What works in arguing for biodiversity?

The background

In the second half of the 20th Century, arguments for biodiversity were focused on the conservation of charismatic and rare species, habitats and spectacular landscapes through protected areas networks. The early 2000s saw a major shift, through the Millennium Ecosystem Assessment and other influential initiatives, towards recognising the importance of ecosystems and their biodiversity in providing a wide range of services for humans. This "nature for people" framing sought to widen the range of arguments, and to "mainstream" conservation, attaching new importance to conserving nature outside the protected areas networks, and throughout all areas of human activity. At the same time, it created a context, and policy demand, for attempts to "value" the contributions of nature in economic terms comparable with measures of economic activity.

This shift, and in particular the use of monetary valuations, has been contentious, with some taking a view that arguments driven by ecosystem services and their economic value have become too prevalent, and potentially dangerous for biodiversity conservation. While economic arguments resonate strongly with some policy makers, public support often remains stronger for more traditional nature conservation motives. Most recently, a softer approach has started to emerge , with a greater focus on the resilience and adaptability of social-ecological systems.

The challenge

Meanwhile, however, biodiversity has continued to decline. The question still remains: what arguments can convince society to take the actions necessary to stop biodiversity loss? In the BESAFE project we investigated how the effectiveness of different types of arguments for biodiversity protection depends on when, where and how they are used, seeking to determine how the effectiveness of biodiversity argumentation can be improved.

Biodiversity protection depends on people and the decisions they take. Different individuals and institutions hold different values and priorities, and will be convinced to protect or reduce their impact on biodiversity by different arguments. Understanding how argumentation works, on what value judgements different arguments are based, and why some arguments are accepted and others rejected in particular situations can be crucial to influencing decision processes and making people better aware of why biodiversity needs to be protected.

BESAFE's findings

Use of arguments at different governance levels and policy stages

At the European (European Union) level of governance, arguments for biodiversity protection have become almost exclusively dominated by utilitarian, macro-economic and ecosystem services arguments. Moral reasons for biodiversity protection are still acknowledged, but not emphasised. National authorities echo this argumentation, but also refer to legal obligations as arguments to justify their adoption of EU policy.

More arguments are used where there is a wider range of audiences to convince. This applies, for example, to local implementation of biodiversity targets, and to development of non-binding, voluntary agreements and targets. Ecosystem service based arguments often play a role, even though non-specialist audiences are usually unfamiliar with the concepts and the terminology.

Effective use of arguments

A key observation from our case studies and working with a range of stakeholders is that the effectiveness of arguments depends on tailoring the choice of arguments, and the way in which they are used, to the situation and audiences. What works, where, and when is context dependent and not easily generalizable. A number of general conclusions can, however, be drawn concerning the process of finding the right arguments and the way to use them most effectively:

- *Understand the situation*. Knowing the situation, the people involved and their interests is important for the choice of arguments.
- *Tailor arguments to the audience.* All parties involved, and not just the decision makers, can be targets to be convinced. This requires tailoring information and format to the understanding and interests of the audience.
- *Use combinations of arguments.* Combinations of arguments help broaden the appeal and facilitate dialogue, especially when combining arguments on the value of nature for its own sake with those on the benefits of biodiversity for local livelihoods and other specific groups.
- *Use positive framings*. Positively framed arguments (emphasising benefits of biodiversity) are often more effective than negatively framed ones (focusing on threats, risks and losses). People from different backgrounds have different levels of understanding and use different language and terminology.
- *Be persistent*. Decision making takes time, and the parties involved have to learn to know and trust each other. Processes therefore need to run their course. Arguments are more effective if they persist throughout a process, and repetition and reformulation of arguments can be important tools for learning and building acceptance.
- *Think across policy levels*. Effectiveness can be increased by deliberation using arguments and interests from multiple policy levels (e.g. local, regional, national). The bottom-up diffusion of local livelihood arguments to higher governance levels brings 'real' context to strategic debates, while local concerns can benefit from being set in a broader context.

What does an ecosystem services based approach add?

By reviewing scientific evidence on the connection between ecosystem services and biodiversity we found that in general a higher level of biodiversity facilitates a higher level of service delivery. Awareness of these ecosystem services can provide additional reasons for biodiversity protection. On the other hand, higher levels of use of a services can damage biodiversity. Over-exploitation of services – especially provisioning services such as food and water, but also some cultural services such as recreational fishing or tourism – is one of the main pressures from which biodiversity suffers. So policy and management must be designed carefully to balance competing demands for different services with protection of the ecosystems and biodiversity that provide them. Restoration and protection measures may increase delivery of some services, especially regulating and cultural services such as flood protection and aesthetic value, but it may also be necessary to limit extraction of some ecosystem goods and services to avoid over-exploitation. The capacity of an ecosystem to deliver services can also be increased by reducing other pressures such as pollution or the spread of invasive species..

Results of a survey comparing perceptions of the relationships between biodiversity, ecosystem services and values amongst researchers, policy makers and NGO's showed a widespread acceptance of the role of economic valuation in biodiversity decision-making, though evidence gaps remain an important barrier. This suggests the need for further studies to strengthen the evidence base for societal values of a range of ecosystem services. The study also found that, irrespective of their perspectives on whether or how biodiversity can be valued, stakeholders displayed a widespread acknowledgement of the ethical importance of biodiversity protection. At the same time, they rejected the concern that valuation of ecosystems is likely to provide a justification for their destruction.

This diversity of views suggests that there is room for a wider range of arguments for the conservation of nature, and that monetary and intrinsic value arguments can be mutually reinforcing. There may be a tendency to assume that decision-makers are forced to rely largely on financial arguments, and that monetary valuation of ecosystems is the only way of demonstrating their importance. But it is clear from our study that many stakeholders from all walks of life – including high-level decision makers - attach considerable importance to the intrinsic value of nature, and place a high value on cultural and aesthetic ecosystem services.

Ecosystem service arguments were found to play an important role in the BESAFE case studies. Arguments drawing on knowledge and awareness of the synergies and trade-offs between services proved valuable in finding solutions tailored to the situations, balancing the social, economic and ecological interests of different groups. However, non-specialist awareness of the concepts and terminologies of ecosystem services is generally low, though this varies considerably depending on the location, occupation, socio-economic situation and degree of dependence of stakeholders on specific services. There is evidence from the case studies that better communication with stakeholders about the importance of ecosystem services, and the way in which they depend on underlying biodiversity, can enhance the value they place on lesser-known services. However, stakeholder values and preferences partly reflect their personal interests and dependence on ecosystem services: better information may help people to understand and articulate these values, but cannot be expected to affect fundamental shifts in these stakes.

Conclusions

Top-down nature protection is not enough

The top-down implementation of a system of protected sites and species has not been enough to stop biodiversity loss - as is recognised in, for instance, the European Union's new Biodiversity and Green Infrastructure strategies, and in the CBD's Aichi targets. We need a much more integrated approach to protection, which also targets the biodiversity outside protected areas and seeks to 'mainstream' biodiversity concerns across all policy areas. The success of this approach largely depends on convincing actors at all scales of the necessity and benefits of protecting and investing in biodiversity.

Foster bottom-up initiatives

Effective biodiversity protection requires processes that consider arguments from different governance levels and that take the interests of all parties into account. This requires the active participation of all parties in the deliberation process, the building of trust and working towards balanced solutions. This suggests the need for bottom-up processes where the role of authorities is one of initiation, facilitation and monitoring. Authorities should invest in adapting their role to guide and encourage these bottom-up collaborative decision-making processes and actively support an adaptive management approach wherever possible.

Tailor arguments and awareness raising to audiences

The dominance of economic and ecosystem services arguments in European and national policies suggest that this type of argument is seen as central to gaining high-level policy-maker support, but our results show that raising support at the local and regional implementation level may require a larger range and a better tailoring of arguments.

There is potentially still a lot to be gained at this level by increasing awareness and understanding of ecosystem services and social-ecological processes. However, authorities should recognise the need for the support, involvement and contributions of parties who are motivated by other reasons, such as love of nature or the value of nature for its own sake. Over-emphasising the economic arguments could disrespect and possibly even erode this support base.

Use packages of positive arguments

There is a role for several lines of arguments in favour of biodiversity protection, including arguments based on the rights of species to exist, on the value to humans, and on the "insurance policy" approach stressing adaptation and resilience. Framed positively, these arguments should be seen as complementary, not as alternatives: rather than assuming, for example, that decision-makers will only respond to financial arguments, present arguments that meet both financial and moral objectives. Perhaps the key to improving biodiversity protection is to ensure a better balance between these arguments, and wider dissemination of these arguments to all stakeholder groups. In particular, our results could be used to justify a stronger emphasis on ethical and moral arguments for biodiversity conservation, alongside the economic arguments, as it seems that many decision-makers and other stakeholders respond positively to those arguments.