

Interreg 
EUROPEAN UNION

France (Channel
Manche) England

BCHT - BioCultural Heritage Tourism

European Regional Development Fund

***BioCultural Heritage Tourism – a review of literature and
experiences***

WP1.A1.D1.

Report prepared by:

 UNIVERSITY OF
EXETER | Centre for
Rural Policy Research

Contents

Tables and Figures	2
Acknowledgements.....	3
Suggested citation.....	3
1. Literature Review	4
1.1. Search Results	4
1.2. Defining biocultural heritage	4
1.3. Related concepts.....	8
1.3.1. Biocultural design and innovation	8
1.3.2. Biocultural fingerprint and place relationships.....	8
1.4. Typology of biocultural heritage	9
1.5. Location and subject of case studies	10
2. Project definition	12
3. Review of experiences	14
4. Conclusion	16
Bibliography	17
Appendix 1: Search Results.....	20
Appendix 2: Disciplinary affiliations of search terms.....	21
Appendix 3: Publication Years	22

Tables and Figures

Table 1. Definitions of Biocultural Heritage.....	5
Table 2. Criteria for recognition of Biological Cultural Heritage.....	6
Table 3. Foci of the field of biocultural diversity	6
Table 4. Principles of biocultural approaches to conservation.....	7
Table 5. Biocultural Design Co-ordinates.....	8
Table 6. Types of biocultural heritage	9
Table 7. Location and bio-cultural subject of recent articles.....	10
Table 8. Possible BCHT definitions based on feedback and discussion at conference.....	12
Table 9. Project definition of BioCultural Heritage Tourism.....	12
Table 10. Selected examples given by respondents	14
Table 11. Selected comments about tourism experiences in themes.....	15
Table 12. Web of Science searches.....	20
Figure 1. Discipline usage for 'Biocultural heritage' search	21
Figure 2. Discipline usage for 'Biocultural' search	21
Figure 4. Number of articles published using term 'biocultural' or 'bio-cultural'	22
Figure 3. Number of articles published using term 'biocultural heritage' or 'bio-cultural heritage' ...	22

Acknowledgements

This report was completed as part of the European Union InterReg France (Channel) England BioCultural Heritage Tourism project. This project is co-financed by the European Regional Development Fund (ERDF).

Thank you to those who completed the questionnaire survey about examples of tourism experience, delegates at the BCHT kick off conference (November 2018) and project partners for input and discussion.

Thank you to Prof. Michael Winter, Prof. Matt Loble, Dr. Carolyn Petersen and Dr. Ian Merrell for comments and discussion of the literature.

Section 1.1 and Appendix 1 displays data derived from Clarivate Analytics Web of Science Core Collection. © Copyright Clarivate Analytics 2019. All rights reserved.

Appendix 2 and Appendix 3 display data and graphics derived from Clarivate Analytics Web of Science Core Collection. © Copyright Clarivate Analytics 2019. All rights reserved.

Report produced by Timothy J. Wilkinson. Centre for Rural Policy Research, University of Exeter.
t.j.wilkinson@exeter.ac.uk

Suggested citation

Wilkinson, T. (2019) *BioCultural Heritage Tourism – a review of literature and experiences*. Published online. Available: <https://www.bcht.eu/results>

BioCultural Heritage Tourism – a review of literature and experiences

The report is an output from the BCHT InterReg project. It includes work completed under Work Package 1, Activity 1, Deliverable 1 (WP1A1D1). The literature review (Section 1) of this report was completed in October 2018 and informed initial discussions about BioCultural Heritage Tourism (BCHT). The concept was not pre-defined by the project, and through discussion and feedback at the 'BCHT Kick-off conference' in North Devon (November 2018) several definitions of BCHT were developed. At a Work Package 1 meeting in December 2018, a project definition of BCHT was agreed (see Section 2). In tandem examples of tourism products that fitted with the BCHT definition were collected from partners and wider stakeholders using a short questionnaire survey. A summary and analysis of the results of this survey can be found in Section 3.

1. Literature Review

1.1. Search Results

It is useful to know what we inherit by using the terms 'bio-cultural' and 'bio-cultural heritage'. The terms below searched for on the Web of Science.¹ The search results in Appendix 1 refer to the entire text of journal articles, not just the title. The term 'biocultural' (1129 results²) is more widely used than the hyphenated 'bio-cultural' (168 results). This was true for other pairs of terms e.g. 'biocultural heritage' (33 results) in comparison to 'bio-cultural heritage' (11 results). The term 'biocultural heritage' is in use, however there were no results for the exact term 'biocultural heritage tourism', confirming the InterReg BCHT project as a new niche in bio-cultural research.

Appendix 2 gives an indication of the disciplinary association with the terms 'biocultural heritage' and 'biocultural' (see Figures 1 and 2). Disciplines with an environmental, conservation or agricultural focus use both terms. Anthropology and biology uses the term 'biocultural' more than other disciplines (see Figure 2). Published articles using the term 'biocultural' appear from 1969 and start to slowly increase from 1994 from 12 to 112 in 2016 (see Appendix 3, Figure 3). The first published reference to biocultural heritage was in 2008, and there were 10 publications referencing it in 2018 (see Appendix 3, Figure 4).

The literature also record several terms we associated with biocultural heritage: 'biological cultural heritage', 'biocultural diversity', 'collective bio-cultural heritage' and 'bio-cultural dynamics'; these are outlined in Section 2. There are also several ideas which do not directly relate to our project but contain relevant ideas (see Section 3).

1.2. Defining biocultural heritage

There are various definitions of 'biocultural heritage' (see Table 1), but all in various ways relate to the interconnection people and the environment, of the biological and cultural. Biocultural heritage is often associated with indigenous people (e.g. Maffi 2005, Pretty *et al.* 2009, Wolverton *et al.* 2014, Gavin *et al.* 2015) and local rural communities (e.g. Galluzzi *et al.* 2010, Dahlström *et al.* 2013, Otero

¹ <http://wok.mimas.ac.uk/> (Accessed 21.08.2018).

² Data included in Section 1.1. are derived from Clarivate Analytics Web of Science Core Collection. © Copyright Clarivate Analytics 2019. All rights reserved.

et al. 2013, Agnoletti *et al.* 2015, Cohen *et al.* 2015, Vallejo *et al.* 2015, Rangel-Landa *et al.* 2016). It tends to express the ways indigenous people perceive, know and perform the relationship between biology and culture. The term has become a policy tool for development organisations such as the International Institute for Environment and Development³ who support ‘biocultural heritage’ and unions such as The International Union of the Conservation of Nature⁴ who use the concept of ‘biocultural diversity’ to inform thinking about nature governance.

The Latin American concept of ‘collective bio-cultural heritage’ is synonymous with ‘biocultural heritage’, focusing on Indigenous knowledge and practices in relation to local natural resources and environment, including the food, crops and landscapes (McRuer and Zethelius 2017, 489). It takes a holistic view of society and heritage to understand and safeguard indigenous knowledge (Swiderska 2006). Developed at a project planning workshop in Peru in 2005, it builds on a body of anthropological work about American indigenous cultural practices, knowledge and resources. By placing emphasis on protecting traditional knowledge within broader knowledge systems such as landscapes, spiritual values and customary laws it seeks to intervene in the politics of land use policy (Swiderska 2006).

Table 1. Definitions of Biocultural Heritage

Definition of Biocultural Heritage	Reference
...a complex system of interdependent parts centred on the relationship between Indigenous Peoples and their natural environment. Its components include biological resources, from the genetic to the landscape level; and long standing traditions, practices and knowledge for adaptation to environmental change and sustainable use of biodiversity	International Institute for Environment and Development (2019)
Living organisms or habitats whose present features are due to cultural action in time and place	UNESCO (2008, p. 8)
Biocultural heritage represents not only the biogenetic diversity of landscapes, but also the interrelation this diversity shares with the language, heritage, cultural memory, ecological knowledge and values of local and indigenous communities	Poole (2018, p. 58)

The hybridity of the biological and cultural is performed in the ‘biocultural heritage’ through the use of a portmanteau. A relationship between the natural and cultural is articulated by the notion of ‘biocultural heritage’ is also apparent in the notion of a ‘cultural landscape’ as defined by the European Landscape Convention as ‘an area as perceived by people whose character is the result of the action and interaction of natural and/or human factors’ (Council of Europe 2000, Article 5). In a similar way to the notion of ‘cultural landscape’, the term ‘biocultural’ bring together natural and human factors. This interconnection between nature and culture promises to be an important relationship for the BCHT project. The interaction and interdependency of these two categories is a significant feature in definitions of Biocultural Heritage.

Eriksson (2018) develops an interesting and pertinent distinction for our project, between ‘biological cultural heritage’ and ‘biocultural heritage’. Eriksson (2018) uses the term ‘biological cultural

³ <https://biocultural.iied.org/> (Accessed 21.08.2018)

⁴ <https://www.iucn.org/> (Accessed 21.08.2018)

heritage’ to refer to biological cultural traces (e.g. ancient trees) that are considered heritage, while biocultural heritage includes other aspects of culture (such as language, religion and art). A definition of Biological Cultural Heritage (BCH) as ‘biological manifestations of culture, reflecting indirect or intentional effects or domesticated landscapes, resulting from historical human niche construction’ (Eriksson 2018, p. 5) is given. This draws on the Swedish National Heritage Board (2014) definition of BCH as ‘...ecosystems, habitats and species which have originated, developed or been favoured by human utilization of the landscape and whose long-term persistence and development is dependent on, or favoured by management’ (Swedish National Heritage Board 2014, cited by Eriksson 2018, p.3). Eriksson (2018, p.7) elaborates three criteria for recognition of the more narrowly defined ‘biological cultural heritage’ (see Table 2). This raises an interesting question for the BCHT project: to what extent do we wish to include objects, practices and knowledge as a source of potential tourism products and experiences? Is a narrow or broad definition useful for the project?

Table 2. Criteria for recognition of Biological Cultural Heritage (reproduced from Eriksson, 2018, p.7).

- | |
|---|
| <p>(1) The biological cultural trace reflects either a previous (historical) human impact or a current impact which is rooted in what is currently considered as a tradition. A time-depth, a history, is essential.</p> <p>(2) If the biological cultural trace no longer has a function or role, knowledge of its previous function or role is essential.</p> <p>(3) It is essential that the biological cultural trace evokes feelings, either due to its role for people’s identity and sense of place or for its sanctity or sheer beauty.</p> |
|---|

The concept of ‘biocultural heritage’ appears to have developed from a broader research field about ‘biocultural diversity’ often associated with the work of Maffi (2005, 2007). Biocultural diversity is ‘an area of transdisciplinary research concerned with investigating the links between the world’s linguistic, cultural, and biological diversity as manifestations of the diversity of life’ (Maffi 2005, p.599), which itself comprises multiple disciplines. Emerging in the mid-1990s it explores the interface between biological and cultural diversity through work linking natural and social sciences, theory and practice, and science with policy, ethics, and human rights (Maffi 2005). Maffi (2005) has described the main foci of ‘biocultural diversity’ in terms of connections between biodiversity and language, assessment of threats to biological and cultural diversity, approaches to sustaining and developing biocultural diversity and human rights dimensions (see Table 3). A clear theme for the BCHT project here is interconnections between the biology, language and culture.

Table 3. Foci of the field of biocultural diversity (reproduced from Maffi 2005, p.600)

- | |
|--|
| <p>(a) the parallels and correlations between biodiversity and linguistic diversity, the overlaps in the global distribution of languages and biodiversity, and the relationships between language, traditional knowledge, and the environment;</p> <p>(b) studies and assessments of the common threats to biodiversity, cultural diversity, and linguistic diversity and of the sociocultural and environmental consequences of loss of these interlinked diversities;</p> <p>(c) approaches to the joint maintenance and revitalization of biocultural diversity;</p> <p>(d) development of the related aspects of human rights</p> |
|--|

Originating as a way of documenting and comprising connections between biological, linguistic and cultural diversity over space and time (e.g. Harmon 1996), it has developed into a transdisciplinary

framework for scholarship and action (Davidson *et al.* 2012, 2.2.2, p.36). This human rights aspect is also reflected in Baldy's (2013) notion of 'bio-cultural sovereignty' as a means of viewing resistance against colonisation and cultural revitalisation. He interprets biological and cultural knowledge of gathering and land management practice by native peoples in California as a means of exercising bio-cultural sovereignty (Baldy 2013, 5).

Hill *et al.* (2018, p. 572) define biocultural diversity 'as the total variety exhibited by the world's natural and cultural systems', viewing it as comprising three concepts: (1) the idea that the diversity of life includes human cultures and languages; (2) that links exist between biodiversity and cultural diversity; and (3) that these eco-cultural links have a history and possibly co-evolution (Hill *et al.* 2018, p. 572). While there are other concepts, such as 'ecodiversity' and 'ethnobiology', which relate ecology and cultural practice, biocultural diversity has become the dominant discourse through which to express linkages between cultural diversity and natural resource use (Eriksson 2008, p.2).

Where biocultural diversity differs from 'biocultural heritage' is perhaps in its emphasis on language. Davidson *et al.*, (2012, 2.2.2, p.36) views the framework (of biocultural diversity) as having 'a strong, almost exclusive, focus on local and Indigenous Peoples; an emphasis on language over other aspects of culture and identity; and, a concern for conservation'. Poole (2018, p.57) explains that 'whereas biocultural diversity refers to the deep and co-constitutive relation between biological, linguistic and cultural diversity, biocultural heritage specifically represents the rich history of language, heritage, cultural memory, ecological knowledge and values embedded within human culture.' It is this rich history of engagements with nature found in human culture that is key for the BCHT programme.

Studies of biocultural heritage and diversity have taken a spatial approach to patterns of knowledge and territorial characteristics (e.g. Iseppi 2013, Shen *et al.* 2013). The BCHT project is likely to reflect this given its uses of a tourism masterplanning tool, which includes an element of mapping. The notion of biocultural heritage has been applied to conservation (Gavin *et al.*, 2017). Gavin *et al.* (2017, p.140) contend that 'biocultural approaches to conservation can achieve effective and just conservation outcomes while addressing erosion of both cultural and biological diversity'. They set out a number of principles for achieving a biocultural approach to conservation (see Table 4). This application of the biocultural heritage concept to conservation practice, to some extent sets a precedent for its application tourism.

Table 4. Principles of biocultural approaches to conservation (reproduced from Gavin 2017, Box 1, p.141)

- | |
|--|
| <ul style="list-style-type: none"> (a) Acknowledge that conservation can have multiple objectives and stakeholders (b) Recognize the importance of intergenerational planning and institutions for long-term adaptive governance (c) Recognize that culture is dynamic, and this dynamism shapes resource use and conservation (d) Tailor interventions to the social–ecological context (e) Devise and draw upon novel, diverse, and nested institutional frameworks (f) Prioritize the importance of partnership and relation building for conservation outcomes (g) Incorporate the distinct rights and responsibilities of all parties (h) Respect and incorporate different worldviews and knowledge systems into conservation planning |
|--|

Having an awareness of concepts related to biocultural heritage, such as biocultural diversity and biological cultural heritage helps to identify the meaning of biocultural heritage for the project (see Section 3 for definition).

1.3. Related concepts

1.3.1. Biocultural design and innovation

There are two related concepts of 'biocultural design' (Davidson *et al.* 2012, Turner *et al.* 2018) and 'biocultural heritage innovation' (Dutfield 2014). Both seek ways of sustainably developing biocultural resources (e.g. knowledge, artefacts, landscapes etc.). With a focus on product development, 'biocultural design' seeks to understand 'how endogenous innovation could support sustainable development in rural indigenous and local communities' (Davidson *et al.* 2012, pp). Turner *et al.* (2018, p.32) have elaborated 'biocultural design coordinates' through asking five questions (see Table 5). Taking a broader view, Dutfield (2014, p.2) discusses 'Biocultural Heritage Innovations' in terms of 'new knowledge, resources, skills and practices, or new combinations of these' (Dutfield 2014, p.2), which help communities sustain and develop themselves from a local and global view. 'Biocultural Heritage Innovations' should both 'strengthen and sustain the agro-biodiversity', for instance local seed systems, livelihoods and well-being of communities and 'adapt to and mitigate risks due to global impacts' such as climate change (Dutfield 2014, p.2).

Table 5. *Biocultural Design Co-ordinates* (reproduced from Turner *et al.* 2018, Table 1)

- | |
|--|
| <ol style="list-style-type: none">1. Does product selection consider production contexts, including sociocultural, economic and ecological conditions?2. What are proactive ways to support existing ecological, economic and sociocultural relationships enabling continuity of Biocultural Heritage?3. What might unintended consequences of valorisation be for a selected product and other food system components?4. Do biocultural valorisation efforts include producers and their products to reduce poverty and promote Biocultural Sustainability?5. What are the ethical dimensions of valorisation discourse construction and how might risks of elite capture be reduced? |
|--|

Dutfield (2014) locates Biocultural heritage innovations in biocultural heritage; '(Biocultural heritage innovations) integrate daily practices with traditional knowledge, spiritual values and customary norms. As such, they are dynamic, continuous, open, adaptive, and gender-sensitive, integrating the creativity of people and nature' (Dutfield 2014). The question for the InterReg BCHT project will be how to put this into practice.

1.3.2. Biocultural fingerprint and place relationships

Iseppi *et al.* (2013) use the term 'biocultural fingerprint' to articulate their use of a model to appraise the 'territorial capital' of Lombardy and Vento regions. Using a biological metaphor they approach the landscape having a kind of 'genetic code' and seek to characterise the different features of territory by the presence/absence attributes and their combination (Iseppi *et al.* 2013, 356). The idea of 'biocultural fingerprint' could be useful for the BCHT project because it could help articulate the difference between the four Biosphere Reserves. The notion of a fingerprint expresses the interaction between human-nature, in the sense of imprinting. As an image a fingerprint resembles contour lines on a map; this could be a useful way of conveying what 'biocultural heritage' is.

McRuer and Zethelius (2017) explored the significance of place to the everyday lives of Afro-Colombian youths on Isla Grande, an island in a marine protected area of Colombia. Drawing on the concept of ‘collective biocultural heritage’ they apply the notion of ‘biocultural place relationships’, to refer to ‘the diverse connections between human culture and the natural environment’ (McRuer and Zethelius 2017, p.484). They conceptualised ‘biocultural place relationships’ via work from anthropology (Ingold 2008), science and technology studies (Haraway 2008) and cultural geography (Whatmore 2007) about entanglements between humans and place, to explore the ‘biocultural interdependence of place, including the relationships that exist among humans, non-humans (e.g. biological, material, technological, political, economic entities), ideas, improvisations (i.e. the creativity of labour, influenced by place relationships), innovations, research and more’ (McRuer and Zethelius 2017, p.850). The idea of ‘place’ is one that is likely to be more familiar to business and potential visitors than ‘biocultural heritage’, so the notion of ‘biocultural place relationships’ may be helpful in communicating about the BCHT project.

1.4. Typology of biocultural heritage

In order to develop biocultural heritage tourism products it will be necessary to consider what biocultural heritage the Biosphere Reserves have. Table 6 breaks down areas where the biological and cultural intersect to begin to elaborate a typology of biocultural heritage.

Table 6. Types of biocultural heritage (adapted from ‘Areas of interdependence between biological and cultural diversity’, UNESCO 2008, 9, Table 1)

Themes	Biocultural type	Examples
Words	Language	Terms, concepts and categories relating to nature
	Linguistic diversity	The relationship between linguistic and biological diversity
Things	Material culture	Objects created from and/ or representing biodiversity, including those reflecting spiritual and religious beliefs and aspirations, the arts, tools
Know-how	Techniques	Practices and processes relating to the use of natural materials
	Traditional and local knowledge	About places, resources, ecological relations; early warning systems, risk management and coping with natural disasters; traditional medicine
	Transmission of knowledge and skills	From one generation to the other (e.g. formal and informal education)
	Mechanisms for adapting	Mechanisms for the revitalization of traditional knowledge and for the adaptation of new knowledge and technology, technology transfer
Living from the land	Natural resource use, resource-based livelihoods and resource management	Agriculture, industrial agriculture, horticulture, agro forestry, pastoralism, fishing, hunting, nomadic practices and shifting cultivation Supplementing economic subsistence activities with significant economic and/or social contribution (e.g. hunting, fishing, berry and mushroom picking)
	Land/sea use and management	Indigenous landscape management using fire, customary marine tenure systems
	Plant/animal domestication and selective breeding	Creation and maintenance of genetic diversity – plant/animal varieties, local and traditional knowledge relating to the maintenance of genetic diversity, such as

		wine and cheese varieties in Europe; or potato, corn and rice varieties
Being in place	Attachment to place	Cultural identity inscribed in natural places, such as national parks or sacred sites
	Social and political relations	Genealogy maintained through resource sharing, social roles relating to differential resource use, control over differential resource access, gender and biodiversity management/ loss, “wild food” gathering, medicinal plants, gender specific environmental knowledge), constructing identity with/through the natural world (e.g. totemism, nagualism, tonalism)
	Legal institutions	Customary law governing resource/land access, as well as contemporary/ national legislation and legal aspects of conventions)
	Ritual and cosmology	Those celebrating seasonal events and marking rites of passage, sacred sites, representations of human nature relationships, symbolic acts to maintain cosmological order
	Economic relations	Partnerships based on trading natural resources, often across ecological boundaries, management of common property resources

1.5. Location and subject of case studies

Table 7 below reviews the location and subject of recent published academic literature that uses a concept of biocultural heritage. There are a variety of biocultural subjects being addressed, however it is notable that in Europe we often find the concept used in relation to landscape. By thinking about biocultural heritage in the themes outlined in Part 4, the project can find a variety of scales at which to apply the concept of biocultural heritage.

Table 7. Location and bio-cultural subject of recent articles

Continent	Location	Bio-cultural subject	Reference
Asia	China	Rhododendrons	Geogrian and Emshwiller (2016)
Asia	Lebanon	Rural landscapes	Makhzoumi <i>et al.</i> (2012)
Asia	Dulong Valley, China	Swidden agriculture	Shen (2010)
Australasia	Australia	Humid tropical forest	Hill <i>et al.</i> (2013)
Europe	Sweden	Rural landscapes	Eriksson (2018)
Europe	Iberian Peninsula (Portugal and Spain)	Plant-based remedies for wolf bites	Gonzalez <i>et al.</i> (2017)
Europe	Mallorca	Agro-ecological landscapes	Marull <i>et al.</i> (2015)

Continent	Location	Bio-cultural subject	Reference
Europe	Europe/ UK	Woods, landscapes	Rotherham (2015)
Europe	Europe	Wild forest products	Wiersum (2017)
Europe	Italy	Landscape	Iseppi <i>et al.</i> (2013)
Europe	Italy	Rural landscape	Agnoletti and Rotherham (2015)
North America	Barbados	Flying fish	Cumberbath and Hinds (2016)
South America	Andes, Peru	Agricultural biodiversity, Potatoes	Graddy (2012)
South America	Andes, Peru	Potato Park	Argumedo (2006)
South America	Bolivia	Wine and cheese	Turner <i>et al.</i> (2018)
South America	Uruguay	Medicinal plant	Castiñeira Latorre <i>et al.</i> (2018)
South America	Isla Grande, Columbia	Place/ Youth	McRuer and Zethelius (2017)
South America	Mexico	Forest products/ thatched huts	Sierra-Huelsza and Kainer (2018)
South America	Peru, Panama, India, Kenya and China	Traditional knowledge	Swiderska (2006)

2. Project definition

The concept was not pre-defined by the project, but based on the literature review an initial definition was developed to aid discussion at the BCHT Kick-off conference in North Devon (November 2018) several definitions were elaborated. This definition was:

Getting people actively and experientially involved in the heritage of human activities connected to nature, in ways that mutually benefit customers, businesses, local environment and heritage

Following feedback and discussion on the concept of BCHT several definitions were developed.

Table 8. Possible BCHT definitions based on feedback and discussion at conference

<i>BCHT is about limiting the negative impacts of tourism on the environment by getting people actively and experientially involved in traditional land management practices</i>
<i>BCHT is about limiting the negative impacts of tourism on the environment by facilitating active and experiential activities in nature, in ways that highlight how an area is special and distinctive</i>
<i>BCHT is a process of collaboration between inhabitants, businesses and environmental managers to create new tourism products that limit the negative impacts of tourism on the environment by developing new experiential activities that celebrate the connections between humans and nature</i>
<i>BCHT is a process of collaboration between inhabitants, businesses and environmental managers to create new tourism products that limit the negative impacts of tourism on the environment by developing experiential activities that celebrate the connections between humans and nature distinctive to the local area</i>
<i>BCHT is a process of collaboration between inhabitants, businesses and environmental managers to create new tourism products that limit the negative impacts of tourism on the environment by developing experiential activities that celebrate the connections between humans and nature distinctive to the local area. For instance, by creating new tourism products that are attractive to visitors in low season, or getting visitors involved in land management practices such as gardening, hedge-laying, charcoal making, or in less traditional activities facilitated by digital technology.</i>

The definitions in Table 8 were discussed by partners at a Work Package 1 meeting in Saint Omer (December 2018). Following this a project definition of BCHT was finalised (see Table 9).

Table 9. Project definition of BioCultural Heritage Tourism

<i>BioCultural Heritage Tourism is a process of collaboration between inhabitants, businesses and environmental managers to create new experiential activities that celebrate the connections between humans and nature distinctive to the local area and cultural heritage. These aim to improve the benefits and limit the negative impacts of tourism on the environment, for instance by appealing to visitors in low season, getting visitors involved in sustainable land management activities, or by creating nature experiences facilitated by digital technology.</i>

Having a definition of BCHT (Table 9), it is worth briefly noting how the concept developed by this project relates to other models of tourism development such as sustainable, responsible, eco and green tourism. All of these models of tourism have multiple definitions so it is not feasible to distinguish BCHT from each and every definition. However, in broad terms, BCHT differs from eco-tourism in that it is not solely about nature, but the heritage of practices related to nature. BCHT is

similar to sustainable tourism in that BCHT experiences should minimise negative impacts of tourism, and the mode of tourism development is collaborative. In our definition of BCHT there is less of direct emphasis on the responsible actions of tourists in BCHT and more of an emphasis on positive and active engagement with a place. Features of tourism particular to BCHT is the explicit celebration of connections between humans and nature distinctive to the local area and cultural heritage. This can be achieved, for instance, through experiences in which tourists understand the whole process of sustainability from production to consumption. In this sense, BCHT is holistic, seeking to tell a story that links different parts of the complex process of interaction between culture and nature. In so doing, BCHT facilitates understanding of the interdependency of nature and culture.

3. Review of experiences

The project collected examples of experiential tourism products to improve our awareness of similar products. The short questionnaire was co-designed by partners and circulated to email lists for environmental managers and to the project partners. There were 18 responses. In the short questionnaire survey we asked four questions:

- 1) What existing tourism experiences relate to the natural environment or cultural heritage?
- 2) Please state the locations of these tourism experiences.
- 3) Please supply any web links or further information about these tourism experiences below.
- 4) Please let us know your thoughts or experiences of these tourism activities.

Examples of existing tourism experiences given by respondents can be clustered into several broad themes (see Table 10). The survey was very useful in terms of beginning to identify different types of experiences that the BCHT project could develop in Work Package 2.

Table 10. Selected examples given by respondents

Foraging	Wild food foraging (e.g. mushrooms, seaweed) Foraging & cooking local food
Food	Jam & chutney making, Fruit cookery, juicing, cordial making Medicinal herb workshops Cheese-making Mushroom cultivation Cider making
Learning about plants or animals	Beekeeping experience Bird watching and other direct wildlife experiences e.g. cetaceans Farm visits
Rural skills and bush craft	Fire lighting Den building Shearing sheep
Citizen action	Working holidays Beach cleaning
Crafts	Wood craft courses such as Gate Hurdle Making, Spoon Carving, Making wooden furniture, Hazel Trug Making Willow craft courses (e.g. obelisks, baskets and garden sculpture)
Building and making	Roundwood timber framing eco-refurbishment Pole lathe course Stone carving Learn how to make a yurt Building with straw bales Clay oven building Making nesting boxes
Land management activities and gardening	Coppicing Hedge laying Permaculture Charcoal making Fruit tree pruning Kitchen gardening Open gardens

Archaeological/Historical insights	WW2 Heritage Traditional boat building workshop Woodland folklore
Wellbeing	Mindfulness and nature

Comments about the experiences that participants suggested ways forward in terms targeting and marketing of BCHT, partnership working, collecting feedback and the importance of a diverse tourism offer (see Table 11).

Table 11. Selected comments about tourism experiences in themes

Targeting and marketing	Are experiences targeted at locals or tourists?
	Experiential tourism offer is not well know enough and not enough options
Partnership working	Partnerships help diversify the tourism offer for example guided boat trips, a professional photographer and an organic market.
Collecting feedback from customers on impact of their visit	Innovative feedback questions: ask customers/ visitors whether they think their holiday benefitted local people, reduced environmental impact or supported conservation
Diversity of offer	Important to offer tourists different ways to discover the cultural, historical and natural heritage of the territory. Each place can be presented to tourists as a story
	Value of learning experiences

4. Conclusion

Section 1 provided an overview of existing literature about biocultural heritage outlining related concepts in notions of biological cultural heritage and biocultural diversity. This provided a number of principles and ideas associated with concept of biocultural heritage that can be applied to the tourism sector in this project. By identifying a typology of biocultural heritage (Section 1.3), this report provides a way forward for the development of BCHT prototype products. Co-development of a definition of BCHT through discussion with partners and conference delegates (Section 2) provides a reference point the use of the term. In the project definition, BCHT is characterised by a focus on collaboratively developing new experiential activities based on distinctive qualities of the local area, and limiting the negative impacts of tourism. The list of examples of existing tourism products in Section 3 provide inspiration for the development of new experiential activities.

Bibliography

Argumedo, A. (2006) The Potato Park, Peru: Conserving agrobiodiversity in an Andean Indigenous Biocultural Heritage Area. In Amend T., Brown J., Kothari A., Phillips A. and Stolton S. (eds.) *Protected Landscapes and Agrobiodiversity Values. Volume 1 in the series, Protected Landscapes and Seascapes*, IUCN & GTZ. Kasperek Verlag, Heidelberg, pp.45-58.

Baldy, C. R. (2013). Why we gather: traditional gathering in native Northwest California and the future of bio-cultural sovereignty. *Ecological Processes*, 2(1), 17.
<http://www.ecologicalprocesses.com/content/2/1/17>

Council of Europe (2000) *European Landscape Convention*. CETS No. 176. Council of Europe, Strasbourg.

Cumberbatch, J. A., & Hinds, C. J. (2013). Barbadian bio-cultural heritage: an analysis of the flying fish. *International Journal of Intangible Heritage*, 8, 118-134.

Davidson-Hunt, I. J., Turner, K. L., Mead, A. T. P., Cabrera-Lopez, J., Bolton, R., Idrobo, C. J., & Robson, J. P. (2012). Biocultural design: a new conceptual framework for sustainable development in rural indigenous and local communities. *SAPI EN. S. Surveys and Perspectives Integrating Environment and Society*, 5.2.

Dutfield, G. (2014). *Towards a definition of biocultural heritage innovations in light of the mainstream innovation literature*. Project Material. Available: <http://pubs.iied.org/G03771/>

Eriksson, O. (2018). What is biological cultural heritage and why should we care about it? An example from Swedish rural landscapes and forests. *Nature Conservation*, 28, 1-32.
doi:[10.3897/natureconservation.28.25067](https://doi.org/10.3897/natureconservation.28.25067)

Fletcher, R. (2009). Ecotourism discourse: Challenging the stakeholders theory. *Journal of Ecotourism*, 8(3), 269-285.

Gavin, M. C., McCarter, J., Mead, A., Berkes, F., Stepp, J. R., Peterson, D., & Tang, R. (2015). Defining biocultural approaches to conservation. *Trends in ecology & evolution*, 30(3), 140-145.

Georgian, E. and Emshwiller, E. (2016) Rhododendron Uses and Distribution of this Knowledge within Ethnic Groups in Northwest Yunnan Province, China. *Open Journal of Social Sciences*, 4, 138-150.
<http://dx.doi.org/10.4236/jss.2016.41018>

Gonzalez, J. A., Carvalho, A. M., Vallejo, J. R., & Amich, F. (2017). Plant-based remedies for wolf bites and rituals against wolves in the Iberian Peninsula: Therapeutic opportunities and cultural values for the conservation of biocultural diversity. *Journal of ethnopharmacology*, 209, 124-139.

Graddy, T. G. (2013). Regarding biocultural heritage: in situ political ecology of agricultural biodiversity in the Peruvian Andes. *Agriculture and human values*, 30(4), 587-604.

Hill, R., Cullen-Unsworth, L. C., Talbot, L. D., & McIntyre-Tamwoy, S. (2011). Empowering Indigenous peoples' biocultural diversity through World Heritage cultural landscapes: a case study from the Australian humid tropical forests. *International Journal of Heritage Studies*, 17(6), 571-591.
<https://doi.org/10.1080/13527258.2011.618252>

Iseppi, L., Chang, T. F. M., & Droli, M. (2013). Lombardy and Veneto Biocultural Fingerprint: a Driving Force for Tourism and Residential Attraction. In *Society, Integration, Education Proceedings of the International Scientific Conference. Sabiedriba, Integracija, Izglitiba* (Vol. 2, pp. 353-363).

- Maffi, L. (2005). Linguistic, cultural, and biological diversity. *Annu. Rev. Anthropol.*, 34, 599-617.
- Maffi, L. (2007). Biocultural diversity and sustainability. *The Sage handbook of environment and society*, 267-277.
- Makhzoumi, J., Talhouk, S., Zurayk R, and Sadek, R. (2012). Landscape Approach to Bio-Cultural Diversity Conservation in Rural Lebanon. In J. Tiefenbacher (Ed.) *Perspectives on Nature Conservation - Patterns, Pressures and Prospects* Available: <http://www.intechopen.com/books/perspectives-on-nature-conservation-patterns-pressures-andprospects/landscape-approach-to-bio-cultural-diversity-conservation-in-rural-lebanon>
- Marull, J., Tello, E., Fullana, N., Murray, I., Jover, G., Font, C., ... & Decolli, T. (2015). Long-term biocultural heritage: exploring the intermediate disturbance hypothesis in agro-ecological landscapes (Mallorca, c. 1850–2012). *Biodiversity and conservation*, 24(13), 3217-3251.
- McRuer, J., & Zethelius, M. (2017). The difference biocultural “place” makes to community efforts towards sustainable development: Youth participatory action research in a marine protected area of Colombia. *International Review of Education*, 63(6), 847-870.
- Latorre, E. C., Canavero, A., & Pochettino, M. L. (2018). Comparison of medicinal plant knowledge between rural and urban people living in the Biosphere Reserve “Bioma PampaQuebradas del Norte”, Uruguay: an opportunity for biocultural conservation. *Ethnobiology and Conservation*, 7.
- Poole, A. K. (2018). Where is Goal 18? The Need for Biocultural Heritage in the Sustainable Development Goals. *Environmental Values*, 27(1), 55-80.
- Rotherham, I. D. (2015). Bio-cultural heritage and biodiversity: emerging paradigms in conservation and planning. *Biodiversity and conservation*, 24(13), 3405-3429.
- Shen, S., Wilkes, A., Qian, J., Yin, L., Ren, J., & Zhang, F. (2010). Agrobiodiversity and biocultural heritage in the Dulong valley, China: impacts of and responses to the Sloping Land Conversion Program. *Mountain Research and Development*, 30(3), 205-211.
- Sierra-Huelsz, J. A., & Kainer, K. A. (2018). Tourism consumption of biodiversity: A global exploration of forest product use in thatched tropical resort architecture. *Geoforum*, 94, 1-11.
- Swedish National Heritage Board (2014) *Biologiskt kulturarv – växande historia*. Available: http://samla.raa.se/xmlui/bitstream/handle/raa/7731/Varia%202014_37.pdf?sequence=1 [not accessed]
- Swiderska, K. (2006). Protecting traditional knowledge: a framework based on customary laws and bio-cultural heritage. *IIED: London, UK*. Available: <http://pubs.iied.org/pdfs/G01069.pdf>
- Turner, K.L., Davidson-Hunt I.J. and Hudson I. (2018) Wine, cheese and building a gourmet territory: biocultural resource-based development strategies in Bolivia, *Canadian Journal of Development Studies / Revue canadienne d'études du développement*, 39:1, 19-37, DOI: 10.1080/02255189.2017.1331158
- International Institute for Environment and Development (2019) About Biocultural Heritage. Available: <https://biocultural.iied.org/about-biocultural-heritage> [Accessed 21.08.2018]
- UNESCO (2008) *Links between biological and cultural diversity*. Report of the International Workshop organised by UNESCO with support from The Christensen Fund. Available: <http://unesdoc.unesco.org/images/0015/001592/159255e.pdf> [Accessed 21.08.2018]

Wiersum, K. F. (2017). New Interest in Wild Forest Products in Europe as an Expression of Biocultural Dynamics. *Human Ecology*, 45(6), 787-794.

Appendix 1: Search Results

Table 12. Web of Science searches. Data are derived from Clarivate Analytics Web of Science Core Collection. © Copyright Clarivate Analytics 2019. All rights reserved.

Search for...	Web of Science Results	Publication date range	Exact search term
Biocultural	1129	1969-2018	TS=("Biocultural")
Biocultural heritage	33	2008-2018	TS=("Biocultural heritage")
Biocultural heritage tourism	0	N/A	TS=("Biocultural heritage tourism")
Biocultural tourism	0	N/A	TS=("Biocultural tourism")
Bio-cultural	168	1958-2018	TS=("Bio-cultural")
Bio-cultural heritage	11	2012-2018	TS=("Biocultural heritage")
Bio-cultural heritage tourism	0	N/A	TS=("Bio-cultural heritage tourism")
Bio-cultural tourism	0	N/A	TS=("Bio-cultural tourism")
Biocultural heritage	43	2008-2018	TS=(Biocultural NEAR heritage)
Bio-cultural heritage	18	2009-2018	TS=(Bio-cultural NEAR heritage)
Collective biocultural heritage	2	2017-2018	TS=("collective biocultural heritage")
Collective bio-cultural heritage	0	N/A	TS=("collective bio-cultural heritage")
Biocultural tourism	3	2007-2016	TS=(Biocultural NEAR tourism)
Bio-cultural tourism	1	2008	TS=(Bio-cultural NEAR tourism)
Biocultural heritage tourism	1	2016	TS=(Biocultural NEAR heritage NEAR Tourism)
Bio-cultural heritage tourism	1	2016	TS=(Bio-cultural NEAR heritage NEAR Tourism)
Biocultural diversity	160	1985-2018	TS=("Biocultural diversity")
Bio-cultural diversity	22	2002-2018	TS=("Bio-cultural diversity")
Biocultural dynamics	16	1995-2017	TS=("biocultural dynamics")
Bio-cultural dynamics	2	2006-2017	TS=("bio-cultural dynamics")

Appendix 2: Disciplinary affiliations of search terms

Figure 1. Discipline usage for 'Biocultural heritage' search (33 results). Data and graphics are derived from Clarivate Analytics Web of Science Core Collection. © Copyright Clarivate Analytics 2019. All rights reserved.

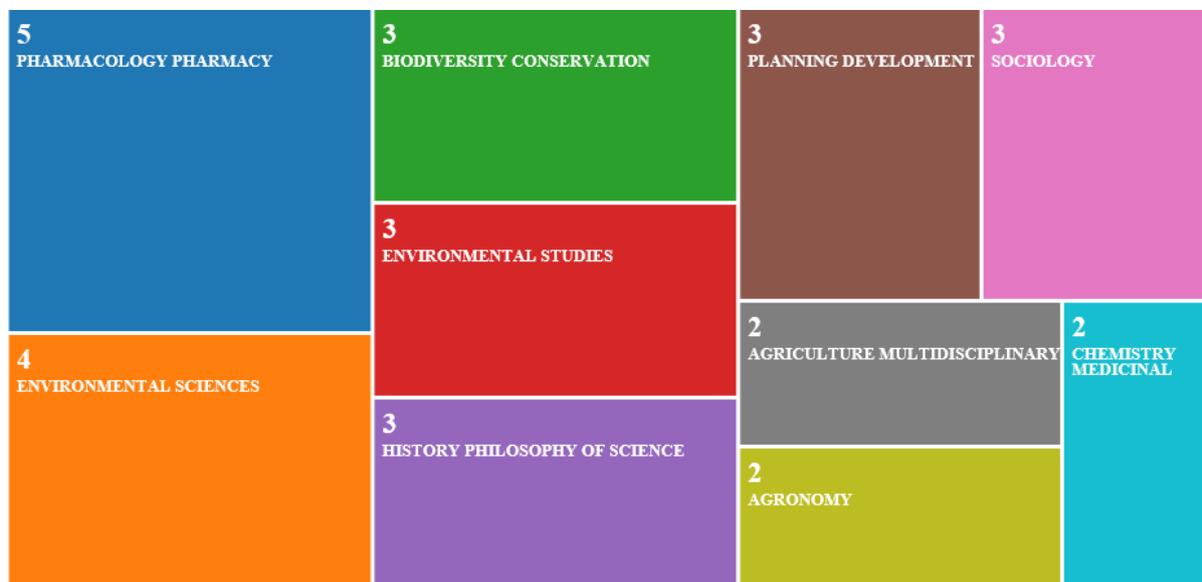


Figure 2. Discipline usage for 'Biocultural' search (1129 results). Data and graphics are derived from Clarivate Analytics Web of Science Core Collection. © Copyright Clarivate Analytics 2019. All rights reserved.



Appendix 3: Publication Years

Figure 3. Number of articles published using term 'biocultural' or 'bio-cultural' (1284 results) by Year, from 1994. Data and graphics are derived from Clarivate Analytics Web of Science Core Collection. © Copyright Clarivate Analytics 2019. All rights reserved.

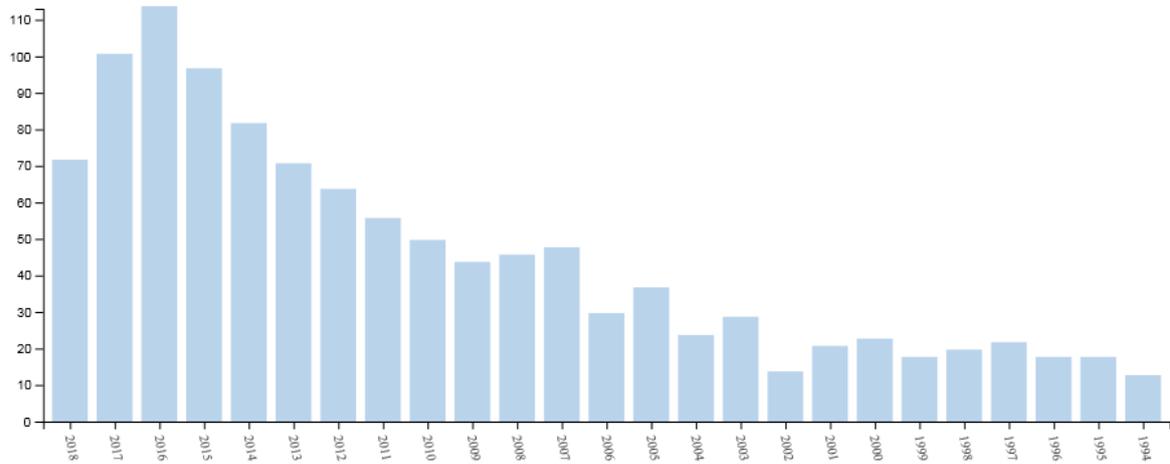


Figure 4. Number of articles published using term 'biocultural heritage' or 'bio-cultural heritage' (44 results) by Year. Data and graphics are derived from Clarivate Analytics Web of Science Core Collection. © Copyright Clarivate Analytics 2019. All rights reserved.

