



## Narrative Summary

On 10 March 2025, an international webinar on *Cultural Ecosystem Services (CES) and Biocultural Heritage (BCH)* brought together over 270 researchers, policymakers, and heritage practitioners to explore emerging concepts, methodological challenges, and governance frameworks. The event, co-organized by JPI Climate, JPI Cultural Heritage, and the Centre for Functional Ecology (CFE–University of Coimbra), counted with the participation of UNESCO representatives, whose involvement provided vital institutional recognition and reinforced the urgency of integrating culture and biodiversity in sustainability discourses.

The session opened with institutional remarks that situated the webinar within broader policy and research agendas. **Michael Depuydt** (JPI Climate) emphasized the importance of bridging climate science and heritage studies, highlighting CES as a field that, although difficult to quantify, offers critical insights for coherent decision-making. **Pascal Liévaux** (JPI Cultural Heritage) traced the joint efforts between JPI Cultural Heritage and JPI Climate, noting the significance of their collaboration, including a White Paper and a new Horizon Europe partnership focused on cultural heritage and climate change. **Helena Freitas** (University of Coimbra) reinforced the deep interconnections between nature and culture, stressing the role of biocultural landscapes in sustainability and the importance of community-led practices. **Fernanda Rollo**, on behalf of the organizing committee, provided a broader reflection on the global challenges faced today — from biodiversity loss to social inequalities — and framed the webinar as part of an ongoing effort to foster interdisciplinary collaboration, promote the recognition of CES and BCH, and advocate for transformative public policies and research frameworks that integrate cultural and ecological perspectives.

### *Presentations*

Four keynote presentations structured the core of the webinar, each offering a distinct yet complementary perspective:

1. **António Abreu** (Director of UNESCO Division of Ecological and Earth Sciences) opened the session with a reflection on the evolution of the biosphere reserve concept and its relevance for current debates on biocultural heritage. He underscored the critical need to reinforce the community component of sustainability strategies and to move beyond technocratic models that overlook local cultural dimensions. His presentation reaffirmed

that CES and BCH are not abstract constructs but embedded in lived experience, shaped by memory, tradition, and identity.

2. **Berta Escobar** (Head of Unit, UNESCO, World Heritage Convention) provided a policy-oriented overview of the UNESCO World Heritage Convention and the growing recognition of the interdependence between cultural and natural heritage. Drawing on recent UNESCO documents and case studies, she highlighted how international frameworks are increasingly acknowledging CES and BCH as cross-cutting priorities, requiring new tools for assessment, governance, and community participation. She also noted the importance of breaking disciplinary silos and fostering transversality in heritage valuation.
3. **Victoria Reyes-García** (Institut de Ciència i Tecnologia Ambientals, UAB) presented ongoing work from the LICCI project, with a focus on CES and the co-production of knowledge between Indigenous Peoples and researchers. She examined the tensions between local perceptions of ecosystem services and the dominant frameworks used in global policy debates. Through examples of participatory mapping and ethnographic fieldwork, she illustrated how CES are embedded in identity, language, spirituality, and daily practice. Her talk emphasized the transformative potential of plural valuation and the risks of instrumentalizing CES.
4. **Inge Liekens** (Flemish Institute for Technological Research - VITO) explored the challenges of economically valuing ecosystems and heritage. She explained that, although complex, the economic valuation of cultural ecosystem services is critical for influencing policy and decision-making processes. Presenting methods such as contingent valuation and revealed preference analysis, she showed how these tools attempt to capture the intangible benefits of ecosystems, including cultural identity, sense of belonging, and spiritual values. She stressed that valuation must not reduce CES to mere commodities but should help elevate their visibility in political and economic arenas.

#### *Emerging Themes and Open Questions*

Across the four contributions, a number of shared concerns and conceptual convergences emerged. These include:

- The need to overcome the artificial divide between nature and culture in conservation discourse and practice;
- The urgency of including CES and BCH in climate and biodiversity frameworks at both national and international levels;
- The risk of reducing CES to marketable or measurable services, while neglecting their cultural depth and symbolic significance;
- The potential of participatory methods, such as oral history and co-produced mapping, to empower communities and foster more inclusive governance models;
- The importance of building interdisciplinary and transdisciplinary bridges between environmental sciences, heritage studies, and policy.

The webinar concluded with a rich discussion among participants, who raised further questions around terminology (e.g., how to translate CES into policy language), the politics of valuation, the scalability of local knowledge, and the ethics of heritage recognition. Several participants suggested the creation of a collaborative platform to exchange methods, experiences, and policy tools, as a first step toward developing a more coordinated research and action agenda.

The session also served as an opportunity to recall the upcoming international congress on *Cultural Ecosystem Services and Biocultural Heritage*, which will take place in May 2025. It was announced that the congress has been granted the patronage of UNESCO—an important signal of its relevance in the global policy and research landscape.

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## Analytical Reflection: Revisiting Cultural Ecosystem Services and Biocultural Heritage

The webinar held on 10 March 2025 revealed not only the growing academic and policy interest in *Cultural Ecosystem Services* (CES) and *Biocultural Heritage* (BCH), but also the conceptual and epistemological challenges that continue to shape the field. Rather than simply presenting a series of thematic contributions, the event opened a space of dialogue where the boundaries between *science and culture, knowledge and values, global frameworks and local experiences* were continually interrogated.

At the heart of the discussion lies a fundamental tension: how can intangible cultural meanings be made visible, valued, and protected within systems that prioritize quantification and materiality? CES and BCH challenge dominant ecosystem service models by insisting on the embeddedness of knowledge, memory, and identity in place. They bring forward a different grammar of value — one that resists simplification and instead calls for situated, plural, and often contested understandings of human–nature relationships. Critically, participants underscored that co-production of knowledge, respect for diverse epistemologies, and safeguarding the agency of local and Indigenous communities are essential to prevent the instrumentalization or commodification of cultural assets.

### *From Dualism to Integration: Bridging Nature and Culture*

A recurring concern throughout the webinar was the persistence of a conceptual dualism that separates nature and culture in scientific models, governance frameworks, and policy instruments. Although international bodies such as UNESCO are increasingly emphasizing the interconnectedness of cultural and natural heritage, the operational translation of this principle remains inconsistent and fragmented. As highlighted in several presentations, there is a pressing need to move beyond rhetorical acknowledgment toward concrete, interdisciplinary — and indeed transdisciplinary — approaches that can account for the hybridity and entanglement of lived landscapes.

In this context, Cultural Ecosystem Services (CES) and Biocultural Heritage (BCH) emerge as boundary concepts: they bridge disciplinary silos, institutional

categories, and knowledge systems. Their strength lies in destabilizing conventional dichotomies, drawing attention to the symbolic, emotional, and identity-forming dimensions of human–environment relationships. However, as participants noted, the institutional uptake of CES and BCH remains fragile. Attempts to incorporate them into policy and management often encounter pressures for standardization, quantification, and 'evidence-based' metrics — pressures that risk diluting the complex, relational values they seek to protect and articulate.

### *Valuation, Power, and the Politics of Recognition*

Several speakers highlighted the risks of commodifying Cultural Ecosystem Services (CES) or reducing them to economic categories such as tourism, recreation, or aesthetic enjoyment. While cultural dimensions inevitably have economic implications, their reduction to market-based valuations risks eroding the epistemic, symbolic, and political richness that CES and Biocultural Heritage (BCH) embody. What is at stake is not simply the act of recognition, but the deeper question of **who defines what is valuable, and according to which criteria**.

In this sense, CES and BCH bring valuation into the political arena — a politics of language, representation, and legitimacy. They confront the uneven power structures that historically marginalized Indigenous and local knowledge systems, posing challenges that go beyond technical assessment and into the realm of ethical and political responsibility.

This raises urgent questions:

- How can local or Indigenous knowledge systems be acknowledged without being co-opted, romanticized, or stripped of their agency?
- What mechanisms can ensure that communities retain control over their cultural assets, narratives, and interpretations?
- Can CES serve not only as conservation tools but also as vehicles for cultural justice and self-determination?

The challenge, then, is not merely methodological but fundamentally ethical and political. Participatory approaches — such as oral histories, co-produced mapping, and community-based monitoring — offer promising pathways. Yet, as participants cautioned, these approaches must be grounded in **reflexivity about power asymmetries, epistemological authority, and the risks of extractive practices**.

### Co-production of Knowledge and Epistemic Pluralism

The call for interdisciplinarity was strong throughout the webinar. Yet what emerged was not merely an appeal for the integration of fields, but a deeper invitation to **epistemic pluralism** and **co-production of knowledge**. It became clear that it is not enough to 'include' cultural dimensions in ecological models or policy documents as external add-ons; rather, what is required is a rethinking of foundational categories — of what constitutes “nature,” “value,” “heritage,” and even “knowledge” itself.

This epistemic pluralism is not without its frictions. Heritage studies, ecology, anthropology, and law operate with different temporalities, evidentiary standards,

and normative assumptions. Participants stressed that, although these differences can create tensions, the urgency of the climate and biodiversity crises demands frameworks that are capable of embracing such heterogeneity productively, without flattening it.

In this regard, CES and BCH are more than analytical descriptors — they are **sites of epistemic negotiation and transformative catalysts**. They expose the limitations of dominant knowledge systems and open possibilities for more relational, situated, and pluralistic understandings of human–nature relations. Critically, they challenge not only disciplinary boundaries but also prevailing assumptions about sustainability itself, offering pathways for **redefining how sustainability is understood, valued, and practiced**.

#### *Toward a Research and Action Agenda for CES and BCH*

If the webinar made one thing clear, it is that Cultural Ecosystem Services (CES) and Biocultural Heritage (BCH) can no longer remain peripheral to sustainability science or policy. They must be mainstreamed — not as secondary or decorative elements, but as core components of how we conceptualize, implement, and evaluate sustainability strategies. Crucially, this integration must not come at the cost of flattening their inherent complexity, relationality, and cultural depth.

The discussions pointed to several priority areas for future research and action:

- **Developing inclusive and non-reductive valuation frameworks** that can accommodate the symbolic, spiritual, and emotional dimensions of human–nature relationships;
- **Strengthening the legal and institutional recognition of biocultural rights**, ensuring that cultural dimensions are not marginalized in conservation and climate governance;
- **Expanding participatory methodologies** grounded in trust, reciprocity, and long-term engagement, particularly with Indigenous and local communities;
- **Promoting CES and BCH not only as knowledge categories, but as living tools of resilience**, essential for navigating the uncertainties of climate change and socio-ecological disruption.

Ultimately, the significance of CES and BCH lies in their transformative potential: they challenge dominant narratives of sustainability that privilege technocratic solutions, bringing to the center not only ecosystems, but also the stories, rituals, and memories that sustain them. They invite us to see landscapes not merely as resources to be managed, but as **archives of meaning and possibility** — dynamic sites where past, present, and future are continuously negotiated and reimagined