

## The Brief in brief

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This brief explains how biodiversity can contribute to recreation in many ways. The popularity and value of outdoor recreation can lead to powerful arguments for conservation. On the other hand, there can be conflict between the provision of recreational opportunities and conservation objectives.

## Intended audience

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The brief is for local communities, politicians, decision makers, and the population in general.

## Topic

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### (i) Biodiversity underpins outdoor recreation

Outdoor recreation is an important leisure activity for large proportions of the population in most countries. Whether it is water, forests, mountains, or a mix of many ecosystems, people love the experience of being closer to nature.

Nature-based recreation, involving interactions with and appreciation of the natural environment, largely depends on environmental attributes such as species richness, diversity of habitats and general environmental quality. Some activities such as angling or birdwatching depend very directly on specific parts of biodiversity. Others such as walking, biking and watersports rely on the ecosystem more generally.

The aesthetic qualities of natural areas that underpin visitor experiences are in part due to the range of biological diversity occurring within an area, directly through the sights and sounds of nature. The BESAFE review on aesthetic values showed that the biodiversity elements most recognised by stakeholders as key for recreation and aesthetic services were fauna and flora species, particularly birds, fish and mammals. In the Andalusia national parks case study (Spain) the role of traits such as the visual attractiveness of flowers and foliage were highlighted, and particular species, such as water birds, were stated as the “key attractions” of tourism activities; the presence of native traditional livestock breeds was also important.

Of course, the appreciation of these species is dependent on underpinning supporting services, habitat and environmental quality, including clean air and water quality provided by the regulating functions of ecosystems. These benefits are often influenced by a wider ecosystem than the direct area used for recreation - for example, biodiversity in whole catchments provides water quality for boating, swimming, angling and waterside walks downstream. Managing and valuing these large-scale impacts is challenging.

### (ii) Biodiversity-Recreation conflicts

Although pleasing landscapes with high levels of natural ecosystem function will enhance visitor values, many recreation activities can conflict with conservation objectives, in particular conservation of pristine and semi-natural areas. Some conflicts can be quite extreme, for example ski resort development. More

generally, some more moderate level of conflict is to be expected. This can arise through infrastructure (e.g. car parks, visitor centres), emissions and impacts from activities (e.g. oils, chemicals, exhaust emissions, noise and bank erosion from motorised boating), waste (e.g. litter, lost fishing gear) and simply using the area (e.g. path erosion, trampling plants, picking flowers). Most of these impacts will tend to increase with greater numbers of users, and high intensity recreation is likely to have an impact on biodiversity conservation. The environmental impacts, and visitor congestion itself, can in turn damage the recreational experience. An example of specific trade-off arises in the Andalusia National Parks (Spain) case study, where there is conflict between non-extractive uses of species conservation and spiritual values, seen as important by conservation professionals and tourists, and recreational hunting, which is important for local stakeholders in both Doñana and Sierra Nevada protected areas. To reduce the conservation and recreation conflicts, visitor management strategies are extremely important.

## Usefulness: Recreation-based arguments for conservation

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The benefits of recreation, tourism and aesthetic experience supported by biodiversity can be expressed through a range of arguments, which may, alone or in combination, be suited to different audiences and different contexts:

- Simple enjoyment: people highly value their outdoor recreation;
- Psychological and spiritual well-being: being in nature contributes to mental health, with benefits for individuals and for employers, families and society in general;
- Physical health: outdoor recreation and exercise improve human health, again with benefits to individuals and families, and reduced healthcare costs for society;
- Livelihoods and employment: many jobs are supported by the recreation and tourism industries, including in rural/marginal communities;
- Economic activity and growth: expenditures on recreation and tourism (travel, meals, hotels, equipment and so on) support important industries, with benefits for rural areas and the national economy.

A wide range of cultural ecosystem services were identified within case studies conducted in Spain, Romania, Norway and Northern Ireland mentioning the value to local people and tourists of a unique landscape, cultural heritage, peace, tranquillity, spiritual values, recreational benefits and education.

These values can be expressed in different ways. Numbers of visitors or visits is perhaps the simplest concept. For individual sites, this can be carried out through surveys or automatic footfall or carpark counters. National surveys provide data on outdoor recreation more generally.

There is often a tendency to focus on local economic impacts of recreation. Visitor expenditures may be adjusted using economic models to take account of costs and to allow for indirect and induced expenditures via multipliers. Out of the thirty four studies reviewed in relation to recreational services in the context of the project, eleven value recreational services on the basis of the tourist expenditure they are expected to generate; these studies used the market price approach. Jobs supported are often calculated based on visitor expenditures, again with adjustment for indirect and induced benefits.

These methods focus on economic impacts and do not attempt to estimate the benefit to tourists and recreational users directly. Expenditures do reflect visitors' willingness to pay for visiting an area and using the recreational services to a certain extent, but expenditure may include payment for many other goods and services and should be interpreted with care. Furthermore, many highly valuable natural recreation activities require little or no expenditure – local parks and walking, for example – and focus on expenditure will not capture these values.

Natural spaces provide opportunities for physical exercise, including walking, cycling or activities such as "Green Gym", contribute to reducing the level of stress, and improving mental wellbeing. Green infrastructure also has a positive effect on the occurrence of respiratory diseases as it contributes to the improvement of air quality.

In many cases, the decision context relates to changes in the quality of some recreational activities, for example due to improved facilities or changes in environmental quality or biodiversity. Measuring the resulting change in visit numbers or values can be challenging. Often, it is not clear quite how the changes in quality will link to changes in use, or the value of recreational experiences. There are also important spatial interactions, due to availability of alternative sites for recreation. Where a site improves, some new visits may simply be transfers from other sites. Similarly, where a site is damaged, some lost visits may transfer to other sites. There may also be difficulties associated with sustainability, where the capacity of the environment to continue providing the service is being run down by over-frequentation of some natural areas.

## **Transferability: Strengths and weaknesses of arguments**

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The strength of the different arguments will vary depending on the audience. Recreational users will focus on their own enjoyment and may also be receptive to arguments about health. Arguments may be particularly salient if they target specific user groups – for example separately identifying benefits to birdwatchers, anglers, and boaters. Certainly people can be extremely attached to their outdoor and aesthetic opportunities and strongly resist change – in the UK; for example, a proposed sell-off of public forest managed by the forestry commission was dropped following massive opposition. Resistance to wind-farms on aesthetic grounds is very common, both from residents and recreational visitors.

Local communities may be most receptive to arguments about economic expenditures, value added and jobs supported. If these values can be 'captured' at local level, they can be a strong incentive for conservation. However if they leak outside the area – through buying in supplies, absentee business owners, employees commuting to the area – these arguments will hold less sway with locals.

The strength of these arguments with decision makers will depend on their objectives and interests. National treasuries and local decision makers may be most interested in the financial and employment outcomes. But in some cases health outcomes and recreational opportunities are highly salient.

## Lessons learned

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- Nature-based recreation is popular: establishing a clear link to biodiversity conservation is often relatively straightforward, and can play strongly with beneficiaries and related audiences.
- Conflicts between recreation and conservation are nevertheless common and argument strategies will often have to address ways to resolve these issues.
- Effective protection of biodiversity-rich areas such as natural or semi-natural forests, wetlands, coasts and mountains can ensure provision of ecosystem services such as landscape aesthetics and biodiversity for eco-tourism and outdoor recreation.
- It can be important to demonstrate that conservation for recreational use brings jobs and income to local populations, in order to establish such uses as alternatives to (over-)harvesting for provisioning services (consumption or sale) and to justify conservation expenditures.

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## Looking for more information on effective arguments for biodiversity?

For more BESAFE results, including separate briefs focusing on other case studies and various aspects of argumentation, see <http://www.besafe-project.net> and BESAFE toolkit <http://tool.besafe-project.net>.

This brief is a result of research carried out under the BESAFE project. This brief was written by **Dr Rob Tinch** ([rob@eftec.co.uk](mailto:rob@eftec.co.uk)) and **Laurence Mathieu** at [www.eftec.co.uk](http://www.eftec.co.uk). Further information is available at (website, report, publication...)

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