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Special Session on Cultural Ecosystem Services: Frontiers in Theory and Practice

How can the Cultural Ecosystem Services of a Caledonian Forest be Realised?

1. Introduction: engaging with the Black Wood

The Black Wood of Rannoch in Highland Perthshire is one of the largest remnants of ancient Caledonian pine forest in Scotland. Arguably, it is a site of national cultural importance, yet the benefits that explicitly inform decisions about its management are almost exclusively those associated with biodiversity conservation. Over the last 40 years, this focus has proved very effective in the face of destructive economic interests. However, we argue that it downplays the importance given to the full range of cultural benefits, and constrains their recognition and expression to those realised by a policy of conservation, i.e. a science-informed (cognitive) aesthetic experience limited to a few knowledgeable individuals. This 'cultural problem' is not restricted to those who manage the Black Wood; it is reflected across society as a whole: the Caledonian pinewood ecosystem is neither an image nor a concept that has much traction in archives and museums, or parks and botanic gardens in the cities of Scotland.

This realisation was the impetus behind a series of residencies, workshops and site visits between July 2013 and July 2014 led by two environmental artists with a range of partners from government agencies, NGOs, local residents and academics from the arts and humanities (Collins et al., in press; Kenter et al., 2014). Over time, the project focused on a workshop, held in November 2013. The most important outcome was that a constructive dialogue began between diverse interests. A number of tangible proposals emerged: a) 'deep mapping' of ecological and cultural features, b) inclusive forest planning, c) a proposal for a 'Forest Way' initiative defined by arts, culture and Gaelic themes; and d) arts, humanities and ecology residencies, that might improve cultural connections with the forest and allow managers move beyond the 'precautionary principle'.

This paper explores three types of cultural benefit identified during the project: 'aesthetic and spiritual', '(bio)cultural heritage' and 'community-held'. Firstly, we argue that the Black Wood is a powerful aesthetic presence, which 'returns ones gaze': it is woodland of such complexity that it can't be seen in a day, and indeed evolves in one's eye and mind as it is visited over seasons and years (cf. Eaton, 2004). Secondly, we piece together historical narratives that show how the aesthetic form of the dominant 'granny pines', considered to be so attractive in the Black Wood today, actually embodies, among other factors, the contested land use history of the region (Murray, 2014; Peterken and Stace, 1986; Smout, 2000; Steven and Carlisle, 1959). Thirdly, we explore recent tensions between local interests and the agencies that oversee the Black Wood over its access and representation, and describe how the workshops and events revealed a common agenda that was largely compatible with a successful policy of conservation.

2. Analysis: towards an ecosystem services assessment

How might the Black Wood, and the Caledonian forests more broadly, be managed differently in ways that enhance cultural benefits while still meeting conservation objectives? We outline six potential future scenarios, listed here with increasing levels of intervention:

1. **Untouched wilderness**: nature takes its own path; human access is restricted; possible re-introduction of native species (Kirchhoff and Vicenzotti, 2014).
2. **Sacred or cultural ecology**: a reconsideration of forest landscape and its experience within Celtic traditions, spirituality, song and literature (Maddrell, 2015; Murray 2014).
3. **Native forest conservation**: the approach closest to current practice in the Black Wood; no active attempt to maintain the current aesthetic form, which could be lost.

4. **Social and ecological restoration**: active interaction with communities to encourage capabilities, identities and experiences, which in turn support biodiversity conservation.
5. **Revived cultural landscape**: historic forms of management to revive a relict 'organically evolved' cultural landscape through transhumance or silvipastoralism.
6. **Community forest economy**: local community management for diverse socio-economic objectives, possibly including income generation from visitors, timber and grants.

Analysis of the three broad categories of cultural benefits that emerged from discussions during the project – aesthetic/spiritual, cultural heritage, and community-held – revealed that they can be mapped respectively (with some modifications) onto the three main categories cultural benefit identified by Church et al (2014) for the National Ecosystem Assessment follow-on phase: 'identities', 'experiences', and 'capabilities'. Using the authors' judgement, scores were assigned to each scenario to indicate the approximate level of cultural benefit that would be realised by any one person for each of these three categories. The scores were averaged, and then weighted by a score for the number of people who would have access to these benefits, to derive a measure of total cultural benefit for each scenario. A separate estimate was made of the total biodiversity benefit of each scenario. The results suggested that, in order to realise a wide range of cultural benefits for a wide range of people, then Scenarios 4 and 6 would score higher than Scenario 3 (which most closely resembles 'business as usual'). Arguably a high biodiversity score would be given to Scenarios 1 and 4, suggesting that, overall, Scenario 4, 'social and ecological restoration', could offer the greatest aggregated public benefit.

3. Discussion: technical-rationality versus embedded deliberation

This analysis is only intended to be indicative. We have given equal weighting to different categories of benefit, and also have not considered the costs of each option. A similar exercise conducted with different stakeholder groups would be valuable, we suggest, but primarily as a means to facilitate social learning rather than to derive hard evidence for the best option to implement. This is partly because it is difficult to define, let alone quantify and aggregate, cultural ecosystem services (e.g. Chan et al. 2012), but also because such a technical-rational approach cannot easily account for the fact that values and benefits are not fixed and given, but are also created, in ways that are hard to predict, through the iterative process of participatory assessment, planning and implementation (e.g. Fish, 2011; Jordan and Russel, 2014).

4. Conclusions: realising cultural ecosystem services

The culture of scientific conservation strategically embraced since the mid-1970s by the Forestry Commission to protect the Black Wood has over time (and without malice or intent) allowed the discourse and practice of conservation science to exclude nearly all other social and cultural interests. Discussions about native pinewood management have tended to take place within a relatively narrow community of landowners, foresters and conservationists (Mason et al., 2004). The debate fostered in Rannoch needs to be extended to national level to encourage greater realisation of the diversity of cultural benefits associated with the Caledonian forest. By 'realisation' we mean the simultaneous recognition of existing values and benefits and the creation of new ones. Through this process, a synergistic relationship between community engagement and support for biodiversity conservation could emerge (i.e. Scenario 4), helping to create a unified 'bio-cultural' agenda that has not yet taken hold in the Black Wood, and one, we argue, that is unlikely to result from decisions informed solely by a technical-rational approach to ecosystem services assessment.

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