

Certification of protected areas

Tormod V. Burkey[†], Senior Scientist, DNV; Frauke Fischer[‡], Wildlife, Conservation & Management

Abstract

We argue for a system of certification (or verification) of protected areas to assure sustainable financing and support for efficient park management. Benefits include: attracting donors to well designed and well managed protected areas; attracting donors to protected areas in need of improvement; implementation of a system for continued improvement; new performance measures for donors, recipients and conservation projects; greater accountability; independent verification; and improved information for such endeavors as the World Database on Protected Areas and monitoring of CBD and MDG goals. It is our opinion that there is real value added to having verification by independent third parties, rather than merely an added cost of conservation.

We argue that commitments to conservation targets are not met simply by establishing paper parks and parks where opportunity costs are low and biodiversity values may be also. Assessing and improving the *quality* of protected areas is also necessary if we are going to attain necessary conservation outcomes.

We outline briefly what such a certification scheme (or ranking) might encompass, which actors might have an interest in such a scheme and who would pay for it. Verification by an independent third party avoids the conflicts of interest that arise when actors report on their own performance (which otherwise results in such reports being partially discounted by stakeholders). In addition it helps to identify strengths and weaknesses, and serves as a tool for continual improvement. A ranking system,

^{†††} DNV Research, Veritasveien 1, N-1322 Høvik, Norway. tvburkey@alumni.princeton.edu

^{‡‡‡} Animal Ecology and Tropical Biology, Biozentrum, Am Hubland, 97074 Würzburg, Germany. fischer@biozentrum.uni-wuerzburg.de

for instance a one to five star ranking, would allow easy comparison of protected areas in both space and time, and provide a handy performance measure for reporting and adaptive management.

Introduction

The global loss of biodiversity is a widely recognized fact that has engendered a fauna of international treaties and contracts such as the Convention on Biological Diversity (CBD), Ramsar and the Bern Convention, aiming to halt this negative trend. International concern for the global loss of biodiversity has led the 188 signatory nations to the CBD to commit to the 2010 target: to significantly reduce the loss of biological diversity by the year 2010. The EU and EEA member states have taken the 2010 target one step further: to *halt* the loss of biodiversity by 2010 (<http://countdown2010.net>).

While in the past loss of species and ecosystems only attracted the interest of a small number of people and organizations focusing mainly on ethical problems related to the loss of biodiversity, it is becoming more and more evident that this development will induce long term negative effects on human life and economy in general (Balmford et al. 2002), putting the topic on the agenda of governments and large companies. "Business and biodiversity" has been a focus theme of recent conservation events such as the World Conservation Forum (Bangkok, November 2004) and the Conference of the Parties (COP 8) of the Convention on Biological Diversity (Curitiba, March 2006).

While different strategies are discussed and applied to protect ecosystems, animal and plant populations, species and genes, no such scheme is generally accepted and/or applied. National parks and other protected areas are at least part of the solution as long as no other effective instruments for limiting human encroachment on natural habitats are available and are thus considered being the core units of in situ conservation (Chape et al. 2005). However, protected area conservation as applied today has several shortcomings in relation to designation, management, funding, and sustainability to name a few.

Today approximately 13 % of the land surface of our planet is under some level of protection, at least theoretically (IUCN 2005). However, the actual status of these parks and reserves differs dramatically, many of them being mere “paper parks” with no protection whatsoever (Terborgh 1999). Additionally, many parks are not necessarily situated in high biodiversity areas, but may have been sited where they are for a variety of historical reasons. Often reserves (especially the large ones) are found in dry or alpine areas, scrub, icefields, etc. that are (or at least were) of little value to humans (and sometimes of little value for animal populations also). This is a cheap way to meet the commitments to the CBD and other international treaties, as well as national goals, that require 10% or some other proportion of the area protected, but may be of little conservation value and hence violate at least the spirit of the agreements. The global protected area network is hence far from being complete (Rodrigues et al. 2004).

The one category of protected areas that has a rigorous standard for entry is the UNESCO World Heritage Sites (WHS). Because of this rigorous standard, WHS have been adopted as no-go sites by companies in their biodiversity policies (e.g. Shell, ICMM) and by financial institution in their lending policies (e.g. Goldman Sachs). Yet even the World Heritage Sites has no real system for evaluation or reevaluation once a site has been granted the title. In the interest of maintaining the values identified in WHS over time, they also should be subject to scheduled audits by an independent third party. A certification scheme with a ranking system seems a promising means of giving a spur to continual improvement.

The success of international treaties and commitments depend in part on whether parties can be held accountable, as well as the robustness to cheaters. Cheating can in some cases be dealt with by the setting up incentive structures that discourage cheaters and encourage participation (Cairncross 2004). Certification is a type of mechanism that encourages participation in that it can enable the rise of consumer demand for a certified good.

A certification scheme for protected areas should include the assessment of three broad criteria: conservation value, management, and security of investment. The three components would be scored and weighted to yield something like a one to five star rating of the area in question.

Why certification?

Underfunding jeopardizes the main goal of protected areas as the major tool to safeguard biodiversity (Bruner et al. 2004). Donors and recipients alike find themselves in a dilemma even after the decision to finance nature conservation is made. There is a general understanding and acceptance of the need to spend money in the field of nature conservation but at the same time reasonable fears exist that money will be wasted, which is in turn difficult to explain to clients and to taxpayers.

No scheme exists to date that allows for systematic, independent verification of national parks and other protected areas, since quality standards either do not exist or are not generally accepted and applied. Businesses and other potential donors complain of a lack of guidance to identify good conservation projects to support.

The one area in which independent third party verification has arisen is in the certification of NGOs. The certification of protected areas offers a higher potential for long-term conservation sustainability as compared with the certification of NGOs. Certification and the “green-labeling” of NGOs are usually based on the ratio of donor funds used on administration to money invested in field-based conservation work. However, even an NGO that lowers its administration costs might nonetheless spend funds on protected areas that are poorly managed or have little recovery potential or contain low levels of biodiversity. On the other hand NGOs with relatively high amounts of money spent on administration may do so with good reasons and high efficiency. More credibility, even for the most established and most trusted NGOs, could be won by using an independent verifier to assess actual conservation gains. Organizations engaged in conservation efforts involving protected areas might find it beneficial to their own reporting, monitoring and evaluation, planning and fund-raising efforts to have scheduled certification of the areas in which they work.

Continual improvement

In general, the main reason for entering into a system of certification is for the benefits that accrue by the implementation of a system of continual improvement. A certification scheme generally includes a defined standard and set of guidance, and regular visits by independent verifiers/auditors to monitor compliance with the standard. Auditor reports point out strengths and weaknesses relative to the standard and to past performance, and point out areas where improvements are needed. As such, the auditor's visit helps structure monitoring and evaluation, provides useful feed-back, and serves as a spur to continual improvement.

Attracting funding

A global, or at least a broadly accepted certification system for protected areas would help NGOs and governments in donor countries demonstrate that their money is spent in a responsible and rational manner, and it would help recipient countries obtain urgently needed financial resources to manage their protected areas properly. This would be an important step to allow for money transfer from north to south urgently needed to pay for tropical conservation (Balmford & Witten 2003).

In today's tighter funding environment, businesses are playing a larger role in conservation funding. The business sector is familiar with the concepts of independent audits and certification. Certification of protected areas can thus be crucial in attracting new sources of funding and at the same time serve to help potential donors in selecting conservation opportunities.

Certification does not have to be restricted to national parks and reserves but could also be extended to privately owned protected areas. Certified sites would gain credibility and attract more funding and international interest, e.g. in terms of increased visitor numbers. The latter would also be an asset of certification for publicly owned conservation sites.

A ranking system would help NGOs, developing nation governments and other recipients of donor funds with establishing quantifiable targets for their conservation efforts, and hence with their reporting to donors, putting their claims of achieved conservation outcomes on a more credible footing and thereby aiding their fund-raising efforts.

Reporting

Except for some of the large international NGOs, NGOs are for the most part not considered to be serious partners for large companies or other organizations (e.g. governmental bodies) that possess the financial means to fund nature conservation on a sustainable basis. NGOs are often regarded as ineffective, driven by emotional rather than rational considerations, and lacking basic management competencies as well as operational methodology. By providing quantifiable and objectively verifiable conservation targets, and setting up a structured and systematic means of monitoring performance, certification of protected areas with which they are engaged may help NGOs (as well as other bodies receiving donor or government funds) with their reporting and lend an aura of greater accountability.

The majority of biodiversity rich areas is located in poor and less developed countries, where capacity to report properly (among other shortcomings) is often lacking, especially since reporting is a complex and demanding task which is hard to deal with on top of regular jobs. Developing countries complain of overwhelming reporting requirements (to the CBD, to donors, etc.). Teams of roaming third-party auditors could relieve them of this odious task. Cost savings would come from applying experience in multiple settings, as much of the cost comes from figuring out how to do the audit the first time. Standardizing the process and using the same auditors on multiple jobs would also aid temporal and spatial comparison.

Conflict of interest

Governments and NGOs have a vested interest in attracting funding from companies and other donors to support their own particular conservation projects. This leads to a

conflict of interest. It is unsatisfactory for potential donors to simply take the word of the NGO or governmental agency when having to gauge the success of a conservation effort. There is a need for a neutral third party to certify or verify the actual contribution being made to conservation according to a set standard. This neutral third party can make it easier for businesses and other sources of conservation funding to assess the quality of their investment.

Furthermore, competition among NGOs for the same funding sources means that existing problems and risks connected to certain sites are hidden rather than openly addressed in order to avoid scaring off potential donors. This leads to a certain level of misinformation resulting in suspicion and a lack of trust, which ultimately leads to unstable coalitions and a lack of funding for conservation.

Other potential conflicts of interest abound, including: Companies reporting on their own conservation performance (to shareholders or the general public, either in annual reports or in paid ads), or taking an NGO's word for it, satisfied merely to gain the approval of the NGO (which they may be funding as part of their efforts to reach said goals); Foundations taking the NGO's word for it, or contracting their own consultants for "independent" evaluations of projects on an ad-hoc basis; Consultants called upon to evaluate single projects have an incentive to be ebullient in order to secure similar jobs in the future.

Countries reporting on themselves (e.g. to the CBD) becomes meaningless. There is always a level of subjectivity. Auditors and those designing standards and guidance strive to take out as much of the subjectivity as possible. But this ideal will never be more than partially attained. Bureaucrats giving themselves a low score on national performance would worry about how the evaluation reflects on their own job performance. Politicians are some times held accountable to the public, and hence also have an incentive to pad national estimates of conservation performance.

Contracting of independent third party verifiers should be set up with an intermediary clearing-house (such as an accreditation body) to avoid bidding wars between verifiers—not just on the basis of cost, but also on leniency.

Discussion

What would a certification scheme entail?

A certification scheme for protected areas should be designed to distinguish paper parks from effective and well managed parks, and score them relative to the contribution they are making to biodiversity conservation. In this way, areas of outstanding value but with little support could be identified and funding funneled towards them. Reserves that perform well might find increased visitor numbers and access to funds from less risk averse donors. Necessary management issues would be addressed.

The criteria in a certification standard would vary somewhat for different categories of protected areas, for instance the IUCN reserve categories, as these are designed for different purposes and different activities are allowed in the different categories.

Reserves need at least to be scored for aspects to do with their conservation value, management, and security (how well can the reserve under the current management regime be expected to stand up against future threats). In addition, different reserve types could be scored for how well they meet their other objectives.

Certification might cover the following three aspects, starting with the conservation value of an area. The dimensions of conservation value would include: species richness, presence of particularly significant species (such as globally threatened and endemic ones), population size of key species (given special attention to whether the reserve is able to sustain populations of a size that would render them viable in the long term), important ecosystem services on the regional, national and global level, significant and threatened habitat types, size of the protected area and connectivity, and whether the reserve meaningfully compliments the biodiversity values represented elsewhere in a reserve system (complementarity/irreplaceability and gap analysis). The threat of increased economic activity in buffer zones, prior

damage to biodiversity assets, or threats from outside the reserve system would add to this list.

The second major point would concern aspects of management such as initial identification of key threats to the conservation assets and development of solid management plans to counter these threats. Security of assets, stakeholder issues and how these are to be handled, determining whether size and management of the assets are adequate in reaching specified conservation targets would be summarized under this topic. Special attention would be given to the development of management methods that had proven to be successful and would allow comparing management effectiveness over a large array of certified protected areas. Applied methods and rigorous monitoring would be included here. The inclusion of an adaptive management regime, capable of monitoring key processes, learning from mistakes and adapting to fit changing conditions and lessons learned, would be required for a top score.

The third major point related to certification of an area would deal with security of investment. This would cover the following aspects: addressing potential threats, tractability of solutions, ability to sustain funding and activities in the longer term, financial management, corruption issues, vulnerability to population growth/military incursion and the like, robustness to shifting political regimes and societal priorities, capability and flexibility to deal with new and possibly unforeseen threats, etc. Table 1 endeavors to list some of the general criteria on which verification might be based, and elaborate slightly on their contents.

The actual certification system needs to be developed, starting with the development of standards, with the involvement of a variety of stakeholders, and could be based on a ranking concept familiar to investors with, for instance, one to five stars (or some other icon) depending on how high the conservation asset scores.

Obtaining the first star, the lowest rank certificate, could be relatively easy, perhaps identifying a reserve that has achieved the basic elements of a protected area of its kind (e.g. boundary delineation, official designation, recognition as a protected area),

and perhaps a rudimentary management system (e.g. assigned responsibilities). Making the entry level certificate easy to obtain may make the scheme more attractive to a greater number of parties, and get more reserves more quickly into a system of regular performance evaluation and continual improvement. Higher ranks would signal achievement of management goals of increasing difficulty, providing targets to strive for, and an independent performance measure to be used in reporting and as a spur to continual improvement.

Table 1. Likely components of a ranking scheme for protected areas, upon which they would be scored. In addition to a framework of indicators on which a reserve can be objectively scored on each aspect by an outside auditor (a standard), a ranking scheme would also entail the development of standardized guidelines for auditors on how to score each aspect and on what criteria.

Aspect	Elaboration
I. Conservation value	
Species richness/diversity	Does the area harbor a large and/or significant amount of biological diversity?
Presence of focus species	Does the area harbor significant occurrences of particular focal species or habitat types?
Population size of focus species	Does the area currently or potentially harbor significant population sizes of particular focal species so that it may realistically contribute to real conservation outcomes?
Important ecosystem services	Does the area provide, in whole or in part, significant ecosystem services?
Significance of protected habitat	Are the protected habitats rare or under threat (globally, regionally, nationally, or locally)?
Threat level to conservation assets	A protected area that is not under threat does not currently make a difference to the conservation assets, and management is not currently needed. It may however, be cheaper and easier to establish protected areas before the pressures on the land have mounted to an unmanageable level.

Adequacy of size	Would vary depending of the focal species and level of habitat “value”, and also on connectivity to other habitat patches.
Connectivity	If the area is too small to support viable populations of its own, how well connected is it to nearby (secure) habitat areas? Connectivity, particular north-south and to higher altitudes may also be important safeguards against the effects of climate change.
Recovery potential	Depends on various issues such as connectivity to other protected areas (making natural re-colonization possible), level of habitat destruction etc.
Filling gaps in conservation landscape	Does it enhance representativeness of a larger landscape by protecting natural features such as forest types and species not otherwise protected? Complimentarity
Degradation	Prior damage to biodiversity assets, tempered by the ability of the reserve to recover (but then conservation value should be discounted by the amount of time such recovery might take).
Additionality	Does the reserve give additional conservation to the values that would be secure anyway (in the absence of a reserve)? These ties in with the threats picture, as well as the cost benefit analysis related to being proactive and getting cheaply an area with low threat level in the near term as opposed to paying more for values under immediate threat.

Leakage	Does the presence of the reserve shift pressures to an area of greater, equal or lesser conservation value? If a reserve precludes logging from area A, but loggers merely shift their activities to area B to meet demand, then the value of area B might be deducted from the conservation benefit of the reserve according to some equation.
Buffer zones	Does the reserve have adequate buffer zones where only types and levels of economic activity compatible with the purpose of the reserve are allowed? Threats of increased economic activity in buffer zones. This might increase the isolation of the reserve from other wildlife areas.
Irreplaceability	Estimate needed on how much of the ecosystem or species in question is sufficiently protected in nearby areas
II. Management	
Delineation	Is the reserve adequately and clearly delineated? Has it been properly gazetted, boundaries marked, and the purpose and limits of the reserve firmly established among the populace?

Threats	On the local (e.g. over-exploitation of natural resources), regional (e.g. pollution), and global level (e.g. climate change). Is the assessment of threats realistic and complete? Does the management plan deal adequately with the identified threats, or have concrete plans that would enable it to tackle the identified threats in the future?
Management plans	Are there solid management plans in place, with designation of responsibilities and appropriate involvement of all stakeholders? Has a thorough conservation needs assessment been conducted to guide such a management plan, and select the best interventions to deal with identified threats? Are plans regularly and systematically updated?
Stakeholder issues	Are there serious stakeholder issues, and how well can these be handled under the present management regime? Is the stakeholder process adequate for the long term security of conservation assets? Is the stakeholder map adequate and appropriate?
Appropriate authority	Is the reserve managed by the appropriate authorities? Do the managers have the authority to call upon required support from other agencies?

Adaptive management	Is there an adequate system of monitoring, adaptivity built into management plans, and a demonstrated willingness and ability to learn from experience and modify management regimes and plans based on such experience and observed change?
Management capacity	Does the designated authority and staff have the necessary capacity to deal effectively with the issues facing the reserve? Are the training and capacity building measures adequate to maintain such capacity in the future, and ensure staff retention, recruitment, and career development?
III. Security of investment	
Assessment of (future) threats	Has an adequate and realistic assessment of (future) threats been conducted?
Tractability of solutions	Are the solutions to real and future threats tractable?
Financial security	Ability to sustain funding and activities in the longer term
Financial management	Is the financial management of the reserve on a firm footing? Is it transparent and secure in the face of changes in staffing, etc.?
Corruption issues	Is the viability of the protected area vulnerable to corruption at any level of management or in other branches of government?
Vulnerability	Vulnerability to population growth/military forces/civil unrest/shifting societal priorities

Capacity	Is there adequate management capacity to deal with current and likely future threats to the reserve, and is this system mature enough to plan for and adapt to its own needs?
Flexibility	Is the financing flexible enough to deal with the long term and with changes in threat scenarios?

The greater challenge lies in operationalizing these topics and, where possible, subjecting them to an objective and quantifiable standard, the maintenance and updating of which will be an ongoing task. The task of designing and field testing such standards will be the task of a larger body representing multiple stakeholders, and the task of managing and updating the standard(s) the task of an independent accreditation body.

Added value and who would pay

Certification costs money, but not large amounts of money relative to other expenditures inherent to adequate protection of conservation assets under threat. Moreover, we would argue that this is not simply an added cost to conservation, but rather a value added that would more than compensate for the extra investment. We feel that independent verification is an added value where any party makes commitments to other stakeholders. The commitments of nations to protecting a proportion of their natural environment, or the commitment of an NGO to its supporters to contribute to the conservation of a particular area or species, can thus be put on a stable basis. As soon as there is money changing hands we imagine an increased demand for independent third party verification.

NGOs and governments might find it attractive to pay for certification services in order to attract donors, and donors themselves might pay for it as a means of

monitoring that their money is wisely spent. The proposed certification of protected areas could eventually lead to a process of certification for wildlife management and natural resources management efforts in general and also cover other conservation processes that need to be monitored.

Consider the frequent situation when developing countries ask to be compensated by wealthy countries for protecting biodiversity (e.g. rainforest conservation, avoided deforestation under Kyoto); the success of their efforts would need to be verified by a qualified and neutral party.

Brazilian conservation payments: Since 1992, the State Government of Paraná in Brazil has allocated 2.5% of the value-added taxes it collects to the Municipal Governments of the State, based on how much conservation area they have and how well they protect it. Half of Paraná's municipalities receive such payments, which they are free to apply to anything they wish. All these measures led to an increase in protected areas of 165% in Paraná (IUCN 2004).

Credits for standing forest under Kyoto: At the Conference of the Parties (COP 11) of the Convention on Climate Change (Montreal, Nov-Dec 2005) a group of developing nations including Costa Rica and Papua New Guinea won approval for the idea that developing nations would receive payments for protecting standing forests. The details of such a mechanism will be worked out in the coming years. (<http://unfccc.int/resource/docs/2006/sbsta/eng/misc05.pdf>)

With a ranking system such as we envision, the CBD targets might be upgraded to, for instance, "preserve at least 15% of terrestrial areas and 20% of aquatic areas in reserves with a three star rating or higher".

The Business Sector

Corporations are held responsible for the bottom line to their shareholders, and therefore can be legally barred from doing more than they have to to improve their environmental performance, unless they can successfully argue that doing so contributes to the bottom line (Bakan 2004).

As an alternative, or supplement, to companies taking out glossy advertisements and tooting their own horn about how seriously they take their environmental responsibilities, independent verification would lend credibility to both advertisements and corporate reports.

Since quality management, certification, and independent audits are familiar concepts in the private sector it is likely that additional corporate funding for conservation can be acquired if certification is widely implemented, and corporate donors may be willing to pick up the tab for certification.

The Development Sector

The development sector is heavily involved in conservation efforts, for instance under the auspices of the Millennium Development Goals, the CBD, and bilateral aid. We would also argue that directing aid monies to biodiversity conservation and other environmentally focused projects are the best way to improve conditions for the very poorest, which depend most heavily on ecosystem services. Most classic development projects are abject failures that breed passivity and aid dependence, and undermine local initiatives in business, agriculture and self-reliance. Making development assistance into environmental assistance would avoid many of these problems with conventional development aid while helping developing nations meet their commitments to international agreements and improving the quality of life for their citizens.

The development sector is accustomed to extensive and routine monitoring and evaluation, and a certification regime for protected areas would serve to standardize and formalize such evaluations while yielding an output that can be useful to a variety of stakeholders. Consequently, the development aid sector may be inclined to cover expenses for independent verification of protected areas.

Developing nations:

Governments in developing nations may find it in their interest to pay for certification of their protected areas, or they could apply to NGOs, the UN, GEF, CBD (assuming the CBD had any money...), aid organizations or other donors for funding.

Independent third party verification may help alleviate donors' worries about adequate management, corruption, etc. and thus stimulate the flow of donor funds for conservation and help developing nations meet their international commitments.

NGOs

NGO watchdogs trying to keep an eye on government promises may find added value in contracting an independent third party to verify the performance of a protected area and/or protected area system. Without independent third party verification their criticism of government efforts might be dismissed by the public as vested interest.

With a credible system for certification of protected areas, performance measures for conservation projects can now be formulated as, for instance, "raise the ranking of protected area A from a four star ranking to five stars" or "establish a new protected area with a two star ranking by year T". Get independent third party verification, and you have an operational performance measure as well as a system for continual improvement over time. Verification would be built into plans and proposals. The systematic implementation of such performance measures and independent verification may prove a powerful means of securing funding.

Donors

Donors serious about performance evaluation and continual improvement should find real benefits in independent third party verification. Project evaluations are of course common-place, but systematic verification and performance evaluation of protected areas are not, except perhaps in the best performing national parks systems. Donors would benefit from projects and programs incorporating operational performance measures such as can be based on a ranking of protected areas. Donors could make

such independent verification a condition for funding and ask for them to be built into funding proposals and project design.

How to proceed

The Expert Workshop on Protected Areas (under the CBD) recently made progress on a matrix for national reporting to the CBD, which can be developed further into a draft standard and guidance for certification of protected areas. In Germany standards for national parks are about to be developed. Similar efforts may be underway in the EU. Parks Canada has made some potentially useful progress with their ecological integrity monitoring framework (Parks Canada 2004). Although many of these incipient efforts require a high level of financial support and capacity, and might therefore not be suitable for other regions of the world, lessons can however be learned from these processes. Certification of NGOs is performed on a regular basis by the German Institute of Social Issues (DZI) and by the Swiss certifier SGS, a process that may also be of use for the development of a certification system for protected areas. Many of the larger international conservation NGOs have made major progress in their own monitoring and management systems, and these may have components that could be adapted towards standards for protected areas.

The CoP7 of the CBD endorsed a protected areas work program including the some rather ambitious activities: “4.2.1. Develop and adopt, by 2006, appropriate methods standards, criteria and indicators for evaluating the effectiveness of protected area management and governance and set up a related database, taking into account the IUCN-WCPA framework for evaluating management effectiveness, and other relevant methodologies, which should be adapted for local conditions. 4.2.1. Implement management effectiveness evaluations of at least 30 percent of each Party’s protected areas by 2010 and of national protected area systems and, as appropriate, ecological networks” (SCBD 2004). Even if such standards have not been completed, the endorsement of such a work program signals at least the existence of broad interest in such an endeavor and some overlap of efforts that could be exploited.

If there is adequate interest in the development of a certification scheme for protected areas, one would establish a working group with a variety of stakeholders and experts to develop a draft standard and guidance for auditors (though commonly auditors develop their own set of guidelines to a given standard). An accreditation body would be set up to manage the standard and to authorize qualified auditors to certify against the standard.

We propose that a group of experts from different stakeholder groups (Government agencies and international bodies, NGOs, certification experts, donors, scientific institutions and developmental aid agencies) should pull together all previous attempts at developing standards and systems of evaluation for protected areas, and from them and their combined expertise design the best possible draft standard and guidance for field trials. This work might start with a particular category of protected areas or a particular protected areas system as pilots (for instance strict reserves, the Emerald Network or Natura 2000 sites, or the protected areas system of a particular pilot country).

Concluding remarks

We still need more and better—not least *bigger*—protected areas. A certification schemes for protected areas could help improve existing areas, as well as help garner support for the creation of additional reserves. It is also paramount that we learn to live with biodiversity in that greater part of the world that is not designated as some kind of protected area. Integrated land use planning and innovative ways of designing human habitats so as better to look after other species in our own surroundings should be used actively to achieve a better world for humans and other species alike. In addition to certification of protected areas, we feel it would also be a good thing to institute a system of independent verification of wildlife management plans, land use plans, resource and natural habitats management regimes, and responsible agencies.

Ultimately what the world needs is bold policy decisions and action to circumscribe the scale and pervasiveness of human influence on the biosphere. Somebody needs

to draw a line in the sand and say “this far, but no further”. Such a cap on human activity and land use would set the stage for a number of policy and fiscal instruments, such as cap-and-trade, offsets and valuation of ecosystem services, which would help everyone contribute to a more sustainable society, not just idealists.

While we think that independent verification can play a role in creating a better world for all species, let not the development of certification schemes, like the perpetual call for “more science”, get in the way of immediate action.

References

Bakan, J. 2004. *The Corporation: The Pathological Pursuit of Profit and Power*. Free Press, New York.

Balmford, A.; Bruner, A.; Cooper, Ph.; Costanza, R.; Farber, S.; Green, R.E.; Jenkins, M.; Jefferis, P.; Jessamy, V.; Madden, J.; Munro, K.; Myers, N.; Naeem, S.; Paavola, J.; Rayment, M.; Rosendo, S.; Roughgarden, J.; Trumper, K. & Turner, R.K. 2002. Economic Reasons for Conserving Wild Nature. *Science* 297: 950-953.

Balmford, A. & Witten, T. 2003. Who should pay for tropical conservation, and how could the costs be met? *Oryx* 37(2): 238-250

Bruner, A.G.; Gullison, R.E. & Balmford, A. 2004. Financial Costs and Shortfalls of Managing and Expanding Protected-Area Systems in Developing Countries. *BioScience* 54(12): 1119-1126

Cairncross, F. 2004. What Makes Environmental Treaties Work? *Conservation in Practice* 5(2): 12-19.

Chape, S.; J. Harrison, J., Spalding, M. & Lysenko, I. 2005. Measuring the Extent and Effectiveness of Protected Areas as an Indicator for Meeting Global Biodiversity Targets. *Phil. Trans. R. Soc. B* 360: 443-455

Christensen, J. 2003. Auditing Conservation in an Age of Accountability: Instead of seeing conservation as just a good cause, people are starting to ask, "What are your results?". *Conservation in Practice* 4(3): 12-19.

Deguisse, I. E. and Kerr, J. T. 2006. Protected Areas and Prospects for Endangered Species Conservation in Canada. *Conservation Biology* 20(1): 48-55

Ervin, J. 2003a. Rapid Assessment of Protected Area: Management Effectiveness in Four Countries. *Bioscience* 53(9):833-841.

———. 2003b. Protected Area Assessments in Perspective. *Bioscience* 53 (9): 819-822.

IUCN 2004. Fact Sheet – Markets, Business and the Environment. http://www.iucn.org/congress/documents/fact_markets.htm

IUCN 2005 Benefits beyond boundaries. Proceedings of the Vth World Parks Congress. IUCN, Gland, Switzerland & Cambridge, UK. Ix + 306pp.

Kerr, J. T. and Burkey, T. V. 2002. Endemism, diversity, and the threat of tropical moist forest extinctions. *Biodiversity and Conservation* 11(4): 695-704.

Parks Canada 2004. The EI monitoring framework. www.pc.gc.ca/progs/np-pn/ecosystem/ecosystem3_e.asp.

Rodrigues, A. S. L., et al. 2004. Effectiveness of the global protected area network in representing species diversity. *Nature* 428:640–643.

Secretariat of the Convention on Biological Diversity (SCBD) 2004. Decisions adopted by the Conference of the Parties to the Convention on Biological Diversity at its Seventh Meeting. UNEP/CBD/COP/7/21. Montreal: SCBD.

Steiner 2003. Trouble in paradise. New Scientist 18 October 2003

Terborgh, J. 1999. Requiem for Nature. Island Press, Washington DC.