

Applying the ecosystem approach to collaborative land use and management in the Pentland Hills Regional Park

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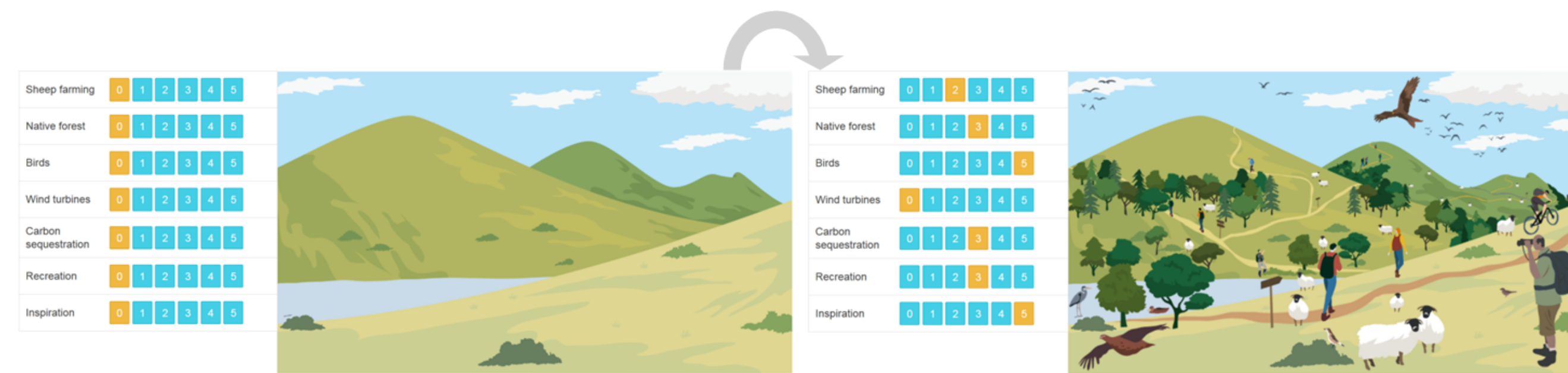


The landscape of the Park is upland in character and is valued for its remote qualities⁴

A step-by-step approach:

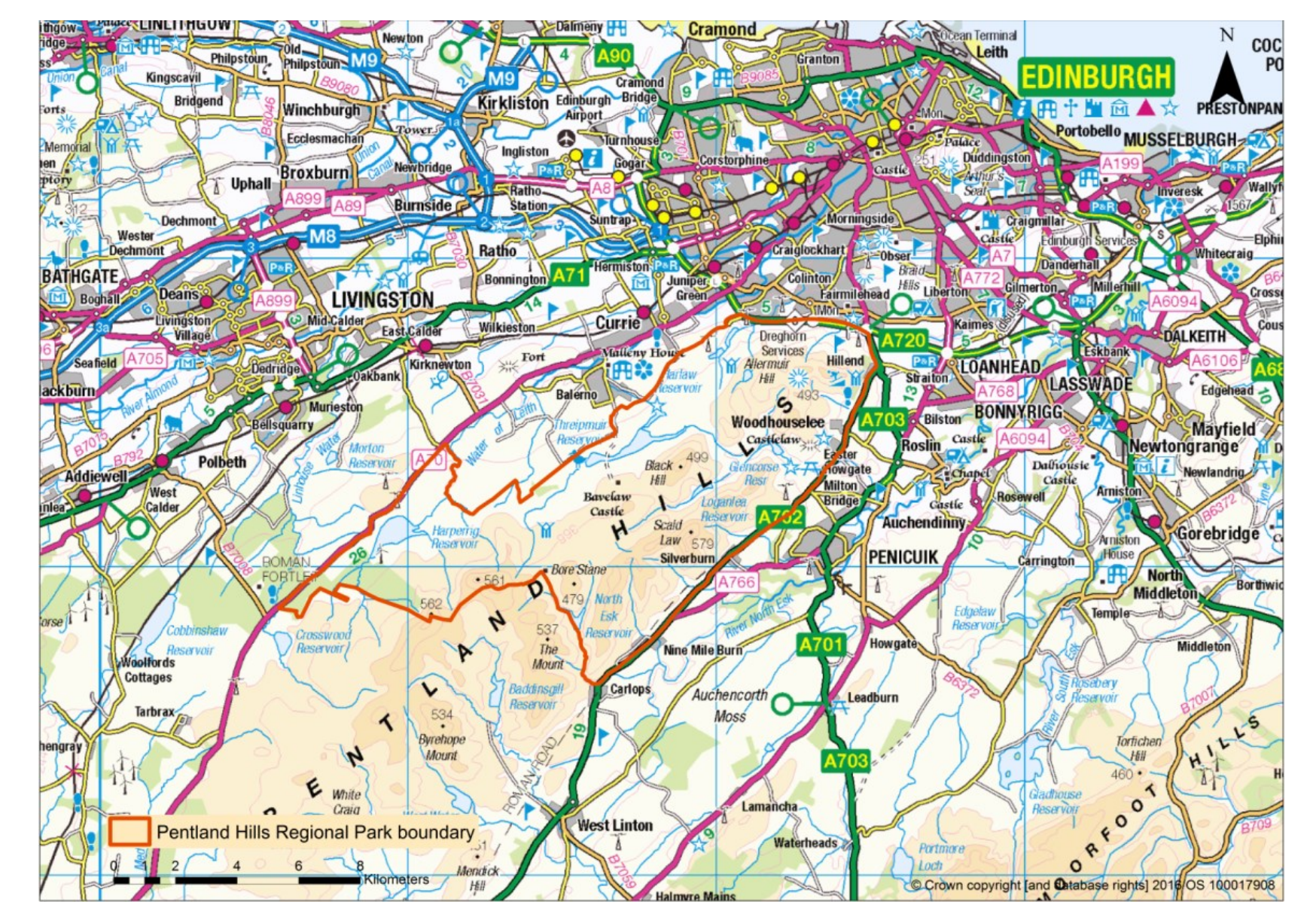
1. Exploring socio-cultural values of ecosystem services – as part of the EU funded research project OPERAs, the University of Potsdam, Germany, set out and found the Pentland Hills Regional Park as a suitable case study¹ in Scotland to explore socio-cultural values of ecosystem services.

The University conducted a visitor survey that updated socio-demographic and user information, explored different methods of socio-cultural valuation of ecosystem services and assessed landscape preferences².

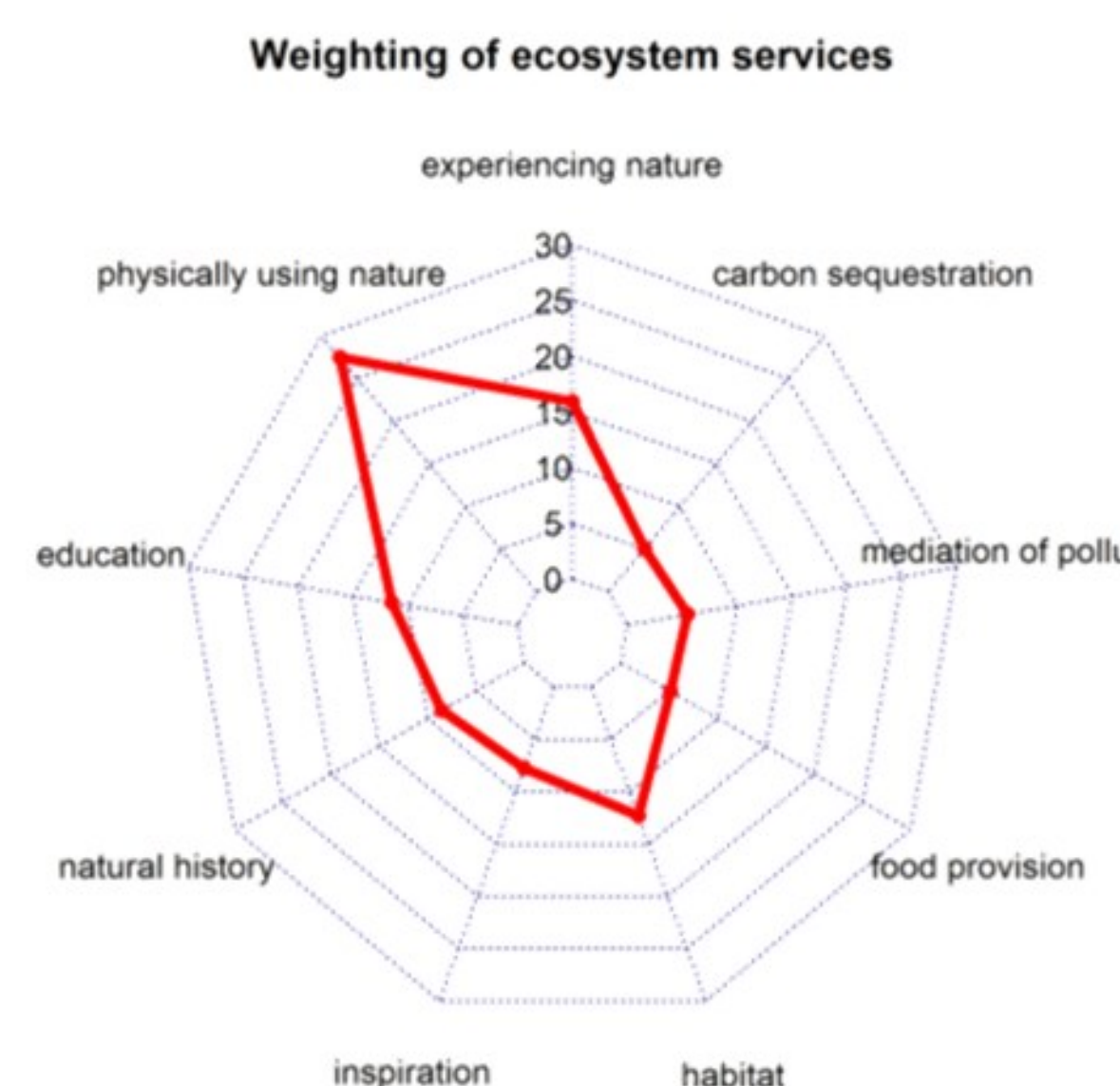
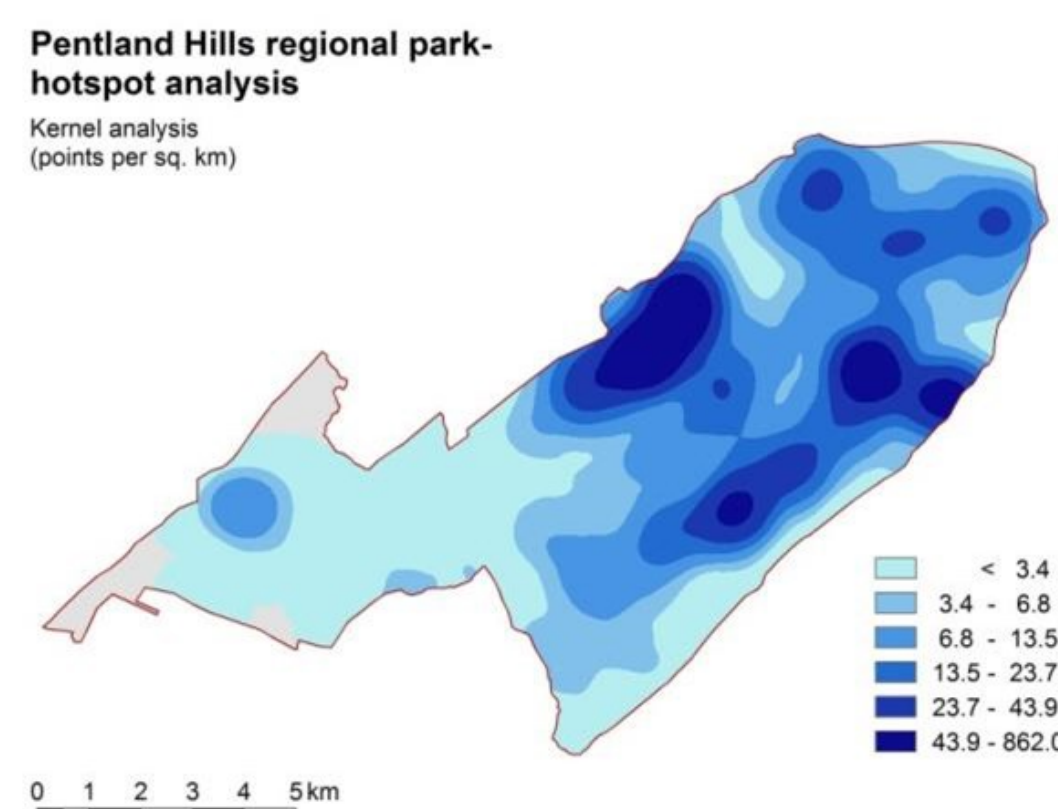


LANDPREF Visualisation Tool

The visualisation tool LANDPREF was designed to assess land use visions and preferences (above). A good spatial overview of visitor hotspots was achieved through asking them to indicate up to three points that they benefitted from in the Pentlands (left, results of a kernel analysis). The study showed that respondents attribute a high value to the cultural ecosystem services of the Park, such as the physical and experiential use of nature and the landscape, and habitat and biodiversity (right). Furthermore the study identified an overall land use vision for the Pentlands which does not require a significant change in the current management regime.



The Pentland Hills Regional Park is located to the south-west of Edinburgh⁴



2. Following on from the visitor survey Scottish Natural Heritage joined up with the University of Potsdam and, with the collaboration of ESCOM and the University of Edinburgh, commissioned a project to build on the survey. Collingwood Environmental Planning designed and delivered a project to engage with the Consultative Forum (CF) of the Park and seek to inform the development of the Park's next Management Plan through applying the ecosystem approach.

Key project objectives:

- Support the Consultative Forum to identify and assess the benefits they receive from the Park
- Support the Consultative Forum to identify, discuss and as far as possible agree land use management opportunities that aim to sustain key benefits in an equitable way over the long-term

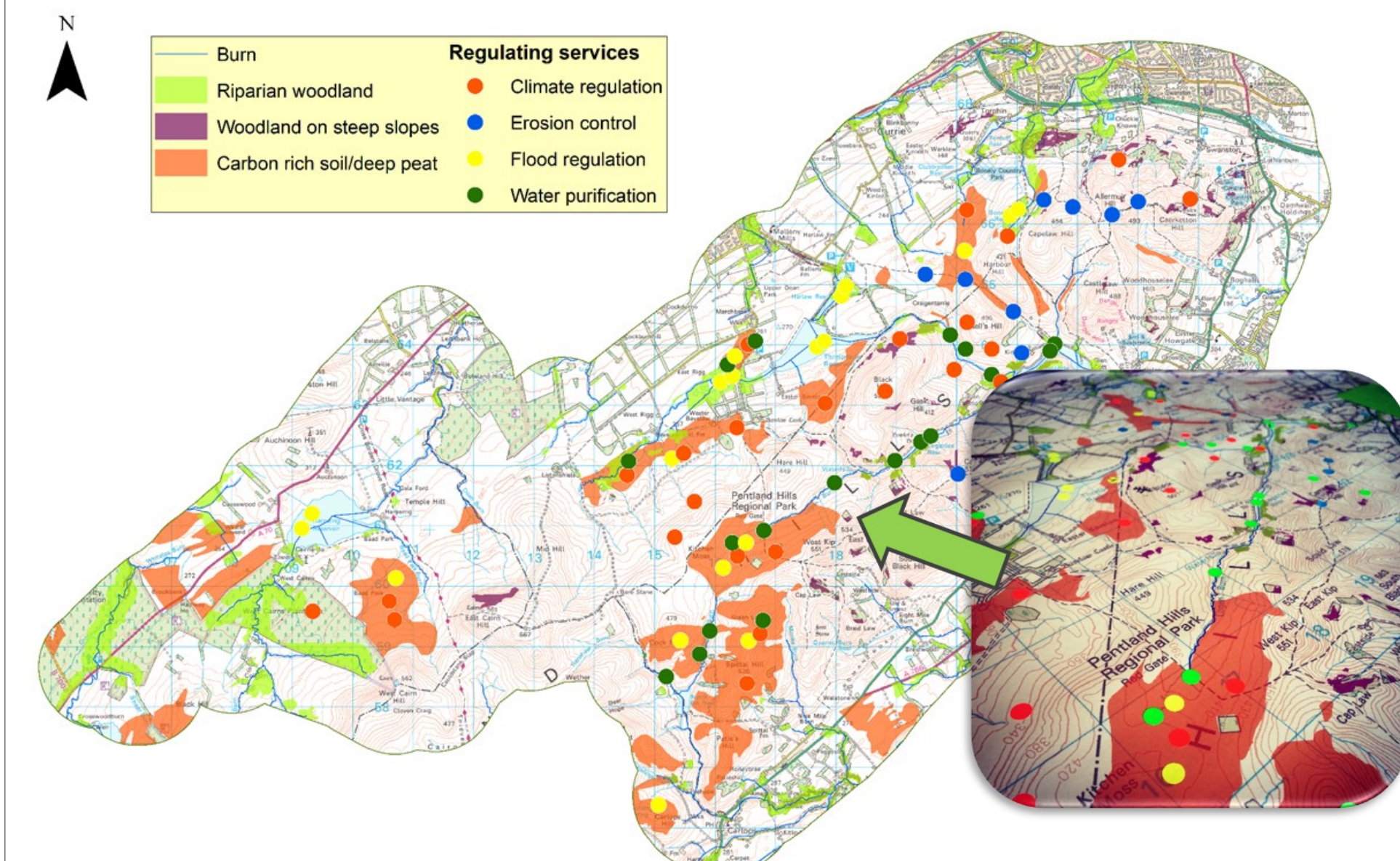


The Park's Consultative Forum is made up of land managers and owners, recreationalists, MoD, Scottish Water, public agencies, conservationists and local authorities.

The project's objectives were achieved through a number of workshop sessions:

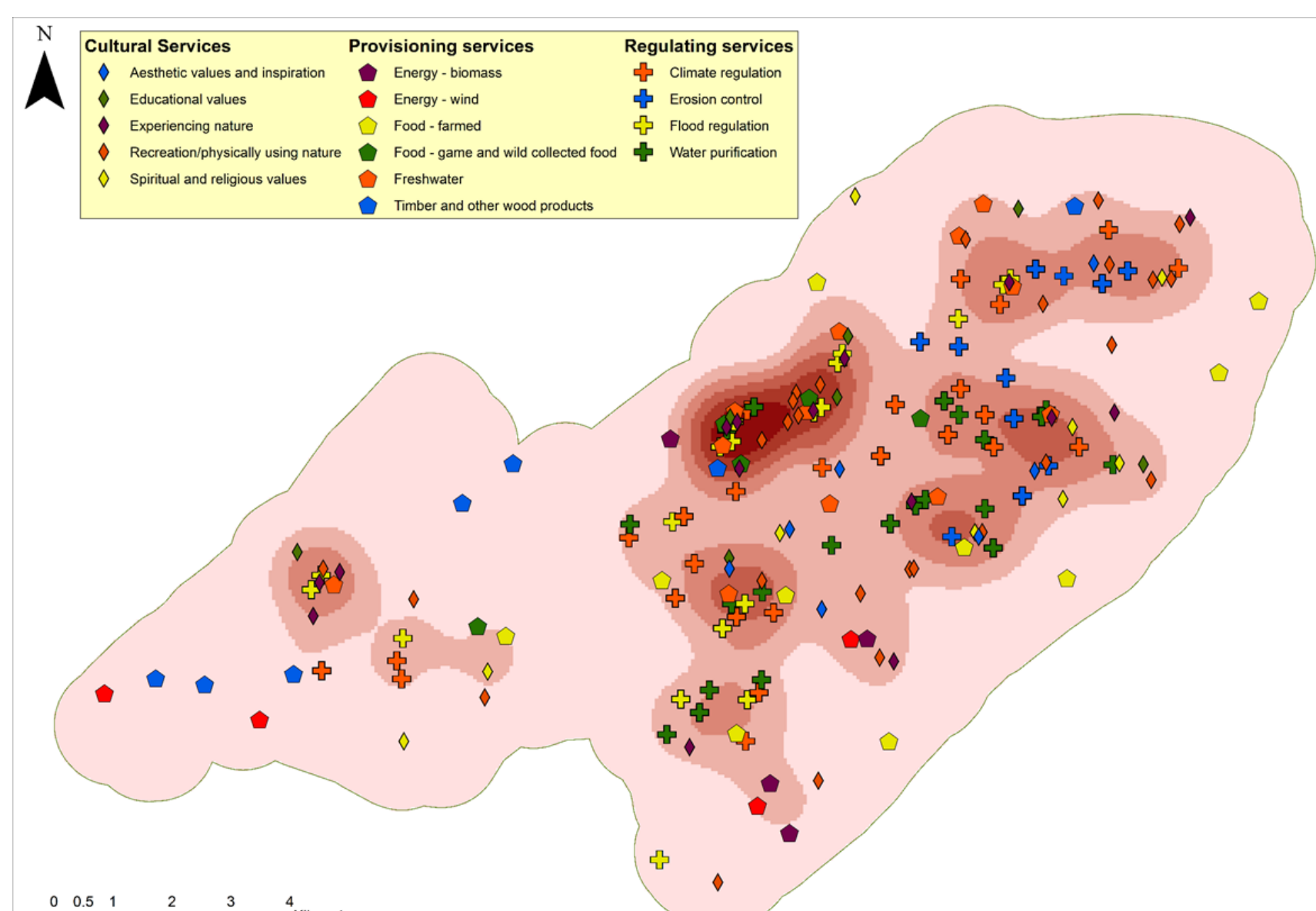
- Identifying and mapping ecosystem services provided by the Park - quantitative (how many, what type, where?)
- Valuing ecosystem services provided by the Park - qualitative (why are mapped ES important?)
- Prioritising criteria for determining value
- Identifying land use change and possible implications for the Park

Locations of ecosystem services identified by the CF⁴

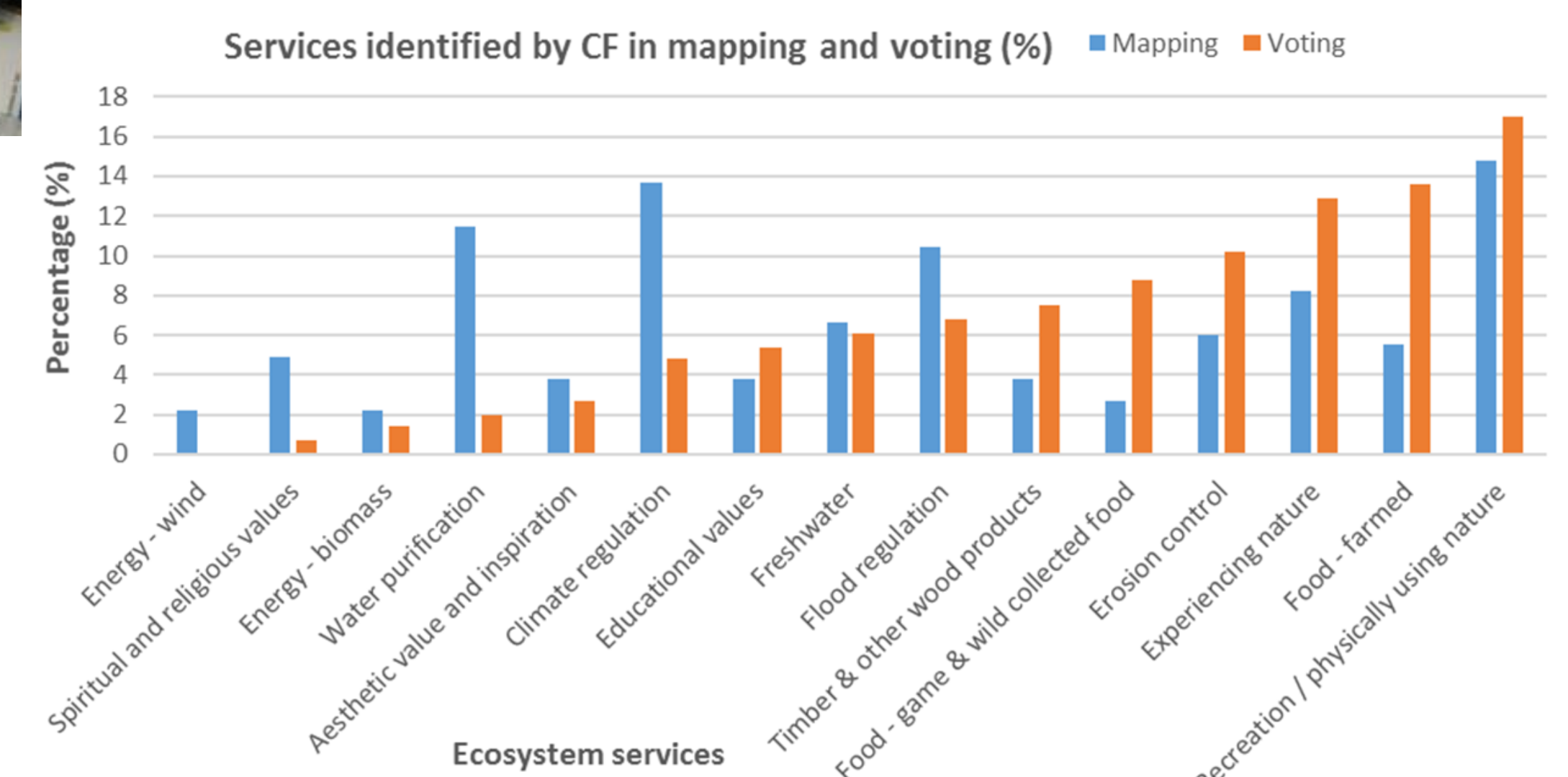


183 benefits were mapped across each of the three ecosystem service categories (provisioning, regulating and cultural).

Locations of five 'hotspots'⁴

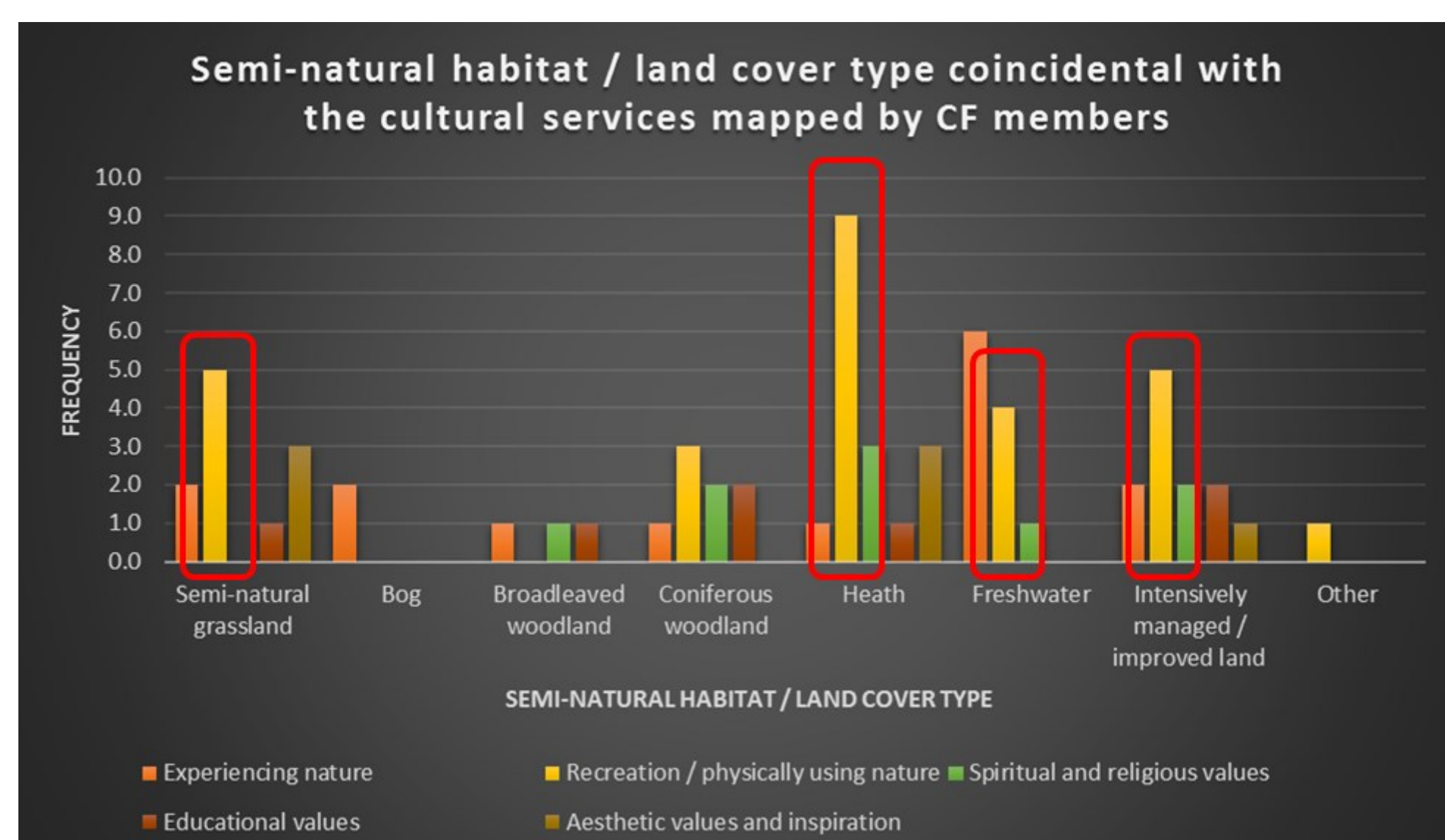


The identified benefits cluster (kernel analysis) into five broad 'hotspots'.



The benefits identified on the maps were counted to give a rough indication of priority. Members of the CF were then asked to 'vote' for their own priority benefits.

"Sites and paths provide the opportunity of great views and scenery whilst being active"
(CF member)



Determinants of socio-cultural value considered³:

- Landscape characteristics: which landscape characteristics contribute to the delivery of the benefit? Which features are most important and why?
- Beneficiaries: who will benefit? Where are these beneficiaries located?
- Use: what is it that makes a given use particularly important?

The beneficiaries of recreational services:

- People living locally, visitors from elsewhere in Scotland and abroad and schools
- Recreational benefits may be valued more by disabled users due to limited access provision
- Benefits enjoyed by some can create dis-benefits for others (there can be conflicts between recreationalists and local residents / landowners).

3. The ecosystem approach is taken forward by the CF as they have agreed eight recommended land use and management objectives, including promoting and managing sustainable recreation opportunities and a balance between semi-natural habitats and productive land uses. They have also carried out more detailed site management planning within the identified 'hotspots'.

All of this collaborative work is being used to inform the next Management Plan for the Park.

Novel aspects of the project were combining participatory mapping and valuation, planning at different scales and creating replicable tools for use by non-experts.

References

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- Schmidt, K., Martín-López, B., Phillips, P., Julius, E., Makan, N., Walz, A., under review. Key landscape features in the provision of ecosystem services: Insights for management. Submitted to Land Use Policy.
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