

Newsletter from African protected areas

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Editorial

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A NEW YEAR BEGINS. CAN IT BE LIKE
THE PREVIOUS ONE? PROBABLY NOT.
WILL IT BE DIFFERENT? PROBABLY
NOT.

From the simple sentence: "the planet suffers because of us", which is the part we can't understand? How is it that the more we measure why and how we destroy our nature, the less able to act we seem? What sort of strange tetany has contaminated our species, who prepares without flinching its own upcoming extinction, mirroring the abundantly-documented extinction of the other species unfortunate enough to share our times?

January calls for optimism. I know. We make wishes, we make promises. And more often than not, we forget them. Nothing dramatic, except that in our days, can we still afford to turn our backs on our commitments? No, doubtlessly, so why do we keep making so many?

The system we designed to take care of our beautiful Earth in recent decades, when she was already clearly declining, has run out of steam. In 1992 (and sometimes as early as the 1970s), it was generously thought that if states made commitments, everything would be settled. We have drafted agreements, conventions,

treaties ... on species, biodiversity, climate, desertification, trade, oceans, whales, poles, water, pollution, etc. Nature has been cut into innumerable fragments and we created the most formidable factory of utopias in our history.

Let us be clear, all of this was justified, corresponded to that time and brought countless benefits, starting with the simple fact that this environmental crisis is now known to all. But is that enough?

At the end of last year, the participants in COP 13 (RAMSAR - October) left the shops of Dubai to go to the COP 14 (biodiversity - November). They barely had time to get out of the pool in Sharm El-Sheikh before putting on their scarf at COP 24 (climate - December) in Poland. In order to do that, they had to skip the COP 8 of the Water Convention, the COP 2 of Minamata or the COP 8 of the World Health Organization, which were held at the same time, among others.

Are you lost? Yes, international conventions abound and each generates its reports, its commitments, its deadlines... Hasn't action been replaced by procrastination? Meanwhile, the public gets tired and now listens with a distracted ear to this distant murmur, when they're lucky enough to hear its faint echo.

Multilateralism has some weaknesses, but the multiplication of multilateralism may only have weaknesses. Debates are removed away from citizens, to a space where lobbies reign supreme and this exonerates our leaders from all accounts. The "machine" works for the benefit of

too few, and humanity, lost, risks missing the train of inevitable - if still at all possible- reforms. But why this train without us?

All these meetings deal with the same subject: the health of our planet, and therefore, ours. Would it be so complicated now to assemble all these conventions, to tackle on one front the few causes that we know to be the basis of all our ills: a growing human population, an unsustainable economic model, waning and destructive fossil energies, undiminishing ignorance, and increasing weariness.

The best year we can wish for is a year of effort and sacrifice: that we get to work seriously, that

those who can do so, move away from an outdated economic model, and that all those who have not yet benefited from this model simply invent another, smarter. If nothing meaningful is done, the indistinct murmur of conference rooms will be replaced by the potentially toxic hubbub of social networks, and the door will open widely to the selfishness of populisms of all kinds for which nature will never be a priority.



Our courses

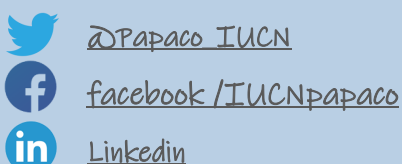


>> Next session : 4 March 2019 <<

The next session of the MOOCs will start a little later this year (4 March), but remember, a brand new MOOC will start at the same time. The topic will be: Valorisation of protected area resources (MOOC-VAL).

Registrations will open shortly, and follow us on [Facebook](https://www.facebook.com/papaco) to receive our latest news.

PAPACO is also on:



Also read: [monthly Protecting the Planet newsletter \(GPAP\)](#).

In addition to PAPACO's page, join the 5,000 members on [the Facebook group](#) dedicated to MOOCs.

All links and useful information is on papaco.org.

Featuring this month

About “Protected Area Governance and Management”

Protected Area Governance and Management presents a compendium of original text, case studies and examples from across the world, by drawing on the literature, and on the knowledge and experience of those involved in protected areas. The book synthesises current knowledge and cutting-edge thinking from the diverse branches of practice and learning relevant to protected area governance and management. It is intended as an investment in the skills and competencies of people and consequently, the effective governance and management of protected areas for which they are responsible, now and into the future.

The global success of the protected area concept lies in its shared vision to protect natural and cultural heritage for the long term, and organisations such as International Union for the Conservation of Nature are a unifying force in this regard. Nonetheless, protected areas are a socio-political phenomenon and the ways that nations understand, govern and manage them is always open to contest and debate. The book aims to enlighten, educate and above all to challenge readers to think deeply about protected areas—their future and their past, as well as their present.

The book has been compiled by 169 authors and deals with all aspects of protected area governance and management. It provides information to support capacity development training of protected area field officers, managers in charge and executive level managers.

The entire book is freely accessible online in English on the Australian National University’s [website](#).

The French translation is currently ongoing and only the first six chapters are currently online.



Chapter 6 – VALUES AND BENEFITS OF PROTECTED AREAS

Sue Stolton and Nigel Dudley

Introduction

Protected areas are places where conscious efforts are made to preserve not only wild species, but also the ecosystems in which species live. In parts of the world where most of the landscape has already been transformed by agriculture or industry, protected areas may be the only natural or near natural ecosystems remaining for large areas. The wider socioeconomic and cultural values of these natural ecosystems are increasingly being recognised, as are the important ecosystem

services they provide. Until recently these services have often been taken so much for granted that their values have been underestimated, forgotten or simply never noticed. The acknowledgment of ecosystem services was boosted by a seminal paper by Robert Costanza (1997), who noted ecosystem goods (such as food) and services (such as waste assimilation) represent the benefits human populations derive, directly or indirectly, from ecosystem functions. In 2003, the Millennium Ecosystem Assessment suggested a simple typology to summarise the various services from

natural ecosystems. This typology has been expanded and adapted for different purposes, including for protected areas. Figure 6.1 outlines the various ecosystem services we might expect from protected areas and lists the benefits associated with these services.

We should not forget that nature conservation remains the primary aim of protected areas. Conservation of biodiversity—of species, genetic diversity within species and of habitats and ecosystems—underpins ecosystem function and has many practical, utilitarian benefits.

There is in addition wide agreement that we have an ethical obligation to maintain the full range of the planet’s living diversity—in other words, not to speed up the rate of extinction beyond what would be expected in natural circumstances. We are manifestly failing in this aim at present, with species declining and disappearing all the time, often before they have even been recognised and described by scientists. Nonetheless, research across multiple

data sets provides strong evidence that protected areas are one of the most effective tools for slowing the rate of biodiversity loss and many species continue to survive only because of the protection provided by national parks, nature reserves and other protected areas. The ethical basis of biodiversity conservation is recognised by signatories of the Convention on Biological Diversity, nationally through wildlife protection and protected area legislation, by senior members of all the world’s major religions, and by much of the general public.

There are three aspects to transforming these recognised ecosystem services into measurable socioeconomic benefits for human communities: 1) quantifying and assessing (often qualitatively) the value of the various benefits; 2) understanding them in relation to other benefits including benefits forgone by retaining the ecosystem; and 3) understanding who receives the various benefits. None of these is particularly straightforward.

SUPPORTING SERVICES

(i.e. services necessary for the provision of all other ecosystem services)

- ↳ Ecosystem process maintenance (soil formation, nutrient cycling, primary production etc.)
 - ↳ Lifecycle maintenance (nursery habitats, seed dispersal, species interactions etc.)
 - ↳ Biodiversity maintenance and protection (genetic, species and habitat diversity)

PROVISIONING SERVICES

(i.e. ecosystems’ ability to provide resources)

- ↳ Food provisioning
- ↳ Water provisioning
- ↳ Provisioning of raw material (timber, wood, fuel, fibre)
- ↳ Provisioning of medicinal resources / biochemicals (natural medicines, cosmetics, pharmaceuticals etc.)
- ↳ Provisioning of ornamental resources
- ↳ Provisioning of genetic resources

REGULATING SERVICES

(i.e. ecosystems’ beneficial regulatory processes)

- ↳ Climate regulation
- ↳ Natural hazards regulation
- ↳ Purification and detoxification of water, air and soil
- ↳ Water / waterflow regulation
- ↳ Erosion and soil fertility regulation
- ↳ Pollination
- ↳ Pest and disease regulation

CULTURAL SERVICES

(i.e. ecosystems’ non-material benefits)

- ↳ Opportunities for recreation and tourism
- ↳ Aesthetic values
- ↳ Inspiration for the arts
- ↳ Information for education and research
- ↳ Spiritual and religious experience
- ↳ Cultural identity and heritage
- ↳ Mental wellbeing and health
- ↳ Peace and stability

Figure 6.1 Ecosystem services and related goods from protected areas

Sources: Kettunen and ten Brink (2013); adapted from MEA (2003); de Groot et al. (2010); and UK NEA (2011)

We summarise information on several techniques for quantifying and valuing benefits in economic and other terms below. But the benefits also need to be understood in the context of competing benefits (so-called trade-offs)—for example, retaining a forest to protect water also means that the timber in the forest is not available for sale or the land for conversion to agriculture or development—and that these benefits and their relative values accrue to different people. One of the persistent challenges in securing ecosystem services is that many services maintained by sustainable management or protection of ecosystems are diffuse in nature, providing many people with a small number of a hard-to-measure benefits (for example, non-monetised and with no clear ownership rights), while unsustainable use provides one or a few people with a lot of benefit (for example, well-monetised with clear ownership rights).



High-altitude paramos water catchment area of Cayamba-Coca Ecological Reserve, Ecuador, which provides ecological services (water) for the capital city of Quito
Source : Graeme L. Worboys

Finding ways of rewarding people for retaining ecosystem services is one of the critical steps in concretely capturing the socioeconomic value of protected area benefits and, consequently, retaining or regaining support for protected area policies. Protected area managers who are aware of both the full range of protected area benefits and the range of stakeholders affected have a far better chance of managing successfully. In the remainder of this chapter, we provide an overview of the range of benefits that can come from protected areas and look at how these can be measured, utilised and managed.

Protected area benefits: Maintaining our life-support systems

Although most of these benefits can come from any natural ecosystem, protected areas often have the advantage that they are already established as efficient, successful and cost-effective tools for sustainable ecosystem management, with associated laws and policies, management and governance institutions, knowledge, staff and capacity. They thus often maintain a wider range of ecosystem services than other areas and they also come with far more associated security than unmanaged, unregulated areas that are more open to rapid degradation and change. We are not, however, claiming that protected areas are the only such vehicle: other well-managed land and water controlled by communities, governments and companies can play similar functions.

Supporting services

À At a time when many agricultural systems are becoming increasingly reliant on inputs of fertilisers, pesticides and large amounts of fossil fuel energy, natural ecosystems that are self-regulating and powered solely by the sun are more rare. 'Supporting processes and functions' refer to the basic running of an ecosystem: soil formation and nutrient cycling; life-cycle maintenance for species by provision of services like fish nursery habitats, means of seed dispersal and continued species interactions; along with conservation of the full

range of biodiversity. By protecting functioning ecosystems, protected areas provide services to surrounding ecosystems, both through the direct spillover of soils, nutrients and intercepted solar energy and from the potential to use protected areas as baselines of information and raw materials for restoration within the rest of the landscape.

Provisioning services

Of more immediate interest to people are the various tangible resources that protected areas either provide directly or support.

Food

Well-managed natural ecosystems play a key role in food security, particularly for the poorest members of society, many of whom are still leading a subsistence lifestyle and are dependent on a diversity of edible products from protected areas.

Water

Some ecosystems also increase the net amount of available water, particularly watersheds containing cloud forests, where leaves 'scavenge' water from mist and cloud, condensing it on specially evolved leaf parts and then funnelling it down branches and trunks.

Raw materials

Many protected areas have been established explicitly to conserve natural resources such as timber and valuable plants. But an increasing number also sanction some level of collection, usually by local communities and focusing on items like poles for building and fencing, grasses for thatching, firewood and more valuable timber for carving, boatbuilding and numerous other non-timber forest products (NTFPs).

Medicinal resources

Protected areas help support public health in a number of ways: by providing a sustainable source of medicinal herbs that are still the medicines of choice for the majority of the world's poor people, and providing genetic resources for pharmaceutical companies, some of which have signed agreements

to pay prospecting rights to individual protected areas.

Genetic resources

Biodiversity has more than simply aesthetic or ethical values, but provides raw material for a range of products including the pharmaceuticals already highlighted and particularly crop wild relatives (CWR)—wild species that are closely related to domesticated crops and which can supply valuable genes for breeding to address issues such as drought tolerance or resistance to disease.

Services de régulation

Well-managed natural ecosystems also maintain a range of beneficial processes and functions with direct relevance to human wellbeing. These so-called regulating services refer mainly to the role of natural ecosystems in helping to control aspects of climate, hydrology and the water cycle, weather events and key natural systems that impact on agriculture, such as pollination. Our understanding of the value of these systems is increasing all the time.

Storing and sequestering carbon

Although only recognised comparatively recently, the role of natural ecosystems in both storing and sequestering carbon, and thus reducing the rate of climate change, is now for many people a primary reason for conservation. Natural ecosystems form critical carbon stores, including vegetation such as forests, grasslands, wetlands and marine vegetation including seagrass and kelp beds, along with subsurface storage in humus-rich soils and particularly peat. Conversely, their destruction and subsequent release of carbon are factors currently leading to runaway climate change. Protected areas thus help both by preventing further losses of carbon to the atmosphere and, in healthy ecosystems, by sequestering additional carbon. The UN Environment Programme's World Conservation Monitoring Centre has calculated that a minimum of 15 per cent of the world's stored carbon is already within protected areas.

Mitigation of natural hazards

Natural ecosystems also make cost-effective ways of mitigating various extreme weather events and the after effects of major earth movements; many of the former are becoming more frequent and more intense due to climate change.

Purification and detoxification of water, air and soil

In an increasingly polluted world, ways of reducing the pollution load are urgently required. Natural ecosystems, if not overwhelmed, can help reduce many forms of pollution.

Pollination

Apart from its critical role in maintaining species diversity and vegetation patterns, pollination has direct utilitarian roles for humans, as an essential part of agriculture and fruit growing, and as a stimulant for the production of honey. In a world where pesticides, industrial pollution and habitat loss have had a catastrophic impact on insect numbers, protected areas are increasingly being seen as a tool for maintaining pollination services.

Pest and disease regulation

Controlling serious pests and diseases is increasingly important as the degree of threat from invasive alien species is recognised and climate change encourages the spread of pests and diseases into new ecosystems. Protected areas can help minimise these problems in a number of ways, particularly by physically blocking unwanted species: many invasive plants are colonizer species and do not penetrate into mature vegetation. The same is true of some insect pests like the tsetse fly, and malarial mosquitoes have also been recorded as moving far more slowly through dense forests.

Cultural services

Clearly not all the benefits we derive from natural ecosystems are narrowly utilitarian: humans enjoy a wealth of complicated cultural, psychological and spiritual links with the natural world. Because protected areas tend to be established in particularly



Visitors, boardwalk and the spectacular cascading waterfalls of the Plitvice Lakes National Park World Heritage Property, Croatia
Source : Graeme L. Worboys

beautiful and pristine parts of nature, these cultural services are particularly strongly represented.

Recreation and tourism

The day-to-day uses of nature for relaxation, exercise and psychological renewal stretch back way beyond recorded history and have been a major driver for protected area creation.

(Nature-based) physical and mental wellbeing

As well as the benefits from recreational use of protected areas, research and practice have found that people with physical and mental problems or alcohol and other drug addictions can benefit positively from immersion in an attractive landscape.

Aesthetic value and a sense of place

A 'sense of place' is also a useful concept for describing and understanding the attachments some people form with protected areas. Such place attachments can include emotional (including identity) and functional aspects even for communities who have only recent connections with a protected area.

Education and research

Protected areas provide an ideal location for ecological research as they are often in fairly pristine condition, and have sympathetic staff and sometimes facilities for visiting scientists.



International border between Canada (left) and the USA (right) and the trans-boundary peace parks: Waterton National Park (Canada) and Glacier National Park (USA)
Source : Graeme L. Worboys

Spiritual and religious experience

Many protected areas contain sites of spiritual importance. Protected areas can, if sensitively managed, accommodate such interests, and can provide both additional protection and a pleasant surrounding environment for meditation and worship.

Cultural identity and heritage

The cultural and historical values found within protected areas are also often very important although sometimes rather difficult to define. In the same way that iconic buildings, writers, musicians and football teams can come to embody the heart of a nation or region, so too can special views, landscapes or wild species.

Peace and stability

Many conflicts between nation-states focus on the borders between countries. Several trans-boundary

protected areas have been effective in helping resolve boundary disputes between countries.

Understanding and managing benefits

Recognising socioeconomic benefits is only the first step; we also need to understand the related value (including relative values compared with alternative uses of the natural resources) and have an agreed plan for their management. Over the years, a variety of tools has been developed for measuring and valuing natural resources, including those within protected areas. These range from detailed and costly economic and social valuation techniques to simple questionnaire-based approaches, which are quicker to use but provide more approximate information. While economic valuation is important, it is not the only way in which to assess the value of the natural world and/or resources, and over-reliance solely on economic values can be dangerous, overlooking the range of broader welfare benefits and associated values outlined above.

Categorising and illustrating values

First, assessments often distinguish between 'intrinsic value' and 'value to humans' (or 'instrumental value'). The meaning of the latter is fairly clear and the subject of much of this chapter. Intrinsic value on the other hand attempts to capture values that are distinct from human interests. This is inevitably difficult: humans are the ones who are trying to define non-human values so that we are still viewing these through our own eyes, but the attempt is important. The intrinsic value of species is their place in the evolutionary process, which is responsible for the continuation of life on Earth; they hold that value whether or not they have any direct or indirect use to people, or even if their continued existence is antithetical to people's interests. Development of theories of intrinsic value marks an important step forward: particularly in the West, people used to believe that nature only had value to the extent that it was of use to us and had no 'rights' independent of humans. These ideas (which were never accepted by most Eastern philosophies) are being increasingly challenged.

Direct use values

These refer to the immediate uses we make of ecosystem services.

Indirect use values

These refer to values that come in more diffuse form, often affecting a large number of people and sometimes including populations far from the origin of the value. They tend to be non-consumptive values and are often regulating services.

Non-use values and/or options for future use

These refer to the values of leaving a natural species or ecosystem in place even when we are not benefiting immediately from its existence.

Assessing socioeconomic benefits

On Today managers of protected areas—whether they are government officials, private charities or communities— are increasingly expected to show the wider benefits of their sites in terms of society, poverty reduction and development. Protected area specialists are divided about how these benefits should be portrayed. Some believe that valuation, especially in economic terms, is critical so that conservationists can talk with governments and industry in their own language. The Economics of Ecosystems and Biodiversity (TEEB) approach has highlighted the role of economic assessment, although TEEB is careful to note that this is only one form of valuation. Others remain concerned that economic valuation is dangerous, not least because clever economists can often argue that using a resource now is more valuable than leaving it for the future and partly on the philosophical grounds that we have no right to reduce the rest of nature to figures on a balance sheet. We recognise the pitfalls but nonetheless believe that careful use of economic valuation can be useful.

Assessing multiple benefits to multiple stakeholders

When approaching protected area valuations, it is important to consider all values and all stakeholders over a lengthy period.

It is also important to acknowledge that benefits provided by protected areas come with costs related to the implementation of management activities. Like benefits, costs can be experienced by different stakeholders at different levels ranging from global to local, from international donors to local communities. Therefore, when assessing the overall value of benefits provided by protected areas it is also necessary to think about the associated costs.

Building on different indicators of value

The value of benefits can be assessed at three levels: qualitative, quantitative and monetary. Qualitative valuation focuses on non-numerical indications of value—for example, by describing the role of a protected area in supporting local culture and identity. Quantitative indicators of value focus on numerical data including, for example, visitors to or the quantity of carbon stored in a protected area. Monetary valuation focuses on capturing or reflecting the different values in monetary terms—for example, by calculating the revenue generated by visitors or defining the value of carbon storage. Only a limited number of benefits can be captured through monetary indicators. Therefore, a comprehensive assessment of protected area benefits is likely to build on a combination of qualitative, quantitative and monetary indications of value.

Managing for multiple benefits in protected areas

Identifying and assessing the value of benefits and understanding the stakeholder dynamics involved in maintaining and using the benefits are key steps towards their management. Once we have this information, we have the tools needed to reach some kind of consensus about how the various benefits from a protected area can be divided up, managed and maintained in a sustainable and equitable manner.

Understanding conflicts between different benefits, beneficiaries and uses

A key aspect of protected area management is to understand the synergies and conflicts between the wants and needs of different users and to manage the trade-offs and build on the opportunities that result. One important aspect of this is managing different, and sometimes conflicting, demands on ecosystem services, in turn keeping in mind their various implications for biodiversity conservation.

Communicating benefits to a range of audiences

One key aspect of successful management is to make sure that people understand and appreciate the wide range of benefits from protected areas. Many, particularly indirect, values have long been treated as ‘free goods’ and the problems that have arisen only when they disappear, such as water pollution, soil erosion and coastal damage, are what have focused attention on their good management.

Communication is therefore critical. Protected areas have the opportunity to reach a wide variety of visitors, and along with information on wildlife and walking trails, a growing number are telling people about the other values they contain. Perhaps even more important is to work with local communities to understand the full range of values—through community evaluations, meetings, discussions on community radio and articles in local newspapers. Just as essential from the protected area’s perspective, however, is that large downstream users understand and where necessary pay a contribution towards the benefits, through such initiatives as payments for ecosystem services schemes.

Read full chapter [here](#).



Aesthetic translucent blue of a geothermal boiling water pool, Yellowstone National Park, USA
Source : Graeme L. Worboys

Announcements

TRAINING - Earthwatch

The Earth Skills Network: Training and mentoring to support management effectiveness

The Earth Skills Network (ESN) can help to ensure effective operations at protected areas by training managers in essential business management skills. This will help protected areas to make better use of available resources, identify and prepare responses to potential risks, develop the foundations for sustainable financing of activities, and much more.

What is it? The ESN training is an opportunity for your organisation to attend a funded ten-day training programme led by a team of learning and business professionals.

Who can apply? We welcome applications from IUCN Natural Protected Areas, UNESCO World Heritage Sites (including sites on the tentative list), protected area agencies and management authorities.

Application deadline: The closing date for applications is January 20, 2019 but extensions can be agreed.

Mentee case study

Dubiure Umaru Farouk, Mole National Park, Ghana



En As the manager of Mole National Park, Farouk's responsibilities include income generation through fundraising and ecotourism. Despite this being a priority, staff at the site, along with the Wildlife Division of Ghana, felt that they lacked some of the tools to take advantage of the opportunities for revenue generation at Mole. Training on market analysis and planning was of particular interest to Farouk, and since the training he has continued to focus on this with support from his business mentor Andrew (pictured).

Over the past few years, Farouk has used new marketing tools and knowledge to establish partnerships that will support income generation, for example through the creation of a website to promote the site, funding for management of the elephant population, and a partnership with a private investor to build a luxury lodge. Farouk and his team will continue to build on these successes, attracting new investment and tourism to Mole National Park.

Click [here](#) to find out more, or contact Stacey Baggaley at sbaggaley@earthwatch.org.uk.



> Community Based Conservation Expert <
Wildlife Conservation Fund

Where? South Soudan

Responsible for the design and implementation of socio-economic research and monitoring systems; to design and implement (climate change resilient) livelihood, natural resource management, and conflict resolution strategies; to design and integrate strategies for community conservation initiatives etc.

Read full description [here](#).



> Protected Area Management and Wildlife Law
Enforcement Expert <
Wildlife Conservation Fund

Where? South Soudan

Responsible for ensuring the effective day-to-day operational management of Boma and Badingilo National Parks; supporting South Sudan National Wildlife Service law enforcement efforts; facilitating the implementation of program research and monitoring etc.

Read full description [here](#).



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THE OPINIONS EXPRESSED IN THIS NEWSLETTER DO NOT NECESSARILY REFLECT THOSE OF IUCN