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RESEARCH ARTICLE

The multiple values of nature



What are heritage values? Integrating natural and cultural heritage into environmental valuation

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Abstract

1. There are strong links between heritage and the environment yet, heritage is not fully included in existing ecosystem-based frameworks. Different understandings of heritage values exist, and heritage values are not yet related to key value categories in environmental values research.
2. To address this gap and facilitate a common values-based approach, we develop a novel framework that links heritage and environmental values. First, we expand the understanding of heritage values by linking heritage to key environmental value categories. We then use the Life Framework of Values to show how heritage features in the different ways in which people relate to the world.
3. The resulting heritage values framework is operationalised by applying it to six case examples drawn from participatory research on the governance of European coastal and maritime heritage.
4. We found that the environment was not only considered to be a setting for heritage but was itself valued as heritage in different ways; that heritage is not extrinsic to the environment but is also a way in which people see meaning in the environment; and that multiple value frames and types were involved in shaping this perspective. The results highlight important discrepancies between stakeholders' perspectives and existing management approaches.

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5. Applying the framework shows the ways in which heritage and nature are entwined by providing a structure for elucidating what can be valued as heritage, what values can inform heritage values and how heritage values feature in human–nature relations.

KEYWORDS

culture, ecosystem services, heritage, Life Framework of Values, nature's contributions to people, participatory research, plural values

1 | INTRODUCTION

The multiple values of nature have long been of interest in sustainability and conservation, and efforts to highlight the plurality of values and mechanisms to integrate them into environmental valuations have intensified in recent years (Chan et al., 2016; Kenter et al., 2019; Raymond et al., 2018). The importance of incorporating multiple values is increasingly being recognised by global initiatives such as the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES) and the United Nations Decade for Ocean Science for Sustainable Development (Díaz et al., 2018; IPBES 2022; Intergovernmental Oceanographic Commission, 2021), which stress the need for interdisciplinary approaches that address how people as individuals, groups, societies and their decision-making institutions, conceptualise, value, impact and relate to nature. In this paper, we argue that an important dimension of environmental valuation that could bridge disciplinary gaps but remains underdeveloped is heritage. We find that heritage is an important way in which people relate to and value the environment and thus offers a useful perspective on sustainability challenges.

Heritage is frequently differentiated in cultural or natural heritage. While this distinction is increasingly recognised as problematic, a sectoral management approach continues (Fredheim & Khalaf, 2016; Harrison, 2015; Tengberg et al., 2012). In the heritage sector, the overlap between cultural and natural heritage is exemplified in normative conventions developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in which cultural heritage is an umbrella term that includes natural heritage and cultural landscapes (Bridgewater et al., 2007; UNESCO, 1972). Yet, while the link between heritage and nature is often alluded to, the full implications of considering the heritage dimension and value of nature in unison are not yet well recognised nor elaborated in the conservation and sustainability fields. This has led to calls for greater cross-fertilisation of ideas between the cultural heritage and environmental management sectors to help bring clarity to how nature and culture are entwined through heritage (Bridgewater, 2017; Bridgewater et al., 2007; López Sánchez et al., 2020; Stephenson, 2008; Tengberg et al., 2012). Scholars recognise that heritage and the environment are linked in multiple ways, not least in that some forms of heritage physically exist in an environmental space (Kenter, 2016a); that heritage in terms of a way of life is determined and enabled by particular ecosystems

thereby contributing to personal, social and group identities (Acott & Urquhart, 2014; Brennan, 2018; Hawke, 2002; Khakzad et al., 2015) and that heritage and the environment are linked as fundamental components of place or place identity (Arias-Arévalo et al., 2018; Brennan, 2018; Hawke, 2002; Kenter, 2016a; Urquhart et al., 2013). The time-depth, and therefore heritage aspect, is further recognised in the notion of cultural landscapes (DeSilvey, 2012; Gee & Burkhard, 2010; Holtorf & Williams, 2015; Stephenson, 2008). However, what is meant by heritage is rarely elaborated in sustainability research and heritage is often considered as something that exists alongside but is extrinsic to the natural environment.

In parallel with developments in ecosystem-based management, values-based approaches are also gaining traction in the heritage sector. However, the two fields diverge in approaches to values and the underpinning understanding of heritage values is not yet complete (Fredheim & Khalaf, 2016). There is therefore an important link to be more fully developed between values, heritage and environmental management approaches, much of which will rely on better understanding of the range of values bound up in identifying what is heritage, how that heritage once identified is valued, what kinds of values heritage values are, how they relate to other types of values, why this matters to environmental management and how they can be incorporated in statutory and voluntary governance processes.

Heritage is currently included in the ecosystem services (ES) framework catalysed by the Millennium Ecosystem Assessment (MEA). Within the MEA, heritage, as heritage values, is included as a cultural ecosystem service (CES). CES is defined as the '*non-material benefits obtained from ecosystems*' (MEA, 2005). However, the framing of heritage is vague and, in linking it specifically to benefits provided by ecosystems, is too narrow (Hølleland et al., 2017). Furthermore, incorporating mainly the non-material aspects of heritage through heritage values excludes the material aspects of human relations with the environment, and heritage does not fit well within the fundamentally instrumental framing of the ES framework. The Nature's Contribution to People (NCP) framework adopted by IPBES (Díaz et al., 2015; Díaz et al., 2018) has sought to overcome these difficulties of ES, though the degree to which it has been successful has been debated (Coscieme et al., 2020; Kadykalo et al., 2019; Kenter, 2018; Peterson et al., 2018), and heritage is still largely overlooked (Bridgewater, 2017).

Here, we use the Life Framework of Values to show how heritage and heritage values can be linked to ecosystem-based management.

The Life Framework of Values was developed to overcome unidirectional, instrumental framings of nature as a source of benefits for people by exploring different ways in which the natural world matters using the frames of *living from*, *living in*, *living as* and *living with* nature (Kenter & O'Connor, 2022; O'Connor & Kenter, 2019). By expanding beyond *living from* nature, the Life Framework offers a route for better integration and navigation of the multiple values and worldviews that shape human–nature interaction. These framings can be related to ES and NCP without being constrained by their conceptual and semantic limitations (Kenter, 2018; O'Connor & Kenter, 2019), and thus has the potential to more fully include the scope of heritage and heritage values. The Life Framework was recently adopted by IPBES in its Values Assessment to organise different kinds of values and link them to the richness and diversity of worldviews and human–nature relations (Anderson et al., 2022; IPBES 2022).

We combine knowledge and key concepts from the thus far disparate research fields of heritage and environmental values to develop a new multi-faceted conceptualisation of heritage values. Drawing on knowledge from the heritage field, we incorporate a nuanced understanding of the interplay between materiality and non-materiality. We also draw on ongoing discourse in the heritage sector where heritage is considered temporally dynamic and changeable rather than static and fixed (DeSilvey, 2012; DeSilvey & Harrison, 2020; Flannery et al., 2022; Fredheim & Khalaf, 2016; Ounanianan et al., 2021; Stephenson, 2008; Tengberg et al., 2012), indicating that perceptions of the environment, what is thought of as heritage and how it is valued can change over time. This perspective can be useful in considering environmental challenges with temporal dimensions (Everard et al., 2016; Kendal & Raymond, 2019). Simultaneously, drawing on the work on environmental values can help elaborate the inclusion of more diverse value concepts and categories in the heritage sector. Having a common language for a values-based approach will facilitate the greater synergy called for between the two fields and can offer a route towards better addressing conflicts in decision-making.

Building on this multidisciplinary ground, we develop a novel framework that incorporates both the expanded conceptualisation of heritage values and, through the Life Framework, the ways in which heritage and heritage values matter in human–nature relations. In this paper, we focus on the heritage values of the natural environment, but the framework can be applied more broadly. First, we link key concepts from the environmental values literature to heritage (Section 2), we then link this with the Life Framework of Values to create a new framework (Section 3). This is then operationalised in application to six case examples (Section 4). These cases are associated with the EU Horizon 2020 PERICLES project,¹ which focused on the participatory governance of coastal and maritime heritage and its place in broader marine and coastal issues. The results are used to reflect on the framework and consider the potential synergies and conflicts that can arise between stakeholder interests (Section 5).

2 | HERITAGE AND VALUES

Values have been considered from several disciplinary perspectives, with the term 'values' referring to diverse concepts (Dietz et al., 2005; Hejnowicz & Rudd, 2017; Kenter et al., 2015, 2019; Pascual et al., 2017; Raymond et al., 2019), resulting in a lack of clarity over the term (Rawluk et al., 2019). Key value types in the environmental sustainability discourse include transcendental values, instrumental values, intrinsic values and relational values. These values can be considered through diverse indicators and through multiple value lenses. They can be expressed individually or by groups, communities, cultures and societies as shared or social values (Kenter et al., 2015; Stephenson, 2008). We briefly consider these categories to develop an expanded approach to heritage values.

A central distinction is between transcendental values that signify broad guiding principles, and more specific contextual values that pertain to a particular object of value. Transcendental values have also been referred to as held or basic values (Chan et al., 2018; James, 2015; Kenter et al., 2015; Kenter et al., 2019; Muraca, 2011; O'Neill et al., 2008; Raymond et al., 2018). Transcendental values are often shared within and across cultures, as they result from socialisation (Ishihara, 2018; Kenter et al., 2015). Transcendental values applicable to heritage and the environment include a respect for tradition, unity with nature (Schwartz et al., 1994) and living well alongside other species and the natural world (Nussbaum, 2000).

Contextual values have also been referred to as assigned values (Raymond et al., 2018). They can be expressed by individuals, but also collectively expressed as shared or social values (Kenter et al., 2015, 2019). They have traditionally been distinguished as either intrinsic or instrumental. Instrumental value refers to an object's extrinsic value, that is, its value for the sake of something else (O'Neill, 1992). If an object is valued instrumentally, the object itself is considered substitutable if the benefit it provides can be maintained or the desired end achieved (Arias-Arévalo et al., 2018). Intrinsic value is based on the inherent worth of an object. This can stem from (i) the value an object has independent of its instrumental value; (ii) the value an object has independently of valuers and (iii) the value an object has based on its inherent properties (O'Neill, 1992). An object considered to have intrinsic value is not substitutable with regard to that value.

A fuzzier category of values is relational values. While the relationality of values and the value of relationships have been considered for some time, the term has recently gained prominence in relation to ES and NCP (Chan et al., 2016, 2018; Himes & Muraca, 2018) and can be thought of more as a boundary object than a precise ethical category (Stålhammar & Thorén, 2019). Generally, they refer to the meaningfulness of relationships and the contributions of these relationships to a 'good life' (Chan et al., 2016), though they have also been more precisely delineated as non-instrumental and non-substitutable, yet anthropocentric in that they depend on people as valuers (Himes & Muraca, 2018; Kenter & O'Connor, 2022; O'Connor & Kenter, 2019). When a relationship is the object of value, relational values can be considered a type of contextual value.

Intrinsic, instrumental and relational values are not mutually exclusive; something can be important for its own sake, for its benefits and for relationships people have with it that are more than merely instrumental. Relational values can also be considered as principles that guide relationships, and in this way refer to transcendental values (Gould et al., 2019).

The term 'values' has also been used to indicate the importance or worth of an object expressed through value indicators, which are expressions of value in different units (Kenter et al., 2015). Indicators of environmental value are often separated in economic (use and non-use) values; biophysical or ecological values; and sociocultural values (Jacobs et al., 2016). Additionally, values are themselves only a part of the whole of the meaning of an object (James, 2019), and heritage values can themselves be part of total value. For example, cultural landscapes can have heritage as well as, aesthetic, recreational, instrumental, relational and spiritual values. More explicitly, a designed garden which is managed as a heritage property may be valued in terms of cultural heritage, but it may also be valued because it is beautiful and offers opportunities for recreation or inspiration. A cultural landscape such as saltpan coastlines or terraced fields, may have heritage value but in providing food and livelihoods, will also have instrumental and possibly relational value. While value indicators facilitate the articulation of something difficult to express, the danger is of the value and/or the meaning of something being reduced to only that which can be expressed by indicators.

Finally, values can be seen through value lenses which are essentially 'lenses of worthiness' that identify what is important and how (Kenter et al., 2019). Different knowledge traditions harbour different value lenses, which are underpinned by different epistemic and procedural assumptions (meta-lenses), that determine how values can be known and assessed (Kenter et al., 2019). These value lenses and meta-lenses are also important in terms of distinguishing whether transcendental and contextual values are considered from a primarily individualistic or shared-social perspective.

There is some overlap in current understandings of heritage values in the heritage and environmental management sectors. Value is a foundational idea in the heritage sector (de la Torre & Mason, 2002; DeSilvey & Harrison, 2020; Fredheim & Khalaf, 2016), where heritage values are understood in two different ways: the value of heritage objects and the values held for heritage objects. In both, heritage values are contextual values. The first interpretation is based on the value inherent within a heritage object and is based on intrinsic value (DeSilvey & Harrison, 2020; Mason, 2002). Intrinsic value is considered somewhat differently here from the environmental field, referring to objective properties of the heritage object, but which are not necessarily independent of human values. Heritage values are then understood to be the ways in which a heritage object is significant, for example, the cultural, economic, political, aesthetic, historic, age, scientific and educational value of heritage (Díaz-Andreu, 2017; Fredheim & Khalaf, 2016; Mason, 2002). However, such categories describe different indicators or proxies for heritage value, there is therefore little distinction between the contextual heritage value and the characteristics of an object used to explicate its value. In

the second interpretation, heritage values are defined as the subjective 'meanings and values that individuals or groups of people bestow on heritage' (Díaz-Andreu, 2017), that is, individual or social values for heritage objects. This perspective is linked to a drive for greater public participation in heritage management (de la Torre & Mason, 2002; Díaz-Andreu, 2017; Tengberg et al., 2012; Waterton & Smith, 2010). In the ES field, heritage values are similarly defined as: 'many societies place high value on the maintenance of either historically important landscapes ("cultural landscapes") or culturally significant species' (MEA, 2005: 40), echoing the understanding of heritage values as social values for heritage objects.

As contextual values these heritage values may then be intrinsic, instrumental and/or relational. For example, a cultural landscape may have particular geographic-historic and aesthetic features that can be assessed using various descriptors to provide indication of quality or significance. These indicators reveal the extent to which the underlying intrinsic or relational meaning is significant (e.g. its historical properties independent of the degree to which these might generate benefits) and what instrumental value can be drawn from it (e.g. tourism revenue).

Thus, current definitions of heritage values account for values either as contextual opinions of worth (generally without making explicit what type of contextual values) or as indicators of significance. In all interpretations of heritage values, the fundamental issues of what is valued as heritage in the first place, and what contextual and transcendental values influence this identification are overlooked, and there is little recognition of what sort of values might inform a heritage value 'lens of worthiness' outside of value indicators.

2.1 | An expanded interpretation of heritage values

To develop a common values-based approach to heritage and the environment, we link heritage to the key value categories outlined above, as summarised in Table 1. Each category is considered to be part of an expanded understanding of heritage values. We use the term 'object' in a general sense throughout to refer to anything that can be ascribed value which in this paper includes cultural landscapes, biotic and abiotic features of the environment, and states of affairs, for example, the value of or for a particular landscape being in a certain condition.

2.2 | Heritage and the Life Framework of Values

Thus far, we have outlined an expanded understanding of heritage values. However, this can generate complexity, and does not fully get to the heart of the basic ways in which people relate to natural and cultural heritage and consider how it matters. The Life Framework of Values was developed to encapsulate the four main ways in which nature matters; how we live *from* nature, live *in* nature, live *with* nature and live *as* nature. Though the Life Framework was originally conceived in the context of environmental values

TABLE 1 Dimensions of heritage values

	Description
Transcendental values and heritage	Broad principles and life goals that transcend specific situations can pertain to heritage. Examples of transcendental values applicable to heritage and the environment include respect for tradition, unity with nature and living well alongside other species and the natural world
Contextual heritage values	Values related to specific objects of heritage value
a. Instrumental	The benefits people obtain from heritage, for example, visitor revenue or use in deliberate national identity construction
b. Intrinsic	The non-instrumental and non-substitutable significance of a heritage object, without reference to relationships with people
Relational values	As <i>transcendental values</i> : the broad principles that define desirable relationships with heritage As <i>contextual values</i> : the importance of non-substitutable, non-instrumental relationships with heritage objects, or of heritage relationships between people, or people and nature
Heritage value as part of total value	Heritage value can be a part of the total value of an object. For example, saltpan coastlines may have heritage value but in providing food and livelihoods, will also have instrumental and possible relational value independent of heritage value
Heritage value indicators	Heritage value may be expressed in terms of an object's economic value, historic value, educational value or aesthetic properties
Heritage value lens	A heritage value lens is a perspective that identifies something as having heritage value in the first place. Value lenses are not value-neutral and different values shape a value lens. Thus, different people may have different heritage value lenses, which may change over time

(O'Connor & Kenter, 2019; O'Neill et al., 2008), it concerns people's living relations with the more-than-human world. The framework does not impose a view of nature and culture as separate, nor do they impose a specific worldview when considering these relations.

'Living *from*' frames the ways in which people are sustained by the environment, including food, energy, shelter and livelihoods, and other ways that nature allows people to prosper. This frame foregrounds instrumental values, emphasising a flow of benefits from the environment to people. However, it also captures relational values linked to people's quality of life, including education, learning and inspiration, all of which are benefits that can directly sustain people's livelihoods and wellbeing. In heritage terms, the living *from* frame pertains to ways in which heritage is used as an educational, economic or livelihood resource and links to practices that are directly based on living *from* nature, for example, a heritage of fishing or farming. The second frame, living *in* the world, refers to how the environment forms the stage of our lives; from developing cultural identities to shaping cultural practices. Heritage, tangible and intangible, contributes to sense of place and place identity and therefore shapes and is part of the world we live *in*. The third frame refers to how we live *with* the more-than-human world as one species among many. This frame captures the way in which the more-than-human world, including other species, ecosystems and natural processes, exists independent of human self-concern. This foregrounds intrinsic values, but also transcendental relational values such as beauty, stewardship and reciprocity and the ways that these translate in contextual values. In heritage terms, living *with* can refer to heritage that people are aware of but do not personally relate to (e.g. the heritage of others), or it can apply to heritage that is outside personal awareness (e.g. submerged heritage). The living *as* frame refers to the way in which other species, ecosystems, geodiversity

and biocultural diversity form webs of life and social-ecological systems that we are part of, and where 'culture' or people and 'nature' are not meaningfully separated. This is also expressed through indigenous expressions of kinship through which natural entities are valued as extensions of individual and collective selves. Relational and intrinsic values are foregrounded and closely associated. In heritage terms, living *as* comes into play when there is a perspective or direct experience of oneness, or being an inseparable part of cultural landscapes or the natural world including through heritage-related practices. Living *as* perspectives can also be expressed and reproduced through heritage. For example, traditional stories, songs and performances can define relationships with species, landscapes or nature more generally.

The frames are not mutually exclusive; for example, natural heritage may be seen as part of oneself (living *as*) and at the same time be important as place or space (living *in*) and as a source of sustenance (living *from*). Kenter and O'Connor (2022) point out that the living *as* frame can be seen as ontologically distinct from the others, but can also, through its particular ontological perspective, provide a lens through which to see the other frames in a more holistic, less dualistic way. The ways in which different value categories and their expression as heritage values link to the four Life Frames are summarised in Table 2.

3 | A FRAMEWORK FOR HERITAGE VALUES

A novel framework for the heritage values of the natural environment that incorporates the multiple dimensions of an expanded understanding of heritage values (Table 1) and the Life Framework

TABLE 2 The life framework of values and heritage

Life Framework of Values	Associated values	Associated value concepts and indicators	Heritage examples
Living from	Transcendental values Respect for tradition, security, livelihood Contextual values Instrumental (and relational)	Visitor numbers revenue Employment Gross Value Added	Heritage that contributes directly to economy or well-being, for example, managed sites and properties. Also, heritage practices that directly relate to living from nature, for example, a tradition of fishing or farming
Living in	Transcendental values Respect for tradition, protecting the environment Contextual values Relational (and instrumental)	Place-based values Identity value Historic value Scenic value	Heritage that contributes to sense of place and cultural identities including tangible and intangible heritage; practices; ideas of local distinctiveness
Living with	Transcendental values Desire to protect nature or heritage, living well with other species, stewardship Contextual values Intrinsic (and relational and instrumental)	Existence value Biocultural diversity values	Heritage that takes on a life of its own, for example, shipwrecks become biodiversity micro hotspots as they act as nurseries for small fish
Living as	Transcendental values Unity with nature, reciprocity Contextual values Relational and intrinsic	Spiritual value Symbolic value	Heritage in which the evolution of cultural and natural landscapes and identities are inextricably linked, for example, expressions of kinship, or objects/place as extension of self/community

of Values (Table 2) was developed as shown in Figure 1. Combining the two within one framework allows for the simultaneous identification of multiple heritage values that may be pertinent in any given situation, enables the inclusion of different groups of people, and through the Life Frames, shows how they bear on to human-nature relations.

In the next section, this framework is operationalised by applying it to six case examples to illustrate the ways in which elements of the natural environment can be valued as heritage and how.

4 | CASE EXAMPLES

The PERICLES project (2018–2021) was funded by the European Commission under the Horizon 2020 research programme to enable the conservation, sustainable use and participatory governance of maritime and coastal cultural heritage. We focus here on six PERICLES case examples (Figure 2) designed as exploratory case studies to address specific heritage governance challenges. At the core of each is taking a participatory approach to identifying what is valued as cultural heritage; the participants engaged and the methods used are summarised in Table S1. It was made clear throughout that the research aim was to identify valued *cultural* heritage, but without providing a hard or exclusive definition of this term; thus, the results represent participants' interpretation of their cultural heritage. Ethical approval for the fieldwork was granted by research institutions in each region. Participants were informed, verbally and in writing, about the aims and objectives of the project and about their right to withdraw at any time; written informed consent was given by all participants.

The Iroise Sea, Golfe du Morbihan and Lake Vistonis examples are within natural parks. The Ria de Aveiro, west coast of Ireland and Clyde marine region examples include protected areas and classification measures safeguarding species or habitats but are not managed within a nature reserve framework.

4.1 | Study areas

4.1.1 | Parc Naturel Régional du Golfe du Morbihan

The Parc Naturel Régional du Golfe du Morbihan (PNRGM) is organised around a multi-stakeholder collaborative project of sustainable development, based on the protection and enhancement of the area's rich natural and cultural heritage. The management of natural areas sometimes generates conflicts of use and PNRGM is currently initiating a strategy for the management and the enhancement of natural and cultural maritime heritage which is based on taking a participatory approach to identifying sites and objects of heritage value.

4.1.2 | The Iroise Sea

The Iroise Sea Natural Marine Park is also a biosphere reserve under UNESCO's Man and Biosphere (MAB) programme.² The area is important for its kelp forests which for centuries have been exploited for agriculture and glass and iodine production. Following the establishment of the park, the kelp forests and seaweed harvesting activities were classified as co-dependent natural and cultural heritage

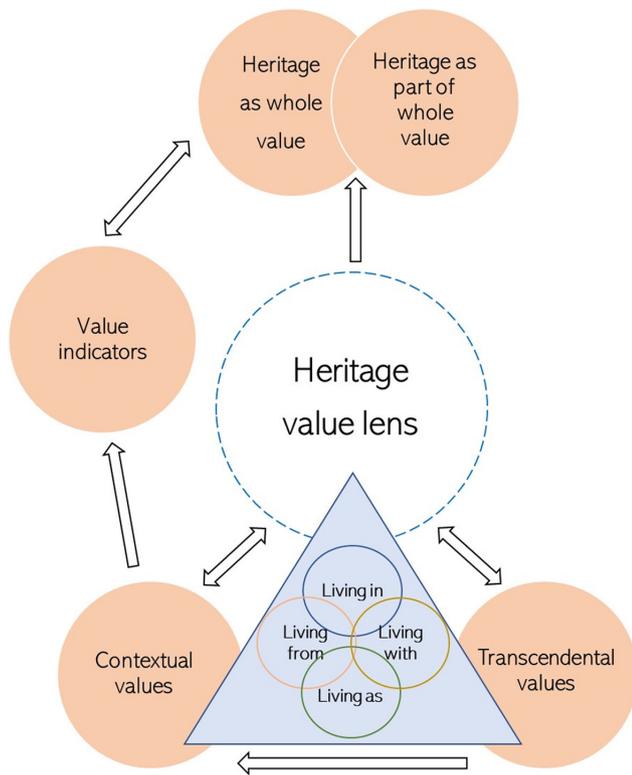


FIGURE 1 A new framework for the heritage values of the natural environment that shows how different dimensions of heritage values interact and link to the Life Framework. Arrows indicate influence: a heritage value lens influences all the dimensions of heritage value. There is a reciprocal relationship between a heritage value lens and transcendental and contextual values. Transcendental values influence contextual values, which, in turn, influence value indicators. The Life framework can be used to understand different heritage value lenses and the transcendental and contextual values linked a value lens.

that should be conserved. The management structure ensures that multiple stakeholders are involved in maintaining both heritages. It is however a balance that needs to be actively maintained as management responses are developed to new threats that require a divergence from traditional solutions. For example, the system of rotating harvesting areas to avoid overexploitation necessitates ongoing negotiation of who has access to help in which areas and when, which differs from the traditional practice of each harvester having a patch to work as they see fit.

4.1.3 | Lake Vistonis

Lake Vistonis is a part of the National Park of East Macedonia and Thrace, it is protected under the Ramsar convention and is also a part of the Natura 2000 network, with a focus on bird conservation. The sea south of the lagoons is fished intensively and the lagoon itself has been physically shaped through centuries of traditional fishing using permanent fish traps (the *dalyan* method). Fishing depends on a healthy lagoonal ecosystem which supports

the renewal of fish populations; some fishers operate in both the lagoon and the sea and have a vested interest in both systems. Additionally, maintaining ecological balance is a common interest between conservationists and the fishing cooperative who have developed a successful *modus vivendi*. The Park's framework does emphasise the importance of cultural heritage and including traditional activities (Papayannis, 2008; Papayannis & Pritchard, 2011); however, the inclusion of traditional fishing methods has not yet been fully explored nor incorporated into the conservation narrative.

4.1.4 | West coast of Ireland

Galway Bay and Killary Harbour in Ireland contain iconic land and seascapes and a strong coastal and maritime heritage strongly linked to Irish identity and which feature in Ireland's coastal tourism strategies (Pafi et al., 2020). Galway Bay has also been identified as a key site for Ireland's Blue Growth strategy (Harnessing Our Ocean Wealth, 2012). In the study locations, Blue Growth is seen as both an opportunity and a threat and increasing tourism and emergence of Blue Growth industries have caused tension with local communities who argue that proposed developments threaten the area's unique tangible and intangible cultural heritage.

4.1.5 | Ria de Aveiro

The Ria de Aveiro coastal lagoon is one of the largest, most biologically significant coastal wetlands in Portugal (DGOTDU, 2004) and a suite of measures protects the diverse habitats and bird species. It is also the site of centuries of human activity including shipbuilding, fishing, eel canning, seaweed gathering and salt production which have shaped the identity of the region but many of which have declined (Martins et al., 2013). Some have reinvented themselves by exploiting the cultural heritage element for tourism (Sousa et al., 2013), others have disappeared along with their associated cultural landscapes (Martins et al., 2020). Research described here was intended to address the risk to tangible and intangible heritage.

4.1.6 | Clyde marine region

The Clyde marine region is one of 11 Scottish marine regions created to facilitate implementation of the National Marine Plan. The Clyde and the Firth of Clyde are well known for their shipbuilding, maritime transport and fishing heritage, all of which are sectors that are now in decline or undergoing significant change (Phillips et al., 2018). The region includes a network of environmental protected heritage and natural sites; however, one remaining pertinent issue in marine planning is identifying heritage of value beyond that which is already officially designated or protected.



FIGURE 2 Map of the case example locations.

4.2 | Analysis and results

For this study, analysis focused on what participants identified and valued as cultural heritage. First, objects identified by participants as having heritage value were listed (Table S2) and categorised (Table 3). The categories were delineated by the researchers to aid analysis and are intended to be illustrative rather than definitive. The cultural landscape categorisation is based on UNESCO's cultural landscape categories (Mitchell et al., 2009: 19). We recognise the view that 'natural' environments are anthropogenically co-produced (Fish, 2011; Stenseke, 2018; Stephenson, 2008); however, here we maintain the distinction to reflect our understanding of participants' basis of value. The framework introduced in Figure 1 was operationalised by applying it to the case examples retrospectively by the researchers active in each area. Finally, each case example was assessed against each of the dimensions of the framework (Table 4).

This work therefore takes an interpretivist approach in relating value categories to what participants identified as having heritage value and in the retrospective application of the framework, which is intended to assess its comprehensiveness, robustness and applicability. Values are understood to be place based rather than abstract and social rather than individual; the values expressed by individual participants are understood to represent their broader social environments as elicited through the social processes of the

participatory workshops and group deliberation exercises (Kenter et al., 2019) used throughout the PERICLES project.

4.2.1 | Life Frames

Applying the framework showed that several Life Frames were relevant in each case and that heritage mattered in multiple ways. The frames of living *from*, *in* and *with* were relevant throughout, although the objects of heritage value differed. Tangible heritage such as buildings, maritime heritage and heritage places contributed to place identity and featured in the living *in* frame but as installations that support livelihoods or as sources of recreation or education (e.g. salt pans, wrecks) they also associated with the living *from* frame. In this way, some heritage objects filled different roles across frames. There was also a temporal dimension to these objects as they are representative of people living *from* and *in* the world in the past, but also shape the present-world participants lived *in*. The past and present of living *from* and *in* the world was also represented by heritage as memory. These heritage objects could also be interpreted in terms of living *with* by people who recognise value in the heritage of others but do not personally relate to them, or where heritage was not interacted with (e.g. wrecks for non-divers). Participants also valued many biotic and abiotic features of the natural environment

TABLE 3 Categories of objects identified as having heritage value

Identified as heritage	Category
Brénégué marsh, coastal path, oyster farms, salt pans, shoreline kilns, the lagoon, stonewalls, standing stones	Cultural landscape (natural sites with cultural aspects)
The coast, coves, beaches, rivers, rockpools, wetlands, views of natural beauty, yellow rocks, sand dunes	Natural environment
Wild salmon, gannets, sea pink, fish, eels, wildlife, seaweed/kelp forests, grey mullet	Species
Past shipbuilding, inshore fisheries, traditional kelp harvesting, wild salmon fishery, the <i>dalyan</i> fishing method, working in the bog, salt extraction, gastronomy (e.g. <i>Lykourinos</i> and salted anchovies)	Practices and associated knowledge
Specific buildings (e.g. the Captain's House), chapels, churches, castles, monasteries and vernacular cottages, archaeological sites, calvaries	Buildings, sites and monuments
Locmariaquer as a whole, Leenaun town centre, marketplace; historic places (e.g. Inverary)	Places
Fishing fleets, boats, piers, dyke, fishing ports, canals, wrecks, military base, yachting marinas, sailing	Maritime heritage
The kingdom of Strathclyde, emigration, summer fairs, small stories, the story of the Nancy Glen	Memory

TABLE 4 Life frames expressed across the case examples with associated transcendental and contextual values

Life Frame	Examples of objects of heritage value and associated contextual values
Living from	<p>Instrumental and relational value for:</p> <ul style="list-style-type: none"> • Installations used for sustenance and livelihoods, for example, oyster farms, tide-mills, fish traps, seaweed kilns, fishing fleets, old piers • Natural species linked to sustenance and livelihoods, for example, kelp and seaweed, fish, eels, oysters, products of the bog • Traditional practices and related products, for example, kelp/ seaweed harvesting and products, inshore fisheries and fishing practices such as the <i>dalyan</i> method, shipbuilding, eel canning • Gastronomic produce and knowledge, for example, how to salt anchovies <p>Instrumental value for:</p> <ul style="list-style-type: none"> • Tourism, for example, sailing, wreck diving, resort towns
Living in	<p>Relational value for:</p> <ul style="list-style-type: none"> • Cultural landscapes, for example, dry stonewalls, Vistonis and Aveiro lagoons, Brénégué marsh, coastal paths, Locmariaquer as a whole, Leenane town centre, standing stones • Particular natural environments, for example, coves, beaches, views of natural beauty, sand dunes • Historic buildings and monuments, for example, Captain's House, traditional wooden houses, chapels, castles • Practices, for example, kelp/seaweed harvesting, working in the bog, fishing movement patterns, recreation
Living with	<p>Intrinsic and relational values for:</p> <ul style="list-style-type: none"> • Natural environments, for example, wetlands and beaches for rich marine life, the creation of reserves and species and habitat protection measures and management approaches • Species including protected and non-protected species, for example, gannets, wildlife, and species associated with practices, for example, wild salmon, grey mullet, eels, seaweed • The heritage of others, for example, fishing heritage, wrecks for non-divers
Living as	<p>Relational, intrinsic and instrumental values:</p> <ul style="list-style-type: none"> • Being part of and co-producing natural-cultural systems with nature, for example, kelp harvesters in the Iroise Sea experiencing themselves as part of and co-producers of a submerged natural-cultural landscape, and fishers co-producing the present Vistonis lagoon landscape

as heritage through a living *with* frame, recognising heritage value in the lives of different species and environments without reference to livelihoods or place, or where species important for practices were also regarded in terms of their intrinsic value. The living *as* frame was, in some cases, co-emergent with living *from*, for example, where fishers or kelp harvesters described themselves as an integral part of and co-producers of a landscape or natural-cultural system, without a clear separation between people and nature.

4.2.2 | Heritage value lens

A point of note is the range of environmental, as well as human-made, objects participants identified as cultural heritage. Objects typically considered to be cultural heritage were identified everywhere (e.g. monuments, sites, wrecks, buildings), yet participants' responses illustrate a much broader view of what constitutes heritage. Participants did not conceptually disassociate cultural and natural

heritage; the combination was considered cultural heritage as were the constituent elements. This applied to the range of human-made objects included, but also in the sense that natural objects, even those without no or little apparent human influence (e.g. beaches, coves, rivers) were valued as heritage. Particular species were also identified as cultural heritage. Some, such as the wild salmon in Scotland and the grey mullet in Vistonis, could be considered culturally iconic species, but others including broad categories such as 'wildlife' and 'fish' could not, indicating that living creatures were valued as heritage also without associated cultural symbolism. In Ireland and Aveiro, species linked to past activities, as well as the activities themselves, were valued as heritage. In the Iroise sea, the traditional practice of kelp harvesting, although modernised, is still practiced as a traditional way of life, that is, heritage.

4.2.3 | Heritage value as part of whole value

Heritage value as part of whole value manifested in two ways. First, in that within some single objects or activities, heritage value was part of the whole of its value. Second, the objects identified as heritage were part of a larger whole which could itself be valued as heritage, for example, cultural landscapes like the salt pans as part of the Aveiro lagoon, or the yellow rocks characteristic of parts of the west coast of Ireland. In short, objects of heritage value can also be part of larger assemblages of heritage value. The examples also show how cultural landscapes have multiple associated values, including but not limited to heritage value (Stephenson, 2008). On the other hand, the heritage value of a cultural landscape was not always fully recognised, as was the case in Vistonis, where recognition of heritage as part of the value of the lagoon is an incomplete, ongoing process.

4.2.4 | Transcendental values

The range of objects valued as heritage indicate that nature-related transcendental values, as well as those linked to tradition, were influential in shaping participants' perspectives. This suggests that heritage and tradition are not inextricably linked and that heritage value lenses can be shaped by principles that do not appear to be heritage-related based on a conventional conceptualisation of heritage.

4.2.5 | Contextual values

The contextual values relevant in each case were partly dependent on the participants engaged. For example, for the harvesters in the Iroise sea, kelp had instrumental value because they earned a living from it, that is, it was valued as a means to an end. It has also been protected as heritage based on this instrumental value. However, if the kelp was only valued instrumentally, then it would be substitutable, but this is not the case *because of* the heritage dimension. It is central for the continuation of a traditional way of life that has

a non-substitutable relational value. Simultaneously, conservationists and harvesters themselves may also value the kelp in intrinsic terms. Other species such as yellow lichen, sea pink or gannets that no longer have instrumental value were valued in terms of both their intrinsic value and relational value as heritage.

4.2.6 | Heritage value indicators

Heritage value indicators were not mentioned at all by any of the participants. This is likely a consequence of the fact that the main objective of the participatory work was to explore what participants considered to be heritage and the values associated with that rather than to discuss each heritage object in depth.

5 | DISCUSSION

It is widely argued that legitimate and effective environmental and heritage management must understand and incorporate multiple values (Chan et al., 2016, 2018; Grubert, 2018; Hejnowicz & Rudd, 2017; Jacobs et al., 2016; Kenter, 2016b; Pascual et al., 2017; Raymond et al., 2019; Stenseke, 2018; Stephenson, 2008). However, the multiple understandings of the term 'values' and different epistemic lenses are significant barriers to effective integration (Kendal et al., 2015; Kenter et al., 2015, 2019; Rawluk et al., 2019). Our results suggest three key points: (1) important differences in value lenses mean that what is valued as heritage, and how it is valued, is not fully reflected in existing management approaches; (2) heritage matters in human-nature relationships in multiple, overlapping ways; and (3) recognising the temporal situatedness of values and objects of value is essential in understanding the ways in which heritage matters and influences present human-nature relations. We will discuss these points in the following two subsections, the temporal situatedness is a thread that runs throughout.

5.1 | Different lenses

The case studies illustrated a key question in terms of value lenses: whether heritage is (a) seen as part of the total value of something, as is typical in the environmental field, where it may be seen as a CES, or as part of non-use, sociocultural or relational value; (b) seen as the whole of the value of an object as is typical in the heritage sector; or (c) is a way of seeing meaning in the natural-cultural environment, where it is the perceived fact of heritage that fundamentally underpins natural, economic and sociocultural values.

Ultimately, heritage is what we attribute heritage value to (Tengberg et al., 2012). Here natural and cultural objects both emerged as objects of heritage value, as also found by Stephenson (2008), Kenter et al. (2016) and Historic Environment Scotland (2017), demonstrating that the heritage value lens of civil society differs from that of experts in either sector. Furthermore, in not showing significant differences

across the case regions, our results indicate that heritage lenses have similar characteristics across geographically disparate communities. While our results indicate that heritage can be valued instrumentally, the intrinsic and relational values entwined in heritage value confer varying degrees of non-substitutability for elements of the environment that other perspectives may not, with implications for policy and management. Given different perspectives, aspects that are valued as heritage can be overlooked when using an environmental management lens. The fact that species were identified as well as, but also separately to, a related practice is surprising and may indicate that as contexts change and activities pass into the past, then heritage values expand beyond the lost or declining practice to also include the natural species as heritage. Therefore, environmental valuations would be enriched by recognising the temporal situatedness of heritage value (Raymond et al., 2019; Stephenson, 2008; Tengberg et al., 2012).

Looking at the world through a heritage lens can facilitate cross-sectoral dialogue; however, a heritage value lens may also lead to, or reinforce, existing differences in cases where a desire to protect endangered ecological systems comes into conflict with a desire to continue a practice valued as heritage. This can be a conflict between different heritage value lenses (e.g. valuing elements of the natural environment as heritage vs valuing practices or ways of life as heritage), or it can be a conflict between a heritage value lens and an environmental value lens that does not have a heritage component, it can even be a conflict that exists within one individual who may well value both heritage and endangered ecosystems. Either way, in such situations, it becomes especially important to address deep-seated values, although these are, as yet, rarely considered in ecosystem assessments (Raymond et al., 2019; Raymond & Kenter, 2016). Another issue that then comes into play is the traditional, often implicit, desire to 'protect' heritage, to pass it on unchanged. Yet, it is increasingly recognised that in some cases, heritage must be adaptable to survive or indeed to be current rather than exclusively of the past. Heritage is not, and often cannot be, a fixed and unchanging thing (Holtorf, 2018). In such conflict situations, explicit recognition of heritage value should be seen as a starting point for mutually respectful discussions towards sustainability or mutually beneficial processes rather than a perspective that is used to shut discussion down.

Both Lake Vistonis and the Iroise Sea are part of natural parks, where a conservationist stance is part of their *raison d'être*, yet room for dialogue has been found in the interplay between transcendental values operating within this framing such as a desire to protect nature and a desire to respect tradition, both of which are likely to be considered non-substitutable. Dialogue can lead to more practicable outcomes but is dependent on the current states of both the practice and the resource; one may need to be prioritised in the short term to reach a point where finding a long-term balance becomes a feasible option. Thus, negotiating deep-seated values will benefit from explicit inclusion of a temporal element to add context to specific management actions such as a transition to rotating kelp harvesting zones. This highlights the importance of including transcendental values in framing heritage values, and indeed multiple values of nature more broadly (Cooper et al., 2016; Hicks et al., 2015; Ives &

Kidwell, 2019; Kenter et al., 2016; Raymond et al., 2019; Raymond & Kenter, 2016), because they highlight that management challenges are not so much trade-offs between different contextual values, but rather moral conflicts between different potential aims and sought outcomes of management, as also investigated empirically by Isacs et al. (2022).

5.2 | Life Frames of heritage: how heritage matters

The Life Framework provided an effective way to navigate and link different value categories and objects of heritage. The relevance of several Life Frames across the examples demonstrates the multiple ways in which heritage matters, how this may change over time and therefore how the frames can merge or shift from one to another over time. For example, the Ria de Aveiro case demonstrates how living *from* can be temporally situated. Here, heritage value was informed by a perspective of *living from* the lagoon in the past, current management actions could also be framed as *living from* by generating heritage-related tourism businesses, but also in terms of *living with* or *living in* in the present. Thus, even while it might not be the dominant frame relevant in the present, the historical *living from* frame still plays a large part in present place identity (*living in*). This suggests that incorporating a temporal approach may be especially important in negotiating transition in areas that had strong industries valued as a traditional way of life, but which are now in decline, in other words where the value frames are shifting from *living from* to *living with* or *living in*.

The frames of *living with* and *living as* were less explicitly represented, which either confronts the conceptual underpinnings of heritage value lenses or the applicability of the frames to heritage. The results suggest that *living with* becomes relevant in heritage terms in large part because elements of the environment were valued as heritage. This brings transcendental values relevant to the *living with* frame, such as the desire to live well alongside other species and/or to protect nature, that are largely predicated on the intrinsic value of 'the other', into play. This frame also pertains to how we lived *with* other species in the past which directly shapes the world as it exists now, and which combined with how we live *with* them now will ripple into the world of the future. *Living with* also applied to the heritage of others and to heritage objects that are not necessarily valued by everyone. For example, in Scotland, the heritage of some participants (e.g. inshore trawler fishing) conflicted with the sustainability worldviews of others. Some participants recognised the heritage value to others but did not relate to it themselves and even viewed it negatively in terms of how they wished to live *with* other species. This again underscores the need to explicitly incorporate multiple stakeholders and their values and frames in policy, planning and management actions.

The *living as* frame primarily arose in relation to fishers and harvesters seeing themselves as an inherent part co-producer of their natural-cultural environments. The close co-emergence of multiple frames in these examples supports allusions by Kenter and

O'Connor (2021) that the living *as* frame is not just a frame in itself, but can also function as an ontological lens through which the other frames are considered, and where all three types of contextual values are bridged: fish and kelp were valued for their own sake, instrumentally to support livelihoods, and relationally as significant part of someone's life and means of unity with the natural world.

5.3 | Further reflections

Overall, the framework worked well, by linking heritage to key value categories we were able to explicitly and methodically question different kinds of heritage values which illuminated the multiple bases of heritage value. Questioning these further was enlightening, for example, in realising that heritage is not necessarily linked to a respect for tradition and that heritage value almost by definition appears to confer a degree of non-substitutability, even where it may be originally grounded in instrumental value. Incorporating the Life Framework brought clarity in navigating the complexity of multiple overlapping values and demonstrated that the Life Frames were applicable to heritage in a straightforward way, which is a novel application of the Life Framework. In aiding clarity in complexity, incorporating the Life Framework can be a boon to understand and bridge different stakeholder positions in terms of why heritage is important, and it was readily and intuitively understood and applied by PERICLES project partners as a way to organise the case data.

Explicitly addressing each of the frames helped expand our understanding of how heritage matters. It revealed a clear predominance of living *from* and *in* perspectives and interesting overlaps and links between multiple frames. Living *as* was least apparent in terms of heritage across our case examples. A key question then is whether a heritage lens is well suited to identifying living *as* or if this frame is better identified using other approaches. Research interpretations may differ from participants' own views of how they relate to the world and living *as* may have been obscured in our interpretative approach grounded in secondary data. None of the frames were explicitly prompted for, which may mean that living *as* framings and values may have been more present than suggested by our interpretation but did not come to the fore (Harmáčková et al., 2021).

With regard to our broader conceptualisation, having a relatively simple framework to guide the unpicking of heritage values was useful. Through our interpretative approach, the data could be understood against the main value categories, but where appropriate the framework can be expanded in other applications to include further dimensions (e.g. Kenter et al., 2019; Rawluk et al., 2019), such as further epistemic and procedural questions.

Operationalising the framework highlighted that heritage value indicators were not explicitly mentioned by participants, which could be a result of the fieldwork design as well as of the participants included. This is also congruent with recent conceptualisations (Breyne et al., 2021) that distinguish sociocultural values in terms of their meaning, which comes out well through our interpretive-deliberative approach, and their 'performance', which is more typically assessed

through an indicator-based approach. Value indicators do play a significant role in both heritage and environmental management as well as in spatial management approaches that aim to integrate heritage such as Marine Spatial Planning (Böhnke-Henrichs et al., 2013). We consider value indicators to be an important part of the framework where it is being operationalised in contexts where indicators are being assessed. The key message is to recognise the difference between value indicators and other ways of understanding heritage value. In these instances, performance value indicators would also need to be clearly distinguished from value indicators as proxies of value.

A heritage value lens here served to bring a temporal perspective to why people value things in the ways that they do that may have otherwise remain hidden, including showing how multiple Life Frames play into each other over time and can overlap in the present. As described above, explicitly recognising this can be particularly useful in areas which had strong industries in the past which are now changing or are in decline, as for example an increasing shift from wild fisheries to aquaculture in many areas. In this way, the framework can be used to help inform initiatives that seek to bring about change which may impact areas or industries that foster a strong heritage connection such as the commitment to Just Transitions to environmentally and socially sustainable economies in Scotland (Scottish Government, 2021). Heritage will likely also be relevant in terms of how transition occurred in the past which may still influence perspectives on current management approaches. For example, the closure of the culturally and historically important herring fishery in the UK in the 1970s had severe and long-lasting impacts on the industry (Dickey-Collas et al., 2010), which may well influence buy-in to current management actions.

The framework can also be used to facilitate cross-sectoral dialogue when different organisations are working together on joint actions which seek to include multiple values (e.g. the People, Place and Landscape Action Plan issued by NatureScot and Historic Environment Scotland, 2019, the public bodies responsible for natural and cultural heritage in Scotland). In bridging both sectors, the framework could be used as a reflexive tool for the management actors involved as well as way of drawing in and interrogating the values of other stakeholders, although its success in doing so has yet to be validated empirically, as our current study was retrospective. Finally, the framework was here applied to participatory work in coastal and marine contexts only. We expect that the structure of heritage values will not change significantly in relation to different ecosystem or practice-based contexts, and we anticipate that the framework should be readily applicable in other contexts, but this remains to be tested.

6 | CONCLUSION

In this paper, we sought to bridge a gap between heritage and ecosystem-based management. We attempted to do so by developing and operationalising a novel framework intended to facilitate a common values-based approach. In applying the framework to participatory work across diverse countries, we discovered that

heritage and the environment are linked in ways that are not typically fully reflected by existing frameworks and approaches.

Participants did not meaningfully distinguish between cultural and natural heritage; the environment was not only a setting for human-made heritage objects but was itself valued as heritage. While this is increasingly recognised in high-level normative conventions, it is yet to be fully realised in existing sectoral approaches on the ground, potentially resulting in certain frames and types of values being emphasised over others. Thus, there is a misalignment in stakeholder value lenses, highlighting the importance of participatory approaches that explicitly address motivating principles and value lenses that either (a) result in outcomes that are balanced across all dimensions of sustainability and/or (b) can be more transparent in recognising conflicts in management decisions for the long-term benefit of people and planet.

As such, our framework provides opportunities for the ecosystems and environmental management field—in terms of deepening understandings of value and particularly the historical constructedness of values—and the heritage management field, in terms of multiple value types and dimensions. It also provides opportunities for more effective, integrated and participatory management through bridging the two fields by promoting a common language and understanding of values.

AUTHORS' CONTRIBUTIONS

E.A. and J.K. conceived the idea and E.A., J.K., J.Y. and C.L. developed it. E.A., J.A., J.K., W.F., L.P.S., D.M., K.F., I.B., M.P., M.K., M.F.d.S. and C.P. collected the data; E.A. led the writing of the manuscript; all authors made significant critical contributions to the drafts and gave final approval for publication. J.K., J.Y. and C.L. provided supervision.

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CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

DATA AVAILABILITY STATEMENT

The datasets used in this study are available in the Figshare repository https://figshare.com/projects/PERICLES_-_Heritage_value/133332. The dataset analysed for the Ria de Aveiro case will be

made publicly available following completion and submission of Margarida Ferreira da Silva's PhD research.

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ENDNOTES

¹ www.pericles-heritage.eu

² The MAB programme is an intergovernmental initiative that aims to establish a scientific basis to improve the relationships between people and their environments.

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