

How can we make conservation more effective?

Everyone involved in conservation seems overworked and many seem to be stretching budgets close to breaking point. The time and money that can be devoted to conservation activities is far less than is needed to tackle the pressing global conservation problems, and so it is obviously important to ensure that any effort is allocated in an effective manner. Remarkably, however, there is little information as to what is effective in conservation. There is a real possibility that we could achieve more for less effort.

This lack of evidence on the effectiveness of conservation actions can be considered as conservation's Achilles heel. To quantify the problem we carried out a survey of land managers in Eastern England to see how they obtained their information. This showed that the main source was common sense and personal experience (54.2%), with speaking to other practitioners and advisers contributing another 32.4%. The primary scientific literature contributed only 2.4% (Sutherland *et al.*, 2004). Similarly Pullin *et al.* (2004) identified a need for more systematic use of evidence in writing conservation management plans.

An associated problem is that most conservation advice does not have a clear identifiable source. As an editor of probably the most widely used book on conservation advice in the UK (Sutherland & Hill, 1995) I can state that most of the available conservation advice is given without providing traceable evidence. It is not possible to determine if most advice is the result of a detailed, carefully planned experiment or simply whether someone thinks that may be the sensible approach. It is perfectly reasonable to use the opinion of an expert if there is no other information, but it should be clear when this has been done. Furthermore, the original study might have been done in another habitat, season or using different methods, and so the advice may not apply. Again if this is known it can be taken into consideration.

To overcome these problems a group of conservation organizations met in 2004 and agreed to create a website to collate available information on this subject. The resulting website (<http://conservationevidence.com>) is used to store information on the effectiveness of conservation management. As well as collating information from the literature, information on the experience of

practitioners is also very welcome. Conservationevidence.com has been initiated with a small grant from the British Ecological Society and funding is being sought to maintain and extend it. The participating organizations have agreed to add cases from their own work. Conservationevidence.com is open access so that anyone can search the site and extract information.

Land managers tend to share information with others in their area and within the same organization. For example, in our study of the sources of information used, over 22.0% of the information was from consulting others in the region but only 2.4% from consulting those outside the region. Many conservation issues, such as invasive species or creating bat hibernacula, are global and it would be invaluable to be able to review the experiences of anyone else in the world who has dealt with a problem, before deciding what to do. Although Conservationevidence.com started off with UK collaborators, the aim is to collate global information. A number of international bodies are now collaborating and others are very welcome.

Although academics can easily obtain most scientific papers, usually without leaving their desk, this is much less easy for many practitioners. The website thus also provides summaries of research papers. The plan is to also include information from unpublished reports, as these are notoriously difficult to obtain.

How does this overlap with other means of sharing information? One solution to the lack of exchange has been to create web-based discussion groups for problems and solutions. Many of these have been successful and fill an important niche, but the information sources are not usually documented. One option is to ensure that the details of the discussed cases are stored within Conservationevidence.com.

Traditional case studies are time consuming to produce and intimidating to read. They usually describe all the changes that took place over an extended period. It is then usually difficult to relate the responses of biodiversity to the changes that took place. The information that is usually more useful is to document a change in management and the response that occurred. A traditional case study would then be broken down into many cases. My vision for the future is that land managers routinely collect information on the effectiveness of at least a couple of conservation actions each year and add them to Conservationevidence.com. The accumulated

cases will then provide the ability to examine the effectiveness of management actions.

Each doctor in the UK is given a copy of a book that provides the evidence for the effectiveness of different treatments. The Centre for Evidence Based Conservation (<http://www.cebc.bham.ac.uk/>) is providing reviews of evidence on the effectiveness of conservation interventions, and disseminating results to support decision-making. The long-term dream is to have a resource for conservationists that documents the evidence behind each method for dealing with each problem, whether the means for controlling zebra mussels or how to reduce damage to coral reefs from sports divers, for example.

These proposals are not radical. Medicine has faced and overcome a comparable problem. The approach used to be that a hospital followed the advice of its consultants, so that each hospital had its own tradition. Comparing the success of different hospitals showed that some treatments were more successful than others. These revelations led to the creation of the subject of evidence-based medicine, in which the systematic review of the effectiveness of treatments is now routine practice. There are now numerous institutes that compare the effectiveness of different treatments and provide guidance for medical practitioners. Conservation is now probably in a similar state to medicine 20 years ago, and with each year that passes we lose more opportunities to collate evidence.

Of course conservation has regularly used evidence, and I do not wish to underplay the impressive achievements and successes of conservation biologists. However, there are so many problems, such as the great array of invasive species, that the available scientific evidence only covers a fraction of the issues. The experience of managers is essential in filling the void, but it needs documenting and collating.

In discussing these plans with conservationists a common response is to repeat the observation that we are usually overworked and with stretched budgets. Another administrative task is not what most conservationists are searching for. However, if the initiative of Conservationevidence.com is successful, it should save time and money by improving the effectiveness of

conservation. I would like to promise that as a result of more effective conservation practice we will all then be less stressed and possess more flexible budgets, but with the enthusiasm and determination of most conservationists I suspect that all it will mean is that we will just strive to achieve more and thus still be overworked and underfunded.

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Note from the Editor

As I write, in November 2004, the increasing popularity of *Oryx* with authors is clearly manifesting itself, with a 40% increase in submissions so far this year. Encouraging authors to condense their papers, however, has so far enabled us to maintain the acceptance rate of submitted manuscripts at c. 48% whilst at the same time increasing the number of papers that are published.

The Impact Factor for *Oryx* for 2003 was 1.25. Impact Factors, which are one measure of the influence of a journal, measure the frequency with which a journal's articles have been cited. These calculations are published by the Institute of Scientific Information (<http://www.isinet.com/isi>) in the summer following the year of coverage.

Please note that the *Oryx* Centenary Archive (1903–2003), on both CD-ROM and DVD, is still available. For further information, please contact oryxcd@fauna-flora.org, or otherwise write to me at Fauna & Flora International.