual experiences by De Pater, Scherer-Rath, and Martens (2008), De Hart (2014), Hedlund-de Witt (2013), James (2002 [1902]), Taylor (2010a), and Waaijman (2001). Nature-induced spiritual experiences take many forms and are often expressed as a flow which

may lead to deeper encounters, self-realization, and meaning-making (De Pater et al. 2008; Havik, Elands, and van Koppen 2015; Terhaar 2009; Van Trigt, van Koppen, and Schanz 2003; Zylstra 2019). This process may be pursued, with possible pitfalls underway (De Pater 2015; Hedlund-de Witt 2011; Roncken 2018).

So far, we can distinguish four specific experiential sub-dimensions. The experiential-aesthetic dimension (1a) encompasses the experience of self-transcending awe and sublimity, often through perceiving the beauty, grandeur, or even menace emanating from forests and nature (Brady 2013; Roncken 2018). Wilderness and forests were found to be conducive to fascinating aesthetic experiences, which many visitors described as 'spiritual' or 'transcendent' (Frederickson and Anderson 1999; Williams and Harvey 2001).

The experiential-restorative dimension (1b) contains the experience of the 'refreshing quality of the forest, the benefits of peace and quiet, a sense of renewed energy and activity' (Williams and Harvey 2001: 255). These and similar features were often mentioned as beneficial effects of forests and nature on people's physical and mental health (Buzzell and Chalquist 2009; Summers and Vivian 2018), although the scientific underpinning is still thin (Van den Berg 2017). It is difficult to single out the spiritual component in these studies; however, Williams and Harvey (2001) found a strong relation between transcendent experiences in wilderness and psychological restoration. Kamitsis and Francis (2013) found evidence that spirituality can significantly mediate between one's experience in nature and the positive health effects derived from it. Heintzman (2009: 84) found that 'leisure-spiritual coping' alleviated life stress. This sub-dimension is exemplified in the recently popularized practice of forest bathing or *shinrin-yoku* in Japan and the West: meditative forest walking to restore physical, mental, and spiritual health (Hansen, Jones, and Tocchini 2017; Li 2018). Vision quests, that is, ritualized wilderness visits to harmonize mind and spirit (Hernandez 2005: 202-205), are another example.

The experiential-relational dimension (1c) comprises experiences of deep connectedness with the forest, trees, or the land in general. Connectedness can be experienced as deep feelings of oneness with nature in general or with elements of nature (such as trees) in particular; it can also evoke deep feelings of connection with the wider landscape or the land itself. These feelings, generally conceptualized as 'sense of place' or 'place attachment' (Muhar et al. 2017; Raymond, Kytta, and Stedman 2017), may generate spiritual meaning and contribute to individual and collective well-being and identity (Hay 1998). Connectedness with nature and forests has also been recognized as an important motivating and

transformative factor for pro-environmental behaviour (Garfield et al. 2014; Hedlund-de Witt 2011; Zylstra et al. 2014).

The experiential-‘lifeforce’ dimension (1d) encompasses people’s intuitive sensing of subtle, life/vital energies in forests, trees, or landscapes. This is related to the Chinese concept of *fengshui* (Parkes 2003), its Western counterpart, geomancy (York 2005), and many Animistic traditions worldwide (Sponsel 2012). Central to this concept is the notion of ‘lifeforces’ (Taylor 2010a: 15) that come under various names (Chinese: *qi*; Japanese: *ki*; Indian: *prana*; Polynesian: *mana*, etc.) and run through Earth and its human and non-human inhabitants in certain patterns. Ivakhiv described this domain as ‘Earth Mysteries: an umbrella designation covering a variety of speculative studies and theories regarding the alleged powers of the Earth; mysterious energies that are thought to be found at particular [sacred] sites’ (Ivakhiv 2005: 525). Our framework is not aimed at analyzing these energies themselves, but at investigating how people perceive them and may act on them. Examples are practices which aim to communicate with the subtle energies of trees (Kooistra 2003) or connect with the lifeforces of landscapes, forests, cities, and even farms and companies in order to restore and enhance their energetic balance (Andeweg 2011; De Pater 2005a, 2005b; Pogačnik 2007).

Secondly, the practical and ritual dimension includes formal or less formal actions often aimed at ‘developing spiritual awareness or ethical insight’ (Smart 2002: 14-15). Forests can be the stage of rituals, whereas rituals on behalf of forests may also be performed elsewhere. Examples are manifold. Some examples include: tree worship (Jones and Cloke 2002; Nugteren 2005); shamanistic and neo-shamanistic rituals performed in forests (Freidel, Schele, and Parker 2001; Reichel 1992; Znamenski 2007), often in connection with healing (Barbira-Freedman 1999; Bill 1999); bird augury for decisions on shifting cultivation (Dove 1999); and tree planting as a sacred deed (Daneel 2001). Natural burials are a case in point; they are closely connected with beliefs about death and recycling of life, have been practiced since ancient times, and have recently gained ground in Europe, inspired by environmental concerns (Nugteren 2019). These and other ritual practices always channel emotions and experiences, strongly linking this dimension with the experiential one. They are also often closely related to myths, narratives, and ethics.

Third, the narrative and mythical dimension covers vital stories—myths, legends, histories, oral or written, often handed down from generation to generation, or ‘given to people in some special/holy way, from some special/sacred place, for some special/holy purpose’ (Taylor 2007: 17). They may tell us about the origin and features of creation, people’s place on earth, saints and heroes, and so on. Storytelling helps

to comfort and inspire followers. A salient example is the reciting of *Bhagavad Katha*—stories about Lord Krishna’s doings in the forest—to encourage women of the Chipko movement in their resistance to logging in Northern India (James 2000). Natural symbols and life-marking events as mentioned by Taylor (2007: 17) can also be placed within this dimension. This dimension is another strong channel for experiences and emotions and is closely related to the ritual dimension.

Fourth, the philosophical dimension harbours the intellectual underpinning of the experiences, rituals, and narratives grouped in the former dimensions. In relation to nature and forest, this dimension encompasses people’s views and understanding of the cosmos and the world, in other words: worldviews and ontologies. Examples are, *inter alia*, visions of ‘division of the world into sacred and profane objects or domains or spaces’ (Taylor 2007: 15), and of ‘earthly and/or otherworldly destruction and [healing]’ (2007: 16). This dimension also includes environmental philosophy, in the sense that people try to make sense of spiritual experiences in nature by reasoning and theorizing. An example is Wilson and Kellert’s biophilia hypothesis (Kellert and Wilson 1993), which posits that people’s love for nature is anchored in human genes in the interest of human evolutionary fitness.

Fifth, the ethical dimension follows closely on the former one and includes environmental ethics, ‘green’ lifestyles, and injunctions to plant trees, conserve ‘sacred’ sites, or other action. This dimension is theoretically distinct from the philosophical dimension, which remains in the domain of abstract reasoning, while the ethical dimension includes the encouragement of action. However, when we look at practical examples, this distinction fades: most examples in Table 1 carry a behavioural element, whether or not rooted in distinct philosophies. An example of the intricate relations between philosophy and ethics is the *Gvi’ilas* philosophical-ethical system of the Heiltsuk Nation in Canada:

We affirm Gvi’ilas, the laws of our ancestors as the paramount principle to guide all resource use and environmental management. ... Gvi’ilas refers to our ‘power’ or authority over all matters that affect our lives. It is a complex and comprehensive system of laws that embodies values, beliefs, teachings, principles, practices, and consequences. Inherent in this is the understanding that all things are connected and that unity is important to maintain. (Heiltsuk Tribal Council n.d.)

Sixth, the social and institutional dimension refers to the ways that the abovementioned dimensions are embedded in social structures, whether they are local communities, tribal councils, or religious organizations such as the Buddhist sangha, mosques, and churches. They may organize and institutionalize ‘green’ initiatives in many forms: from tree-planting

around village churches to mobilization of faith leaders against rainforest destruction (Interfaith Rainforest Initiative n.d.). Spiritual leaders can play an important role in encouraging 'green' initiatives. Examples are Patriarch Bartholomew I of Constantinople who undertook numerous environmental actions (Sponsel 2012), Pope Francis (2015) who wrote the Papal Encyclical letter on the environment, *Laudato Si'*, and the Interfaith Rainforest Initiative, a multi-faith alliance to mobilize faith-based leadership for rainforest conservation (Interfaith Rainforest Initiative n.d.). Environmental education and communication are also part of this dimension. Taylor rightly pointed at the link with the narrative dimension: 'narrative cosmogonies and cosmologies which are not empirically demonstrable but are strongly reinforced through education, reinforcement/reward, penalties for deviance, and other social means' (Taylor 2007: 17).

Finally, the material dimension encompasses all material 'incarnation' (Smart 2002: 21) of spirituality, such as temples, graves, spiritually inspired art, and sacred materials. Examples are totem poles and sacred medicines provided by forests, but also larger natural phenomena linked to (natural) 'place': sacred trees, forests, rivers, mountains, and other 'sacred landmarks'. We cannot see this dimension in isolation from other dimensions, especially the ritual-practical dimension. For example, Langdon (2017) described sacred plants in relation to neo-shamanic networks that associate sacred plants with primordial knowledge and agency. This dimension also has strong links with the narrative and philosophical dimensions.

In line with the FRA, a spiritual phenomenon may carry one or more dimensions, and not all dimensions need to be present in one phenomenon. For example, performing a ritual may evoke an emotional spiritual experience, may be accompanied by certain myths, and perhaps instigate certain ethical behaviour; this might be done with or without an organizational setting or prominent material attributes. However, there will always be a 'grey zone' in the detailed identification of dimensions in a specific phenomenon.

### *Conceptual Framework: Management Elements and Design*

Forest management can be defined as implementation of planned interventions to produce anticipated objectives with regard to use and conservation of forests in an area (after Vellema and Maas 2003). Forest management interventions are governed at different geographical and administrative levels, from national policies to sub-national strategies, from centralized to decentralized and participatory (Arts and Visseren-Hamakers 2012). Levels, scales, and modes of implementation vary

widely across countries and regions (FAO n.d.). In order to examine how spiritual values feature in these different conditions, the conceptual framework needs to contain a set of management elements relevant to the research questions posed. Management elements could be derived from forestry guidelines, such as the *FAO Sustainable Forest Management Toolbox* (FAO n.d.), or conservation guidance such as Wild and McLeod (2008) on sacred natural sites, and Verschuuren et al. (2021) on the cultural and spiritual significance of nature. In the absence of such material, management elements must be defined according to the situation. If the question is how policies addressing spiritual values are translated into practice, management elements may be combined with governance elements ranging from abstract to concrete levels, for instance, policies, strategies, regional plans, field-level plans, zoning, and perhaps specific measures. If the question is about field-level management practices, elements could represent specific practices such as protection, restoration measures, integrated use, recreation management, communication, monitoring, and evaluation.

As for the design of the conceptual framework, its components, the spiritual dimensions and forest management elements, can be combined in a matrix for analysis. Columns could represent spiritual dimensions and rows could represent management elements or other units that can be modified according to the research needs. Such a matrix can serve for qualitative and quantitative analyses of documents, interviews, and other sources.

### *Conclusion and Discussion*

This conceptual framework accommodates spiritual values relevant to sustainable forest management and operationalizes them for research. The development and deployment of the conceptual framework presented in this article forms the first step in a research project investigating spiritual values in forest management plans and their role in practices of forest management. Initial testing showed that the framework was suitable for studying spiritual values in several Dutch forest management situations, but it needs to be further tested to gain feedback that may allow its adaptation for use in other areas.

The proposed framework is currently tested for its applicability in empirical studies into how spiritual values affect forest management practices. The framework may help to answer broader questions across dimensions but can also be adapted to study specific dimensions or management elements. It will be useful to study spirituality and management across cultural, religious, and geographic regions without

prior biases about the cultures concerned. It is also useful to study how spirituality relates to forest management, from policy documents to field implementation. This would contribute to improved knowledge on how spiritual values are translated into the practice of forest management and what problems are encountered in doing so. The framework could also help to systematize evidence on the role of spiritual values in the management of sacred groves, community forests, and traditional forest-related knowledge, and contribute to theorizing these fields. Identifying management elements that fit the framework would help operationalize forest managers' perspectives in empiric research. The framework can accommodate various stakeholders and even non-human actors so as to elicit the role of spirituality in their perspectives and interactions with the forests. As the framework lays out all relevant dimensions of spirituality, under-researched aspects or upcoming topics for research can be added as part of this systematic approach and consequently evaluated on their suitability for further research. In particular, the framework could be used for further eliciting the role of spiritual experiences in people's connection with nature, land, and sense of place. It could also be applied to clarify how spirituality works in nature-induced health restoration. In relation to spiritual experiences, the role of rituals and narratives could also be evaluated for their applicability in sustainable forest management. In a broader sense, the framework could help to investigate the role and importance of worldviews (ontologies and epistemologies) relevant to forest management.

The framework may also contribute to the widely ramified debate on whether and how spiritualities and religions are beneficial or detrimental to nature conservation (see, for instance, Nugteren 2005; Satterfield 2002; Snodgrass and Tiedje 2008; Taylor 2010a; Taylor, Van Wieren, and Zaleha 2016). Ever since Lynn White's famous essay placed Christianity at the root of today's environmental crisis, this debate has known champions as well as sceptics and adversaries of the thesis that religions are conducive to environmental care (Choné 2017; Grim and Tucker 2014; White 1967). While Taylor et al. (2016) cautiously concluded that this is rarely the case, they also point out that more research is needed. The framework may contribute to one of the fundamental questions underlying this debate, namely, how to conceptualize spirituality and spiritual values from the perspective of those engaged with forest management.

There are also obvious sensitivities and limits. First, the framework is not cast in stone but may be thoughtfully adapted to a particular scope of research. Spiritual values are, in a sense, living things, which cannot and should not be reduced into a singular paradigm. Many scholarly endeavours to find a satisfactory conceptualization of religion and

spirituality were to avoid such a narrow reductionist straitjacket (Smart 1973: 32). Following Smart's advice for the scientific study of religious phenomena (1973: 49-73) the proposed dimensions should therefore be treated flexibly, carefully, and respectfully.

Second, the scope of the framework applies to spiritual values in relation to forest management. However, we recognize that spirituality is always embedded in broader domains, such as socio-cultural settings, governance, and power structures, which should be taken into consideration. When the research scope is extended to those domains, broader frameworks such as the Millennium Ecosystem Assessment Conceptual Framework (MEA 2005) and the IPBES Conceptual Framework (Pascual et al. 2017) are likely to be more suitable.

Third, the boundary between spiritual and not spiritual remains a grey area in the framework. When does an intervention in the forest affect a spiritual dimension? Action is determined by a combination of motives, but ontologies play a role too. Most European managers will agree that interventions in the forest do not need to be *directly* spiritually laden and that they can also *indirectly* shape the conditions to facilitate spiritual experiences. For instance, cutting a corridor through the forest to create a sightline to enhance visitors aesthetic experiences may also induce the spiritual. Indigenous managers, for whom land and forests are imbued with spirits acting as governance agents on par with humans, will see all interventions as spiritually laden (Redmond 1999). In general, for a phenomenon to be included in the framework it should at least somehow refer to spiritual value within the practitioner's horizon, even if it is not explicitly named.

Fourth, a problem presents itself when spiritual values are included in a package combining other non-material values. Empirical researchers found that people might be 'reluctant to express them [in public] for fear of social embarrassment or shame' (Cooper et al. 2016: 223; see also Van Trigt, van Koppen, and Schanz 2003). Packaging also occurs in forest policy papers, management plans, and other literature, expressed in a variation of terms and phrases to denote the non-material aspects of forests. When addressing the subject, they often combine cultural and spiritual values in one breath. While from cultural heritage perspectives, cultural values would cover spiritual values, IUCN has consistently refrained from conflating the cultural and the spiritual in their terminology. They present these terms separately in order to denote the importance—and distinctiveness—of the spiritual dimension of nature to Indigenous people's cultures, as well as the importance of 'some people's religious experiences, and even secular-spiritual encounters with nature' (Brown and Verschuuren 2019: 5; see also Zylstra 2018).

Others denoted spiritual values as non-material and socio-cultural (MCPFE 2002) or cultural-historical, cultural heritage, aesthetic/spiritual (Edwards, Collins, and Goto 2016), and social. In relation to the natural world, we also find package terms such as ‘cultural landscapes’, ‘cultural ecosystems services’, ‘cultural benefits’, and/or ‘collective’ or ‘shared values about ecosystems’ (Edwards, Collins, and Goto 2016; Church et al. 2014). Whereas many proponents of the concept of ‘biocultural diversity’ (Elands and van Koppen 2012; Edwards, Collins, and Goto 2016; Pretty et al. 2009) explicitly included spiritual values or related terms in their definition and descriptions, other publications on biocultural values (or diversity or heritage) keep spiritual values more or less obscure (for instance, Maffi 2007). The same can be said about the concept of relational values which Chan et al. (2016) proposed as a way out to address the non-material dimensions of ecosystem services. Useful as they are to stage such dimensions on the policy level, spiritual values are structurally absent from this concept, and at the most implicitly present in cultural values. In view of all this conceptual packaging, the question is how to unravel it to explore whatever spiritual values may or may not be inside?

One pathway to solve this problem is to apply framing theory, as done by Jansen et al. (2016). They used the term ‘religious subtexts’ (2016: 92ff.) to denote expressions of the visible reality of nature which also carry references to deeper, in this case religious (or spiritual), layers of meaning. They explained that, for instance, when people described a Dutch nature area as a place of tranquillity, it could be understood literally but also as a condition for an environment where people could recharge, purify, be reborn, and feel as if they are in paradise. These subtexts would be the results of the interplay between ‘surface frames’—functioning at the level of daily language—and ‘deep frames’ articulating underlying worldviews. Deep frames could be articulated in supporting narratives and at the same time provide an interpretive context for spiritual experiences in nature. Articulation and interpretation could go two ways. Jansen et al. (2016) observed that a reciprocal relation existed between someone’s experience of nature and the interpretation of this experience. Applying frames in this interpretive way may help researchers unpack spiritual values of forests. A similar pathway is presented in Boyatzis’ (1998) approach to thematic content analysis. Boyatzis distinguishes ‘latent’ versus ‘manifest’ texts (1998: 4), much in the same way as Jansen categorizes his frames. Depending on the research questions, the two approaches may be used separately or in combination.

Finally, the question may be asked whether the framework is better suited for qualitative or for quantitative research. The obvious answer is both. Both types of research are reported in the literature, although good quantitative studies appear to be scarce (Taylor, Van Wieren, and Zaleha 2016). A related question is that of the measurability of spiritual values. There is an over-all consensus that expressing spiritual values in terms of benefits, ecosystem services, or deliverables is undesirable (Cooper et al. 2016), and expressing them in financial terms is altogether impossible (Bulkan 2016). Yet sociological research has designed various scales for measuring certain aspects of spirituality, for instance, the 'oneness belief scale' and its 'spiritual sub-scale' proposed by Garfield et al. (2014), to investigate relations between mysticism and environmental behaviour. Although our framework does not dictate a method, it may help to place the measurability of spirituality and related questions in perspective.

We may conclude that, while spiritual values are complex, vaguely demarcated, and often concealed in other and broader concepts, this framework offers a broadly applicable structure to study the role of spiritual values in forest and nature management in depth. It may thus help to increase our practical and theoretical understanding about this often-overlooked aspect of sustainable forest management.

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