

The Sixth World Parks Congress

A Review of Congress Themes and Trends



Sydney

12- 19 November 2014

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Introduction

The World Parks Congress in Sydney from 12-19 November 2014, a major event held every 10 years with around 6,000 delegates attending worldwide. The Congress contained eight program streams which formed the essence of and powered the IUCN 2014 World Parks Congress. The streams addressed prominent issues and challenges faced by parks and protected areas, which will be vital to positioning them firmly within the broader goals of economic and community well-being through the next decade and beyond. The eight Streams were:

- Reaching Conservation Goals
- Responding to Climate Change
- Improving Health and Well-Being
- Supporting Human Life
- Reconciling Development Challenges
- Enhancing Diversity and Quality of Governance
- Respecting Indigenous and Traditional Knowledge and Culture
- Inspiring a New Generation.

Over eight days many issues were canvassed and ideas shared, however, some lasting impressions of the congress included:

- The increasing recognition of parks and protected areas as fundamental to the health and wellbeing of society, through the environmental services they deliver and to physical, mental and spiritual health.
- The increasing importance of indigenous involvement in protected areas and the creation of a new paradigm that recognises Aboriginal culture and connection to land alongside the need for contemporary land management. The department is well-placed with its continuing efforts to participate in joint management arrangements.
- The growing use and power of technology, through satellites, search engines and apps, to identify global environmental change and communicate the parks and conservation message through social media and other channels.
- The substantial effort going into creating and managing marine protected areas, recognising impacts on oceans and marine life and the need to expand the marine protected area network.
- The rapidly changing governance arrangements for protected areas that involve the growth and influence of non-government protected areas including indigenous and community conserved areas.
- The growing presence and influence of the NGO sector in protected area management and financing.

More information can be obtained about the Congress including the action plan titled the [Promise of Sydney](#) from the [World Parks Congress website](#) .

During the Congress daily bulletins were produced summarising the important findings from stream sessions and presentations and is available [here](#).

RECONCILING DEVELOPMENT CHALLENGES

Topic: The mitigation hierarchy and the role of offsets

Author: Ian Herford

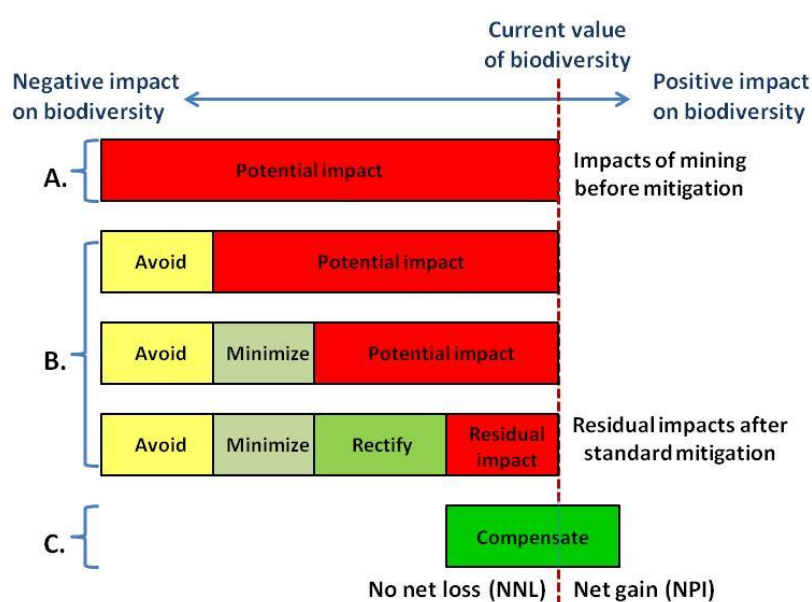
Background:

The mitigation hierarchy for development projects which will impact conservation values consists of the following components:

- **Avoidance:** measures taken to avoid creating impacts from the outset, such as careful spatial or temporal placement of elements of infrastructure, in order to completely avoid impacts on certain components of biodiversity.
- **Minimisation:** measures taken to reduce the duration, intensity and/or extent of impacts (including direct, indirect and cumulative impacts, as appropriate) that cannot be completely avoided, as far as is practically feasible.
- **Rehabilitation/restoration:** measures taken to rehabilitate degraded ecosystems or restore cleared ecosystems following exposure to impacts that cannot be completely avoided and/or minimised.
- **Offset:** measures taken to compensate for any residual significant, adverse impacts that cannot be avoided, minimised and/or rehabilitated or restored, in order to achieve no net loss or a net gain of biodiversity. Offsets can take the form of positive management interventions such as restoration of degraded habitat, arrested degradation or averted risk, protecting areas where there is imminent or projected loss of biodiversity.

Description:

The diagram below, used in a presentation by Dr George Ledec from the World Bank, illustrates the principles of the mitigation hierarchy:



Source: Adapted from the BBOP – Biodiversity Offset Design Handbook

Issues or Concerns:

The idea of biodiversity offsets is controversial to some in the conservation community who fear that the use of offsets could encourage regulators to allow projects with severe impacts on biodiversity to go ahead as long as they offer offsets to compensate, and allow companies to leave significant impacts in areas affected by projects as long as they undertake conservation work elsewhere. This concern can be addressed by advocating for strict adherence to the mitigation hierarchy, which views the role of biodiversity offsets as a last resort, after all reasonable measures have been taken first to avoid and minimize the impact of a development project and then to restore biodiversity on-site.

The application of the mitigation hierarchy, and how far each step should be pursued before turning to the next, is one of the key issues for consideration in biodiversity offset design. When using offsets, we should aim to move from the “do no harm” approach to the “do measurable good” approach by placing climate change, biodiversity, and ecosystems within the mainstream of the development paradigm. This is known as a change from “No Net Loss” (NNL) to “Net Positive Impact” (NPI).

For example, Rio Tinto has now defined an extra step in its mitigation hierarchy associated with this change: Avoid→Minimise→Restore→Offset→**Additional conservation actions**.

Traditionally, work by developers to protect conservation values has been designed to be “just enough”. What is required is much more than just tweaking development to minimise environmental impacts - we should be aiming to do “more good” rather than “less bad”.

Another of the major issues concerning implementation of the mitigation hierarchy and offset design in particular, is the design of an approach to measuring the impacts. Without a suitable metric to measure the impact, it is not possible to know what is required to “offset” it. In WA, the EPA is largely responsible for the determination of appropriate levels of offset, using principles outlined in the “WA Environmental Offsets Guidelines”.

Departmental Response/Opportunities/Actions:

The WA Environmental Offsets Policy enshrines the mitigation hierarchy, but seems to be seeking a “no net loss” outcome, although the EPA Position Statement on Environmental Offsets does aspire to a “net conservation benefit”. Around the world, governments and companies are going the next step to “net positive impact” and Parks and Wildlife should promote this approach in its dealings with developers whenever opportunities present.

Much of the discussion about offsets assumes that the objective will be to acquire and manage **new** areas of conservation land. While this is an important outcome of offsets, it should be borne in mind that offsets can also be used to provide resources for the planning and management of **existing** conservation lands. This approach has particular benefits if resources are targeted at the lands immediately surrounding the development being offset. The proponent can then become engaged in the deployment of offset resources with consequent benefits such as direct staff involvement in projects and the chance of offers of additional resources from the developer beyond the essential components of the offset package (arising from the corporate sense of “ownership” of projects).

Topic: Trails, tourism and protected areas

Author: Kerstin Stender

Background:

The TAPAS Group (Tourism and Protected Areas Specialist Group) is the tourism arm of the IUCN/WCPA (World Commission on Protected Areas). They presented the tourism in protected area stream at the World Parks Congress. Several of their presentations show-cased trails and related events, highlighting the importance of tourism and trails for protected areas.

Description:

Trails (only non-motorised examples were presented) and trail related events, demonstrate a wide range of benefits for protected areas, such as creating awareness of conservation areas and opportunities for conservation education. Galeo Saintz, from the World Trails Network, identified the lack of importance placed on trails, despite their extensive use in protected areas for a variety of purposes, many of which are further discussed below.

They are considered a conservation tool to control visitor movement and disperse visitors in high use parks. Dr Kim, Executive Director from the Korea National Parks, spoke about the capacity of trails to disperse large visitor numbers (10 million) in a national park with initially 2.8 million visitors on one trail. The development of more trails led to better visitor distribution across to other areas within the park and reduced the impact.

Trails benefit society and individual health and wellbeing. Carol Ritchie, Director from the Europarc Federation, presented on the need to be relevant to health and wellbeing, as one of many aspects. Health is not core business, but parks provide clean water, represent a threat from diseases, e.g. animal born infections, and cures, e.g. from plants and fauna.

Trails represent economic opportunities for communities through tourism. Nature based tourism requires communities to preserve the natural environment, rather than supporting destructive plantation and extractive industries. Several parks and trails closed in United States due to government funding cuts, some reopened with a strong community link under private foundations. Linking tourism and conservation is considered a best practice model as it involves the community. As an example of the value of trails for community development and conservation the Interamerican Bank and Biopama invest in trail developments. The New Zealand Parks Director General stated that parks were more valuable than goat farming, primarily due to mountain biking, with tourism generating \$4 billion. An employee scheme provided shares to their Whale Trail business in South Africa.

Trails create employment for those immediately involved, as well as the wider community through goods and services. A Brazilian presentation from the World Wildlife Fund showcased their proposal to engage young people with nature through active involvement during construction, operation and future use of their trail.

Trails are a political tool. The Movement Making/Context Partners company creates human networks to create movements, such as engagement of young people in the outdoors and conservation through trails. Some of their principles included shared goals, clear roles and right rewards.

The [*Tourism and Visitor Management in Protected Areas: Guidelines for Sustainability*](#) (Review Copy) were launched at the Congress, which incorporate trails within the broader context of tourism in protected areas. The Guidelines reflect the thinking behind the presentations at the Congress in the tourism stream, and received input and contribution from TAPAS and other experts. Trails were woven throughout these Guidelines in the form of examples for tourism in protected areas. They were discussed across a wide range of positive and negative impacts, such as providing opportunities for recreation, healthy lifestyles, access to sites, connection to culture and nature, representing infrastructure and revenue opportunities. Negative impacts included the need for appropriate planning, construction, operation and decommissioning as required. These impacts can be biophysical and community-related.

Long distance trails often require management across borders and boundaries and the due to be completed (2015) *Trans-boundary Conservation: Guideline for Planners and Practitioners* will be useful. They are based on ecological, socio-economic, cultural and legal frameworks utilising key elements and characteristics, rather than a set model, allowing form to follow function. These Guidelines support informal to formal agreements, focusing on leadership, representation, style of interaction, authority and decision rules. The aim is for a process that supports governance and fostering. These agreements need to be appropriately resourced by all partners to be successful.

Issues or Concerns:

There is a global recognition of visitor number reductions in protected areas, at least in developing countries. The lack of relationship and importance people associate with the natural environment has been shown to result in a loss of public support, leaving protected areas vulnerable to government funding cuts, de-designation and lack of management. People need to be enticed back into protected areas to reconnect with nature and feel responsibility towards conservation and their protection.

Departmental Response/ Opportunities/Actions:

Trails, as one aspect of tourism, provide a low impact opportunity to encourage visitors into parks. Nature based tourism relies on intact nature (beautiful looking at least), which encourages local communities to look after and support the natural environment and conservation, particularly in developing countries. Trails offer environmentally, economically and culturally sustainable tourism opportunities, as long as they are 'the right trails in the right place'.

Creating a human movement through trails to encourage children and young people into the outdoors could represent a rewarding challenge for the department.

Other opportunities/ideas:**Sponsorships**

New Zealand Parks conservation partnerships - 100% clean tourism campaign. The partnership with Fonterra (milk) is towards conservation efforts and clean river waters. Hydro dam companies, Mitre 10 and other companies support philanthropy.

Community development

Nomvuselelo "Mvusi" Songelwa from SANParks (South Africa) are about more than just conservation. Many populations not permitted to enter parks. Youth education programs are one way to get people into parks. They are also engaging in unemployed programs and partnership with education. One percent of total funding is put aside for social commitments. If parks are not valued by people they do not care for it. They work with spiritual leaders to access plants and develop a healthy water program.

Wildlife tourism

How to make Wildlife Tourism work: If visitors only pay when they see wildlife, locals have a vested interest in protection of wildlife and corridor. Cooperation is better than competition, including coordination at regional level. Improve capacity during planning and management and involve the local community. Do market surveys and find markets that fit the product, rather develop product to fit market. Test package with international visitors and do famils.

Topic: Tourism in protected areas

Author: Rod Quartermain

Background:

There was considerable concern raised within the ecotourism sector that the program for the congress was very light on in regard to issues relating to tourism. Given the apparent commitments made at the previous congress in South Africa that tourism should be given a higher profile at the Sydney congress, discussions focusing on commercial tourism tended to be integrated into the general development streams and sometimes it was difficult to get continuity in the presentations.

There was a group called the Tourism and Protected Area Specialists (TAPAS – mainly academics interested in research) that had its own stand and promoted a number of interesting discussions, the venue for these was not conducive to the large number of people interested in this subject.

Through my role with the Tourism and Protected Area Forum (TAPAF – an informal group that meets up to twice a year with representative from all Australian State and Commonwealth protected area managers and tourism agencies - different to TAPAS) the lack of a tourism profile meant that tourism agencies and bodies tended not to have much interest in the congress.

Description:

However, there were a number of presentations and workshops that focussed on the role of commercial tourism and the benefits of what responsible and sustainable tourism can do for parks. There was also a strong focus on the community connection to tourism operations and the flow on benefits to communities. This is particularly prevalent in the developing countries and many of the presentations were about operations based in various African countries. It highlighted that the target market for many of these operations were wealthy first world residents but the beneficiaries from the development/employment/wealth generation opportunities that came with proper ecotourism developments were to the local communities. The social benefits derived from these operations extend far further than the direct involvement in the operations.

A publication, *Tourism Concessions in Protected Natural areas – Guidelines for Managers* was launched by the United Nations Development Program and featured Parks and Wildlife WA as a case study of best practice via the Naturebank program. The guidelines reinforce the approach Parks and Wildlife take in respect to the assessment and management of commercial tourism recognising the need to adopt a triple bottom line approach with identifiable environmental and social/cultural outcomes along with financial sustainability of both the operator and the managing agency.

So it was difficult to describe this part of the stream because it was rather disjointed and while the emphasis on community involvement in tourism was welcome, it has been a feature of ecotourism operations particularly in the developing world for a long time.

What was welcome is that park agencies around the world that were all suffering from either severe government funding cuts (or had no government funding in the first place) saw the ecotourism industry as a valuable partner in providing financial and non-financial resources to achieve their conservation and cultural goals. Mixed with general visitor revenue, park agencies are now moving towards full funding of their budget from non-government funding sources.

Issues or Concerns:

The presentations and workshops I attended reinforced the approach Parks and Wildlife WA is taking towards its management of commercial tourism and we are seen to be leaders in this area.

There was also recognition that parks agencies and the commercial tourism sector work better when they recognise that in many cases they have common goals. The park agencies are managing the very product that the tourism industry is selling to its customers. Alternatively, a viable business will provide services to visitors that the agencies are not able to provide and are capable of delivering the messages and education that will create appreciation and community support of the park values.

Departmental Response/ Opportunities/Actions:

The Department continues to support a proactive partnership approach with the commercial tourism sector to deliver sustainable and viable visitor experiences. This can be achieved by the continuation of the Naturebank program but expand it from its current focus on just providing accommodation opportunities to include commercial operations that provide high level experiences and interpretation.

We need to build on the understanding within the Department that commercial tourism operations are an opportunity to achieve our conservation goals, not a threat.

RESPECTING INDIGENOUS KNOWLEDGE AND CULTURE

Topic: Ethnobiology code of ethics

Author: Ian Herford

Background:

Ethnobiology is the scientific study of the way plants and animals are treated or used by different human cultures. It studies the dynamic relationships between peoples, biota, and environments, from the distant past to the immediate present.

"People-biota-environment" interactions around the world are documented and studied through time, across cultures, and across disciplines in a search for valid, reliable answers to two defining questions: "How and in what ways do human societies use nature?", and "How and in what ways do human societies view nature?"

Through much of the history of ethnobiology, its practitioners were primarily from dominant cultures, and the benefit of their work often accrued to the dominant culture, with little control or benefit invested in the indigenous peoples whose practice and knowledge they recorded.

In an age when the potential exists for large profits from the discovery of, for example, new food crops or medicinal plants, modern ethnobiologists must consider intellectual property rights, the need for informed consent, the potential for harm to informants, and their "debt to the societies in which they work".

Description:

The International Society of Ethnobiology (ISE) has developed a Code of Ethics. The code acknowledges that biological and cultural harms have resulted from research undertaken without the consent of indigenous peoples.

It affirms the commitment of the ISE to work collaboratively, in ways that:

- support community-driven development of indigenous peoples' cultures and languages
- acknowledge indigenous cultural and intellectual property rights
- protect the inextricable linkages between cultural, linguistic and biological diversity
- contribute to positive, beneficial and harmonious relationships in the field of ethnobiology.

The Code of Ethics comprises a Preamble, Purpose, 17 Principles, 12 Practical Guidelines and a Glossary of Terms and is available at <http://ethnobiology.net/what-we-do/core-programs/ise-ethics-program/code-of-ethics/>.

Issues or Concerns:

Parks and Wildlife's management of conservation lands needs to be science-based. Increasingly, however, there is recognition that ideally, information for management should incorporate current scientific data **and** traditional knowledge. Aboriginal society's knowledge of the plants and animals

we are charged with protecting can assist greatly in designing optimal management approaches, but we must respect the intellectual property rights of the people who hold this knowledge.

Departmental Response/Opportunities/Actions:

Parks and Wildlife should consider adopting a code of ethics for use when gathering and using traditional Aboriginal knowledge. The ISE code would be a worthy place to start in its formulation.

REACHING CONSERVATION GOALS

Topic: Geoconservation

Author: Ian Herford

Background:

Various definitions of geodiversity and geoheritage have been proposed. The IUCN World Commission on Protected Areas (WCPA) Geoheritage Specialist Group uses the following definitions:

- **Geodiversity** is the variety of rocks, minerals, fossils, landforms, sediments, water and soils, together with the natural processes which form and alter them.
- **Geoheritage** comprises those elements of the Earth's geodiversity that are considered to have significant scientific, educational, cultural or aesthetic value.
- **Geoconservation** comprises actions and measures taken to preserve geodiversity and geoheritage for the future.

In 2008, the IUCN revised the definition of a protected area, which is now:

*“A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of **nature** with associated ecosystem services and cultural values.”*

The previous version used “biodiversity” instead of “nature”. The definition now clearly encompasses geodiversity.

Description:

Geology and landscape have profoundly influenced society, civilisation, and the cultural diversity of our planet. Although the World Heritage Convention recognises geological sites of **universal** value there is a need for a system which recognises geological heritage sites of national, state or regional importance. Many important geological sites do not fulfil the criteria for inscription on the World Heritage List, however there is a strong need to conserve and enhance the value of the Earth's heritage, its landscapes and geological formations, which are key elements of the history of our planet.

Geoheritage is an integral part of natural heritage and is often closely linked with biodiversity, as geology has a major influence on plants. Mining heritage is also closely related to geoheritage. Many of the world's early protected areas were selected largely on the basis of their landscape values (Yellowstone and Stirling Range National Parks, for example) and yet there is often little active management to protect these values.

Many countries, including the UK, have declared specific “geoparks” which are included in their protected area networks. A geopark is a UNESCO-designated area containing one or more sites of particular geological importance, intended to conserve the geological heritage and promote public awareness of it, typically through tourism.

Issues or Concerns:

Geodiverse areas are not always biodiverse, even if they are iconic from the perspective of geology and landform e.g. the Twelve Apostles in Victoria would be in this category. Problems can arise if areas reserved predominantly to protect geodiversity are included in the protected area network because the conservation effectiveness of PAs is assessed against the protection of **biodiversity** values.

Geoheritage is non-renewable. Species and communities are at least capable of recovery but if you destroy an outcrop, it is gone forever. Long-term protection of unique geodiversity and geoheritage values, if it occurs at all, will almost always fall to protected area managers as there is little scope for active conservation measures in the broader landscape.

Departmental Response/Opportunities/Actions:

Rather than pursuing geodiverse reserves as a separate classification of protected area (e.g. geoparks), it may be preferable, at least initially, for Western Australia to identify and manage geodiversity and geoheritage within the existing protected area system. The process would commence with an inventory of key sites of geoheritage significance which are worthy of specific protection measures. These would include:

- type locations
- sites of cultural and/or historic significance (e.g. places of indigenous significance)
- sites which help explain the earth's history
- modern landscapes such as deltas and dunes.

Strategies for the long-term protection of these features would then need to be incorporated in protected area management plans **at a similar level of detail as is currently used for biodiversity** values.

The mineral resource sector could be approached to assist the department in the inventory, planning and implementation of geoconservation measures within the protected area network.

Topic: Protected area management effectiveness

Author: Matt Fossey

Background:

Today there are about 200,000 protected areas in the world, which cover around 15% of the earth's terrestrial surface and around 3% of the oceans. But global biodiversity continues to decline. We need to evaluate the extent to which these reserves protect their values and benefit the community, and demonstrate proper accountability and good management practices. Protected areas should not only be measured on coverage but also on their effectiveness.

Description:

A global study on protected area management effectiveness was carried out by the IUCN World Commission of Protected Areas (WCPA). The paper on the global study can be found [here](#). Another recent report is available [here](#). Many thousands of assessments of protected area management effectiveness (PAME) conducted by protected area agencies and conservation NGOs were analysed as part of the study. A nested set of headline indicators were developed that relate to common themes of management planning, resourcing (staff, funding), law enforcement capacity, communication, public participation, visitor management, conservation outcomes, etc.

The overall mean score for management effectiveness was 0.53 out of a maximum of 1. Scores for individual protected areas varied from zero to nearly one. Only 13% were in the clearly inadequate range, while 22% were in the sound management range. Most protected areas were clustered in the middle (i.e. achieved basic management). Overall results indicate that protected area management leaves much to be desired.

Another interesting and related paper presented at the Congress is located [here](#). This explored how long-term biological monitoring data are used to inform Australian marine protected area (MPA) management. Interviews were conducted with managers and researchers from management agencies (including Parks and Wildlife – formerly Environment and Conservation) to investigate the use of long-term monitoring data in i) management effectiveness evaluation (MEE) and ii) evidence-based management.

Issues or Concerns:

Establishment of protected areas: relevant indicators (gazettal, reserve design, boundary marking, tenure resolution and adequacy of legislation) score relatively well, indicating that the basics of protected area systems are in place.

Resourcing: many protected areas still lack basic requirements to operate effectively. Security of funding is a concern in many locations. Increased financial support for protected areas is an important component of increasing management capacity.

Communication and community relations: communications, community involvement and programs of community benefit are generally inadequate.

Management planning and adaptive management: management planning, monitoring and research and management evaluations scored comparatively poorly, but all are strongly linked with management effectiveness. A key factor is the need to improve the application and use of planning, evaluation and management tools to deliver good and consistent on-ground management.

Conservation outcomes: results indicate that despite deficiencies in inputs and management processes, many protected areas are achieving success in management (i.e. conservation of nominated values – condition).

From the MPA paper, results revealed that even when long-term monitoring results are available, agencies are not yet using them in any quantitative condition assessments for MEE. Instead, many long-term monitoring programs are used to inform qualitative condition assessments, where monitoring results are interpreted using expert judgement only.

Parks and Wildlife/MPRA was recognised as being the only agency in the MPA study to conduct management effectiveness evaluations on an annual basis. This frequent evaluation cycle was associated with supporting a high diversity of management decisions, indicating that more frequent evaluation can provide more opportunities to respond to monitoring results.

Departmental Response/ Opportunities/Actions:

PAME assessments have been regularly conducted in other countries and jurisdictions (e.g. South Africa, Victoria and NSW) and directors and managers from these organisations attested to the importance of carrying out these assessments on a regular basis. For example, in KwaZulu Natal in South Africa, the relevant agency has set a minimum target for management effectiveness of 67% for each of its protected areas and a target of 70% across their conservation estate. It is important to convey that they should not be viewed as a performance appraisal of an individual's (manager or officer) performance.

The assessment process provides an opportunity for protected area planners and managers to learn from each other and raise the standard of protected area management. Whilst management effectiveness of WA's parks and reserves may be perceived to be better than many of poorer-performing parks in this study, there is a need to ensure that PAME assessments are being done across the conservation estate. This is currently lacking for our terrestrial parks and reserves and needs to be addressed. And while frameworks are in place to audit management of our marine parks, some indicators are possibly being overlooked.

The planned merger of the CCWA and the MPRA provides a key opportunity to consider how PAME assessments should be carried out and ensure that the necessary frameworks are in place. The frequency of evaluations is also a key consideration and a recent study advocates a more frequent evaluation cycle (e.g. as done by the MPRA on an annual basis).

Topic: The new IUCN Green List

Author: Matt Fossey

Background:

Many of us would be familiar with the IUCN Red List, which is the world's most comprehensive inventory of threatened species. Fewer would have heard about the IUCN Green List of Protected Areas. Launched at the World Parks Congress, the IUCN Green List is a new global initiative that celebrates the success of effective protected areas, and encourages the sharing of that success so that other protected areas can also reach high standards. The list is based on the theory that more effective protected areas lead to greater benefits for humans and nature.

Description:

Interested countries and agencies work with the IUCN and the IUCN World Commission on Protected Areas (WCPA) to establish a proposed programme and identify candidate sites. An IUCN Green List Reference Group will assess nominated sites in accordance with agreed standards. These will include standards for management planning, for effective management and meeting conservation objectives, for governance and for the visitor experience. The Green List is not just about the best resourced protected areas in the most developed countries and regions. Nominated protected areas in Australia for example, would not be compared with parks in developing countries or poorer regions.

The initiative has been developed from 2012-2014, and a number of partners have participated in a pilot phase to help test and refine the process. Based on the pilot phase, the first [Green Listed Protected Areas](#) have been declared and include Montague Island Nature Reserve and the Cape Byron State Conservation Area/Arakwal National Park in NSW.

Issues or Concerns:

Recognising that park managers are busy people, the Green Listing process should not take resources away from daily management and operational tasks, but should provide enough incentive to encourage improvements in performance, and ensure that it recognises all staff and stakeholders involved in making a protected area successful.

NSW National Parks and Wildlife Service (NPWS) was one of the agencies involved in the pilot phase. The process of getting three of its reserves accepted to the Green List has been arduous but very worthwhile. The Green List initiative is a voluntary scheme and for NPWS it was a significant voluntary commitment for the staff involved (which were part of a reference group). It also required a substantial amount of administrative support and a dedicated secretariat.

Departmental Response/ Opportunities/Actions:

Parks and Wildlife should investigate the process of Green Listing some of WA's parks and reserves as it will provide international recognition, motivation to meet and maintain high management standards, recognition from the tourism industry and visitors of a quality experience, and more.

Topic: Conservation objectives under a changing climate

Author: Matt Fossey

Background:

Protected areas serve to both mitigate and adapt to climate change. They contribute to climate change mitigation through carbon storage and sequestration. They reduce threatening processes to species and ecosystems and as such maximise their potential to adapt to a changing climate. And they maintain ecosystem integrity and reduce vulnerability to climate change. Protected areas can be among the most practical, economic and effective solutions to climate change, but are not sufficient on their own.

Climate change impacts have already been documented across a range of systems in protected areas. The only good news is that protected areas are likely to be better able to withstand climate impacts because they are more intact, and less stressed, than other ecosystems.

Description:

The rationale for, and management of protected areas over time has been to maintain existing conditions to conserve biodiversity. However the ecological changes that are now occurring as a result of climate change mean that protected area planners and managers will need to actively manage for change, rather than just maintaining the persistence of existing systems.

Traditionally, most protected area goals and objectives seek either to maintain existing levels of biodiversity (i.e. at the population, species or ecosystem levels) or restore key ecological elements and processes. As climate-driven changes push many systems towards ecological thresholds, managers will need to take an active role in managing these changes. The bottom line is that, increasingly, we will need to manage for change, not just persistence.

In the face of climate change, IUCN suggests reconsidering conservation goals and objectives, not just management strategies. Given the scope and magnitude of climate change impacts, many current conservation goals and objectives may no longer be achievable. Reviewing existing goals from a climate change perspective may either validate the relevance of these goals, or indicate the need to modify them.

There is a need to shift towards developing and adopting climate-informed goals and objectives. Consider the 'what', 'why', 'where' and 'when' components of existing goals and modify accordingly. Climate change adaptation will require that we focus our conservation goals and objectives on future, rather than past, climate and ecological conditions.

Considering the wider landscape in protected area planning and management is another key part of developing climate-informed goals. As climate change causes species to shift across the wider landscape, and exacerbates threats from within and outside protected areas, it is important to think at much broader spatial scales. Likewise, engaging and collaborating with a more diverse set of

stakeholders and institutions will become more important, especially as efforts are made to enhance connectivity.

Issues or Concerns:

It might be expected that protected areas which have fixed locations and are often isolated, will be particularly vulnerable to the impacts of climate change. Many individual sites are likely to lose habitats and species, but there is evidence that well-designed protected area networks may be able to deal with climate change reasonably well.

Although significant uncertainties are associated with climate change, there are also emerging areas of consensus, and improvements in projections. It is worth distinguishing between uncertainties in the direction of trends and their rate and magnitude. Planners and managers need to learn to embrace uncertainties, using tools such as Drivers-Pressures-State-Impact-Response planning and scenario-based decision making. Great Barrier Reef Marine Park Authority has had some experience with these approaches and Parks and Wildlife should explore them further.

For most protected area planners and managers, climate change is just one of many concerns, and often not the most pressing. Planning for the impacts of climate change is often regarded as a “luxury” when faced with limited resources (time, staff, money) and more immediate pressures. One way to address this is to focus on near-term conservation strategies and actions that are consistent with longer-term adaptation needs.

Departmental Response/ Opportunities/Actions:

In the past, climate change has not been considered in the planning and management of WA’s (marine) parks and reserves, as the impacts were not deemed manageable within a marine park context. However, there is growing need for Parks and Wildlife to integrate climate change scenarios into our planning and management efforts. To be effective management approaches will need to be both flexible and responsive. Climate adaptation must be recognised as an ongoing process, rather than a one-off event.

Overall we must plan for a system of protected areas that is most adaptive to climate change. Options to achieve this include: planning for a mix of protected area sizes in the system, but prioritise the large, representative units; planning protected areas that have a diversity of environmental gradients (valleys, plains, mountains, ridges, etc.) to maximise the potential for climate refuges; ensure legal and regulatory frameworks allow managers the flexibility to adapt to climate change; regularly review protected area boundaries to see if adjustments are necessary to help achieve commitments in the face of climate change.

A new guidance document [Responding to Climate Change: Guidance for protected area managers and planners](#) was developed for consultation at the World Parks Congress in Sydney. The guide will be revised in early 2015 and a final draft completed by June 2015.

VALUING HUMAN LIFE

Topic: Valuing ecosystem services

Author: Colin Ingram

Background:

This was another strong theme of the Congress. The messages coming through were that protected areas are now seen less as a last line of defence but as the being the front line, especially around the importance of protected areas and ecosystem services to sustaining human life. The world is moving closer to recognising protected areas as not just about conserving biodiversity but preserving human kind. Protected areas are now being recognised as an investment in our quality of life and wellbeing and not as a burden on taxpayers.

We have seen an evolution over the past 100 years as to how protected areas are viewed – from landscape conservation – places of beauty and for recreation eg Yellowstone, to conservation and biodiversity to tourism and the economic values it provides to currently – the health and wellbeing of people – HPHP.

A couple of sessions on this subject stood out, one on measuring the value of ecosystem services and another on the mapping of ecosystem services.

The [Tessa Tool kit](#) is a suite of rapid fire techniques for measuring and comparing the ecosystem values of different land uses if it were alienated for its natural state.

Technology is now available to assess Ecosystem Services – [Co\\$ting Nature database](#). Co\$ting Nature is a web based tool for natural capital accounting and analysing the ecosystem services provided by natural environments (i.e. nature's benefits), identifying the beneficiaries of these services and assessing the impacts of human interventions. The tool assesses the globe at a 1sq km resolution for the sites of production of E Services eg water, carbon, flood mitigation, nature based tourism, species richness and endemism. It is able to compare these values from 1950 – 2010. This program can run at a global, continental or even park level.

- 15% of the World's water is coming from Protected Areas
- 20% of the World's carbon is held within Protected Areas

One of the key findings in this process is that the placement of PAs is critical to maximising Ecosystem Services. It appears that many of the world's PAs are in the wrong place. In other words, ie ecosystem services should be one of the criteria used in PA acquisition.

Issues or Concerns:

The data and associated tools to allow the Department to access and process that data to determine the value of ecosystem services being provided by protected areas in Western Australia. The existence of ecosystem service values is not well known or understood by the community. Undertaking an assessment of ecosystem values for a particular park or forest area and

communicating the results widely would assist in articulating another important value of protected areas.

Departmental Response/ Opportunities/Actions:

The Department's Science and Conservation Division should review the Co\$ting Nature system and the consider using the data held within the database to undertake an assessment of E services on a selected park or forest area in Western Australia.

ENHANCING DIVERSITY AND QUALITY OF GOVERNANCE

Topic: Meeting Aichi targets - the changing face of protected area governance

Author: Colin Ingram

Background:

Governance is about who and how decisions are made and the power relationships between decision makers and those affected by those decisions.

The entire landscape of governance is moving rapidly. Over the past decades there has been a dramatic change in understanding how governance of protected areas impacts on the achievement of their conservation goals. Since Durban the IUCN has issued a typology of four different forms of governance of protected areas:

- Government run protected areas;
- Privately managed protected areas;
- Those established and managed by indigenous peoples or local communities (ICCAs); and
- Those under shared-governance arrangements.

There are several driving forces in governance arena.

- the Aichi Target 11 – by 2020, 17% of terrestrial and inland water and 10% of coastal and marine areas will be in protected areas;
- social equity, social justice and humanitarian Aid programs in Africa and other developing countries;
- the increasing recognition of Aboriginal/indigenous people's rights to land and their capacity to contribute to land management, and
- the strong involvement of the ICCA Consortium (a non-government group coordinating the policy framework for inclusion of ICCA in protected areas).

The net effect is that the pendulum has shifted in terms of the perceived values of the various sectors of governance types. Government is no longer considered the only or even primary form of protected area and there is a view that other forms of governance may be more effective in achieving biodiversity and social/community outcomes.

For example, a constant statement throughout the Congress from keynotes speakers was how essential and important local communities and indigenous people are in achieving conservation outcomes. Creating indigenous and community conserved areas has become a key driver of meeting conservations targets.

Issues or Concerns:

- Meeting the Aichi target is about numbers /statistics and not about the quality of PAs or good management. Many non-government PAs will remain unmanaged while being counted

in the Aichi target. Eg, Massive new marine protected areas are being created throughout the Pacific islands. Some countries have set aside large portions of their EEZ (Exclusive Economic Zones). The question is – can they manage them effectively to exclude illegal fishing and restore values?

- Powerful non-government groups are setting the agenda in defining what a PA is and what should be included in the accounting of them. For example – there is now a strong push through the WPC process to include Other Effectively Conserved and Managed Areas (OECMs). This is a catch all category that includes private bushland and military bases/training areas.

Departmental Response/ Opportunities/Actions:

- We need to engage with the players in the ICCA sector in a positive and proactive way.
- While the private and ICCA sector is growing in strength and capacity. We shouldn't see these sectors as threats but as opportunities to partner and possibly to be "contracted" to manage some government PAs under shared arrangements.
- Are we at the stage where we look for example to local communities and or local Aboriginal communities to manage a group of nature reserves in an area? We provide the oversight and set the standards. These are realistic ideas that deserve proper consideration.

This opens up the topic of joint management. The Department made two presentations in the Governance stream on the topics of joint management and customary activities. There is no doubt that WA is leading the world in legislating for the right for Aboriginal people to undertake customary activities across the entire parks and conservation estate. Likewise, CALM Act amendments in relations to joint management, especially the capacity to enter into joint management across any land tenure is a powerful and necessary tool that will enable the department to engage effectively with local communities and traditional owners, mining companies, pastoral lessees and others to achieve our conservation goals.

For further information and reading see – [*Governance of Protected Areas – IUCN*](#) and [*ICCAs and Aichi Targets*](#).

Topic: Financial sustainability scorecard

Author: Ian Herford

Background:

Protected area (PA) financing is critical for sound management. However globally, protected area financing needs to be improved at both site and system levels. Hence developing long-term financing systems is a key element for the sustainability of PAs.

As a tool to assist in this area, the United Nations Development Program (UNDP) has developed a “Financial Sustainability Scorecard” for national systems of protected areas. The scorecard is available at <http://www.undp-alm.org/resources/knowledge-products/financial-sustainability-scorecard-national-systems-protected-areas>.

Description:

The purpose of the scorecard is to assist governments, donors and NGOs to investigate and record significant aspects of a PA financing system – its accounts and its underlying structural foundations – to show both its current health and status and to indicate if the system is holistically moving over the long-term towards an improved financial situation. The scorecard is designed for national systems of PAs but can also be used for state, regional or local or networks.

There is a section to record overall financial status and changes to the inflows and outflows of capital of the PA system. However, the scorecard is designed to check the progress of the entire PA financing system and its foundations which will lead to the future financial viability of a PA system.

Issues or Concerns:

Assessing a PA system’s financial sustainability is widely recognised as a key component of effective PA management. The Programme of Work of the Convention on Biological Diversity (CBD) acknowledges the importance of financial sustainability by including specific recommended actions for countries under Goal 3.4, which focuses on ensuring financial sustainability of protected areas. Specific activities under this goal include:

- a) conducting a national-level (or in our case state-level) study of the effectiveness of existing financial resources
- b) identifying diversified funding mechanisms and options
- c) establishing a national-level (as above) sustainable finance plan
- d) developing and implementing supportive enabling policies.

The UNDP financial scorecard covers many of the aspects in Goal 3.4 of the CBD Programme of Work, and can provide the basis for many of the recommended actions.

PA financing must be viewed at two levels. One is the basic status of a PA system’s finances – how much is being spent and how much is needed to be spent for effective management. This will look at annual expenditures, operational costs, investment needs, revenue generation, etc. From this it is

possible to assess financing gaps and financial targets for increasing budgets and expenditures and/or reducing management costs in order to balance accounts.

However, there are limitations to what a snapshot of a PA system's financial accounts shows about the underlying structure, health and future direction of its finance. To fully assess if a PA system is moving towards financial sustainability it is also important to investigate and analyse the structural foundations of what enables and promotes long-term financial improvements for PAs.

Departmental Response/Opportunities/Actions:

Managing PAs is a long-term business and yet funding is often hard to predict from year to year, let alone for the decadal time-scales necessary for effective management of conservation values. The UNDP's scorecard is designed for national systems of PAs but can be applied at the state level and could be worth trialing in WA. At the very least, it would give us an indication of the sustainability of our finances in a global context. At best, the results could assist in making the case for more sustainable resourcing of our PAs.

IMPROVING HEALTH AND WELL BEING

Topic: Healthy Parks Healthy People

Author: Ewen McGregor

Background:

Improving health and wellbeing – healthy parks, healthy people, is based on the fact that nature is essential for human health and well-being, something that Australian aboriginal people have known for tens of thousands of years. Health, land and living are part of the same equation.

–The last World Parks Congress at Durban - partnering with health should be mainstream ...demonstration of progress but need to make connections other sectors.

–Health sectors are beginning to engage –Parks Victoria (Medibank Private 3x years support).

– People are integral to parks and parks are integral to people: Over half of the world population now lives in cities (Australia already 70%) have become disconnected with the outdoors.

We need spectrum of parks and experiences. Every person should have a park within walking distance. Seamless connection with all parks (including promotion). Visitors do not care who manages areas - need places that are accessible.

“These local parks must be complemented with regional and city parks creating a great city-wide park system that mixes active, passive and contemplative recreation”. (ref: Mr Gil Penalosa - 8-80 cities).

We are all part of the natural world. This understanding is deepened by a growing body of evidence on the connections between nature and human health and well-being. Parks and protected areas are:

- Places of hope and inspiration
- Natural solutions to the impact of climate change
- Stimulators of sustainable economies, and
- Keepers of biological diversity.

We know that nature provides fresh water, clean air and food, upon which all human life and health depends. It influences disease occurrence and spread, and is the source of medicines. Nature benefits people’s mental, physical, cultural, and spiritual health and well-being.

In terms of physical health: Australian research has found that people living in neighbourhoods with more than 20% green space are significantly more likely to be physically active (Astell-Burt et al., 2014).

Regarding mental health, we know that the fast pace of modern life is associated with a diminished capacity for directed attention (i.e. we find it difficult to focus). Yet Dutch research shows that sitting in a park for 15 minutes restores intentional capacity and increases people’s sense of wellbeing (Van

Den Berg et al., 2011). And Finnish research (de Bloom et al., 2014) has shown that accessing natural settings in lunch breaks decreases negative moods and improves self-reported health. Moreover, Danish research (Stigsdotter et al., 2010) shows that people living within 300 metres of green space are 1.42 times less likely to experience stress than those living 1 kilometre or more from such space. Socially, parks foster connections and interactions between people, at a time when fear of 'others' is widespread. For older people in particular, structured activities in local parks motivate older adults to visit parks and interact with others (Pleson et al., 2014).

And spiritually, UK research (O'Brient et al., 2011) shows that engaging with parks fosters spiritual growth and provides meaning and purpose in life for young people.

We know that when ecosystems are disturbed, biodiversity is often lost, as is human health. Eco-health experts caution that human impacts on the environment lead to the spread of emerging and infectious disease including malaria, Lyme disease and dengue.

Health and wellbeing decision-makers advocate for a greater focus on preventative health care as a way of reducing the disease burden and associated costs.

Conservationists, just as strongly, advocate for the role of protected areas in providing natural solutions to a range of society's problems, including health and wellbeing. It would seem that health and wellbeing professionals and conservationists have a convergence of interests.

For millennia, communities have understood the inherent health benefits gained from nature. However, sprawling urbanization coupled with shrinking natural spaces has left society disconnected from the natural world. While urbanisation has brought many benefits to society, it increasingly denies people opportunities for physical activity and enjoyment of the mental, spiritual and physical benefits of nature. This is cause for alarm and needs our immediate action.

Over this last decade, there has been a global increase in non-communicable diseases such as heart diseases, some cancers, and Type 2 diabetes. This is likely to worsen as the global population shifts from 54 per cent of people living in cities today to a forecast 70 per cent by 2050 (Australia is already at 70 per cent).

The research is very clear about the human need for connection to nature. We consistently heard at the congress that as the world has urbanised people, particularly youth, have become increasingly disconnected from nature and more sedentary.

The Congress has provided the incentive for change. But to realise this opportunity we need to mobilize partners in all sectors to create a new approach that ensures healthy parks that support healthy people. One of the challenges in the battle for protected areas is to show their value and relevance and this new approach is essential if we are to win the hearts and minds of an urbanised world to conserve biodiversity. This is essential if we are to realise the universal right to health enshrined in the World Health Organization's Constitution and achieve the Aichi Biodiversity Targets of the Convention on Biological Diversity.

The health of parks and the health of people require urgent attention. We need to work smarter. We need to make more persuasive arguments. We need to communicate with loud voices to new audiences that parks are essential for physical, mental, social and spiritual health.

Great advances were made during the week with the health sector joining this Congress with approximately 60—70 per cent of the HPHP stream participants coming from the health sector. But, we need to do more. We need more engagement of the health sector and together with our health colleagues; we need to partner with business and the private sector. We have to rethink our networks and develop new ones.

Topic: Inspiring a new generation

Author: Ewen McGregor and Rod Annear

Background:

For the first time ever, the majority of the world's population now lives in cities and the proportion continues to grow. By 2030, 60% of the world's population will live in cities. In developed countries, people are spending more time indoors than in any point in history and society has shifted towards emphasizing safety over experience.

A growing body of empirical evidence demonstrates that deepening our relationship with nature, by fostering and enabling direct and meaningful experiences, has a positive impact on every facet of society.

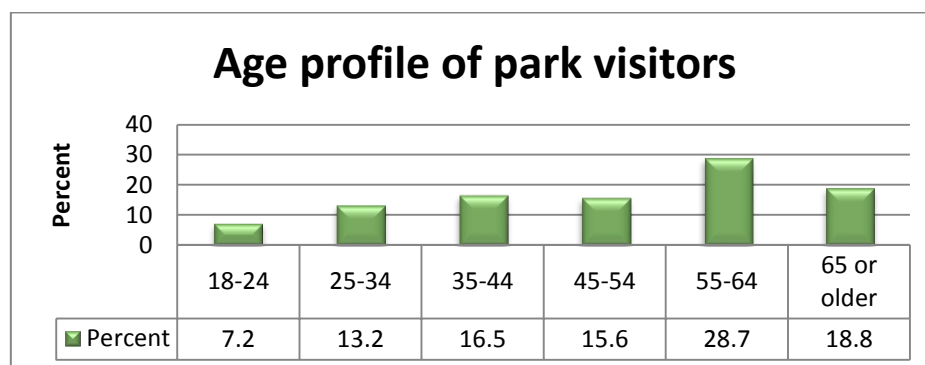
Changes to western culture have led to children spending more time indoors and viewing screens than for previous generations. A review of literature by Martin, 2011 found that contact with nature is associated with positive health benefits, behaviour and learning. The evidence includes:

- That there is a decreased risk of children being overweight when more nature is present in their neighbourhood.
- Playing in natural environments assists with building children's motor skills.
- Nature contact enhances children's learning and development. Programs increasing nature contact have identified beneficial effects on children's personality development, cognitive functioning, attitude and school behaviour.
- Contact with nature, especially during middle childhood, has been indicated as having an important role to play in children's mental health
- Children's manage stress better when they have more contact with nature.
- Time in nature assists the performance of children with ADHD.
- Children displaying delinquent behaviour benefit from nature-based programs such as wilderness camps.

Young people (35 and under) represent more than half of the world's population, making this a significant group as a living and breathing force of great potential whose voices must be heard.

Visitors to Parks and Wildlife managed sites is significantly underrepresented by those aged 18-24.

Data from Parks and Wildlife state-wide surveys shows 47.5% of visitors are aged 55 or over with nearly 20% aged over 65.



The age distribution of parks and wildlife staff workforce is also skewed toward older workers. The 2013 Workforce and Diversity Plan reported that only 4.8% of the workforce was aged under 25 years over 50% were older than 45 and around 23% were over 55 years of age. The average age of Parks and Wildlife workforce is 45.4 which is consistent with the public service average but 5 years older than the average age of the WA workforce. Many of these people will be retiring over the next 10 -15 years including many of the agencies current leadership.

A society is developing which is increasingly remote from the natural world and for many young adults and children nature is seemingly irrelevant. It is a community where nature is not understood, valued or respected. This disconnection and disengagement from the natural world is a major threat to the ongoing protection and survival of protected areas.

For Parks and Wildlife, it is critical that we continue to invest in inspiring a new generation of park visitors, *connecting young people to natural areas to engender respect and a love of nature, particularly through experiences in protected areas.*

The “Inspiring a New Generation” stream at the WPC 2014 focussed on the actions needed to better connect a new generation to nature as well as opportunities to better empower young people as tomorrow’s conservation leaders. There were many inspiring presentations from young people involved in the stewardship and protection of natural areas.

The “Inspiring a New Generation” Stream at the WPC provided many examples of individuals and park managers engaging with youth to inspire a new generation of park advocates.

The use of digital technology was a feature of many presentations. The use of film, sound, digital photography, mobile applications, websites, social media, augmented reality and citizen science was extensive in engaging young people in parks. The theme of “starting where people are” and moving them from the places and spaces they know and out in to parks was a familiar theme. Some of the notable ideas/projects are presented below.

Description:

Project Wilderquest

[Project Wilderquest](#) created by NSW Parks and Wildlife was an excellent example of this. Wilderquest is a website and Ipad app that allows kids to play a game that takes them on a journey through a virtual environment. It makes them familiar with a range of native species and then seeks to link the virtual experience to a real world experience in a park.

There were many examples of the links between education and protected areas and the use of citizen science to engage students in local protected areas was regularly highlighted.

Wilderquest Website



[Inaturalist](#) was an example of a citizen science app which allows users to record what they see in nature, meet other nature lovers and learn about the natural world. There were many other examples of similar websites/phone apps that had similar aims and functions.



Explore!
Your World!



Learn!
About Life!



Record!
Add Observations!

Welcome!

to **iNaturalist.org**, where you can **record** what you see in nature, **meet** other nature lovers, and **learn** about the natural world.

[Learn More »](#)
[Sign Up!](#)

Maintenance downtime scheduled for Thursday 8pm PST (4am GMT Friday)
 El tiempo de inactividad de mantenimiento programado para el jueves 20:00 EST (04:00 GMT del viernes)

Recent additions

A Red-backed Shrike

Observer: terathopius
 Date: November 9, 2014
 Date added: January 22, 2015

[View »](#)

B Wahlberg's Eagle

Observer: terathopius
 Date: November 11, 2014
 Date added: January 22, 2015

[View »](#)

C Monkey Moths

Observer: terathopius
 Date: November 12, 2014
 Date added: January 22, 2015

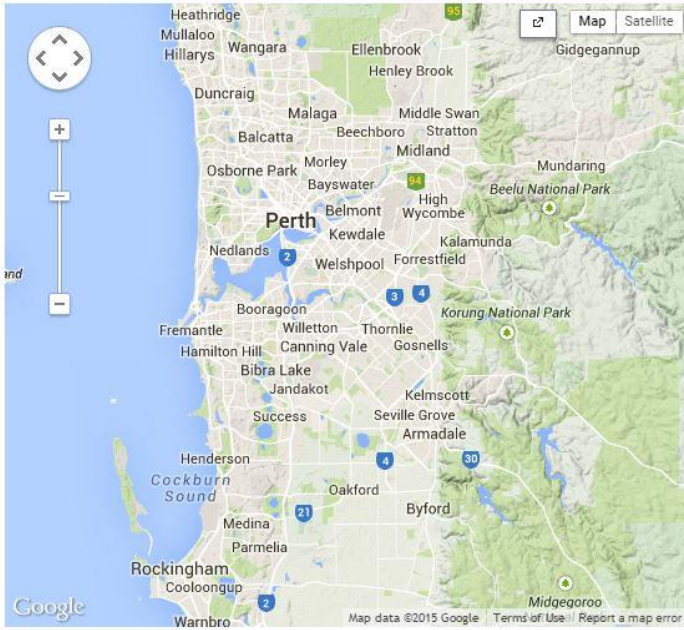
[View »](#)

D Shreve's Tree Snake

Observer: terathopius
 Date: November 12, 2014
 Date added: January 22, 2015

[View »](#)

[More »](#)



iNaturalist Website

Another example of using citizen science was the [National Geographic Bioblitz](#). A BioBlitz brings together the expertise of multiple scientists and naturalists with the power of citizens, including students, willing to take a snapshot of an area's biodiversity in about 24 hours.

Activities that Attract

There was considerable throughout this stream discussion about protected areas having a reputation of being “stuffy”, old fashioned and out of touch with youth culture. One of the ways to overcome this that was highlighted was to consider activities that appealed to young people and to accommodate these in parks where possible. Mountain biking was mentioned as a popular activity with young people that with proper planning and design, was consistent with national parks and protected areas. [Many park agencies](#) around Australia and the world were [embracing and encouraging mountain biking](#) and with it were bringing a new generation of park visitors and park supporters.



The Six foot Track

The Six Foot Track is a classic Blue Mountains long distance walk trail from Katoomba to Jenolan Caves. Sixfoottrack.com is a website developed by individuals that highlights the trail, provides how to videos, guides and tutorials, features 360 degree photography (emu view), detailed track notes and forums. Sixfoottrack.com is a good example of community taking over the promotion, interpretation and provision of information for a publically managed resource.

Parks Canada Youth Ambassador Program

This helps make parks cool for young people. Each year [Parks Canada Youth Ambassador program](#) employs two young Canadians over summer to inspire youth to get off track and discover and share all the awesome things that they can experience in Canada. The youth ambassadors embark on a once in a lifetime summer journey and then for the next six months are employed part time (approx. one day per week) to share their discoveries and experiences at organised events and activities to introduce and motivate a new generation to discover Parks Canada. They also make a series of [promotional videos](#) about their adventure.

Google Tech

Changes and new innovations in technology featured in many of the presentations and workshops in this stream. One example of this was the [Google Photo Spheres](#) which are 360 degree panoramas that can be created with a smartphone. Viewers can look up, down and all around and spheres can be embedded in websites and shared across a range of other digital media. The [Google Trekker](#) is a portable high resolution 360 degree backpack mounted camera that collects imagery for out of the way places – in effect street view for trails. Parks and Wildlife and Tourism WA are currently negotiating the loan of a Trekker unit to collect trail imagery for WA. Google have also partnered with Catlin Seaview Survey to create an [Underwater Streetview](#).



Google Trekker

Green Screen Postcards

To engage people in visitor centres or at outreach displays, Parks Canada have developed a greenscreen postcard. A visitors stands in front of the greenscreen and has their photo taken on an Ipad. You can then choose from a range of classic Canadian park scenes and “embed” yourself in the scene. The finished image is then emailed to you to share.



GreenScreen Postcards

The Quietest Concert Ever

Parks Canada partnered with Sennheiser Audio, CBC Music and rock band Hedley to put on the [quietest concert ever](#), in [Banff National Park](#). The crowd all had wireless headphones so while they were all rocking out to the band – there was no sound disturbance in the park. The parks spectacular backdrop was a feature of the performance and young attendees were introduced to the beauty of

the park. Parks Canada [used the band members](#) to help promote the park and the benefits of young people getting out into parks.



The quietest concert ever

Soundscapes and Digital Storytelling

Leah Barclay presented on her work at the intersection of art, science and technology. As a composer, sound artist and producer she presented her work on creating soundscapes and acoustic monitoring. [River Listening](#) is a project which is acoustically monitoring four Queensland River systems to measure aquatic diversity. [Biosphere soundscapes](#) is being created to allow people across the world to “listen” to the soundscapes of protected areas.

Geocaching and more

[Geocaching](#) is not new however there were a number of new spins on the genre and park agencies across the world using geocaching to engage young people and families to explore and find out more about parks. Geocaching is like a treasure hunt using your GPS or smartphone to find caches. [Munzee](#) is a new spin on the geocache genre calling itself “the next generation global scavenger hunt”. Munzee “gamifies” geocaching as you score points and gain levels as you accumulate more points.

[Zombies, Run](#) is the gamification of running. Zombie run is a fitness app on your smartphone that combines structured training, audio instructions, music and a gripping story. The idea is that running from zombies motivates you to run further and faster! It is happening in parks as visitors use parks for exercise and adventure.

[Habitat The Game](#) is a bit like [Tamagotchi](#) craze of the 90s. Players of Habitat undertake actions to keep an endangered animal (a bear) “alive”. To keep the bear alive and healthy players need to undertake real world actions such as saving energy and water. The game aims to change actions and behaviour through the game and have these behaviours stick as permanent changes to behaviour.

[Bound Around](#) helps kids (8-12 year olds create their own travel stores and to share them digitally and safely to help other kids learn about a destination. It taps into a growing “tween” market and is being used by park agencies to promote natural areas to kids.

Vecotourism.org

[Vecotourism](#) is a virtual ecotourism project that uses interactive on line tours to connect people with conservation and local communities and ecologically and culturally sensitive areas worldwide.

Empowering Young Park Professionals

There were many sessions that dealt with issues around empowering young people to be involved in decision making and planning for parks. Creating pathways for young people to have input into management, to have a voice and to build capacity were common themes. Barriers to employment and leadership roles were also discussed.

Project Wyld

Project Wyld demonstrated an innovative approach of connecting people to nature through music. Canadian rapper Baba Brinkman was inspired to create the [Rap Guide to Wilderness](#), a hip-hop album that captures the spirit of commitment to wilderness conservation in a way that is both infectiously informative and heartfelt. The collection of songs serves as an outreach tool to connect people to nature.

Issues or Concerns:

In a constrained budget environment, the temptation is to reduce or cease creative, communication, education, community engagement and interpretation projects. Without continuing to focus energy and effort in this area, Parks and Wildlife runs the risk of failing to engage a new generation of park visitors and supporters. The temptation to scale back operations to “core” work which does not include a focus on community and youth engagement fails to recognise the important connection between a communities’ engagement with protected areas and advocates who support them.

The age profile of Parks and Wildlife staff provides some cause for concern. During the past 10 years, recruitment and training of graduates has fallen. The average age of the Parks and Wildlife workforce has risen and leadership pathways for younger staff remain limited in some areas. With many of the leadership of the agency due to retire over the next 10-15 years, the development of leaders, leadership pathways and input to management by younger staff becomes more critical.

The age distribution of visitors to Parks and Wildlife managed land is also concerning. Visitors aged 55 years or older are approaching 50% of total visitation to Parks and Wildlife managed lands and those under 25 make up only 7.2%. Once the baby boomer population begin to decline as visitors to natural areas, it is possible there will be a reduction in visitation, especially for camping.

Departmental Response/Opportunities/Actions:

- The Department should continue to invest in and expand activities and programs that promote lifelong connections with the environment. Partnerships with NatureplayWA, education programs and interpretive activities programs in parks should be encouraged and expanded even in challenging times.
- The use of digital technology and communication using contemporary media such as film, sound, mobile phone and tablet applications, websites and social media should be expanded. Use innovation, marketing communications, technology and partnerships across diverse sectors to inspire a new generation to connect with nature.
- Consider the development of a Youth Ambassador program for Parks and Wildlife which should include Indigenous youth ambassadors. Consider partnering with the Youth Affairs Council of WA to develop a program and selection process for the appointment of Youth Ambassadors. Liaise with Parks Canada to take advantage of their experience in running a similar program.
- Develop processes within the department to get input from younger staff regarding programs and decision making.
- Closely look at the workforce profile and plan and consider ways to recruit younger staff. Actively develop young leaders programs to empower young people in decision making to be current and future leaders for change.
- Look for ways to bring activities and recreational pursuits to parks that attract young people to parks. Growth activities include mountain biking, geocaching, music events and fitness activities in parks.
- Further analyse the age profile of Parks and Wildlife visitors and undertake some predictive modelling regarding the likely impacts of a changing community demographic on park visitation.
- Evaluate the “branding” of parks and explore and introduce styles of presentation and media that make parks “cool” and target younger people.

TOPICS ACROSS VARIOUS STREAMS

Topic: Food for thought – Key messages for the Conservation Commission

Author: Carol Shannon (Conservation Commission of WA)

The Congress provided an opportunity to revisit and discuss continuing themes, revitalise old themes and explore new themes in protected area management. The diversity of attendees was at least as diverse as the spectrum of terrestrial and conservation management issues facing nations, developed and developing.

The high calibre of presenters inevitably resulted in the delivery of inspirational messages to conference delegates – but what is important, after the euphoria of the world congress abates, is how those messages are translated into action by conservation practitioners.

Against a backdrop that reinforced the essential link between human society and nature and acknowledged the advances of the last ten years, delegates were reminded of the threats to nature due to the convergence of the impacts of human consumption, population growth and industrial activity at the same time as the meeting of G20 leaders in Brisbane focussed on economic growth. The enthusiasm and energy of Indigenous peoples in actively addressing threats to cultural values posed by climate change was evident across discussion streams.

Three key themes from the Congress linked to the business of the Conservation Commission are discussed below:

Governance – Performance Evaluation – Respecting Indigenous Knowledge and Culture

Governance:

One of the eight discussion streams at the IUCN Congress was dedicated to the discussion of governance, acknowledging its increasing importance in protected area management across the world. As a definition:

“Governance is about **who decides** about what is to be done, and **how** those decisions are taken” (IUCN – *A primer on governance for protected and conserved areas*, 2014).

Discussion indicated agreement that there is no perfect governance setting and no “one size fits all” governance framework. For example, it is recognised that in developed nations, the drive for conservation of nature is driven more by ethical and recreational motivations than to securing livelihoods. This inevitably places different emphases on how governance and management play out in protected area management for Australia *vis a vis*, for example, less developed countries.

However, a new and interesting area of discussion indicates that while governance types can be different and should be fit for purpose, governance quality is now recognised as being a critical element. The IUCN has developed a set of good governance principles, noted below, a detailed discussion of which can be found on the IUCN website.

It was proposed at the conference that there has been, over the last decade particularly, a shift from understanding to action in improving governance arrangements over protected areas – for

conservation, for sustainable livelihoods and respecting the rights and responsibilities of Indigenous people.

While the legislation (*Conservation and Land Management Act 1984*) creating the controlling bodies for Western Australia's conservation estate has been in place for some years, giving those bodies responsibilities in relation to direction, performance and accountability, recent past and proposed future legislative amendments will continue to strengthen the governance framework in Western Australia, particularly as it relates to the rights and responsibilities of Indigenous people. There is clear evidence in the intention and language of management plans of the changes in this regard.

Performance Evaluation:

A simple message pervaded discussion on the value of performance evaluation in protected area management – performance evaluation must be used to inform and improve management of protected areas.

This principle was used to consider the value of performance evaluation in implementing adaptive management through to considering the contribution of protected area management in conserving biodiversity in the long term. To investigate either premise, at either the micro or macro scale, requires measurement and evaluation techniques to be applied.

The same question appears to be being asked and researched by conservation professionals across the globe – “What is the correlation between protected area management intervention and desired biodiversity outcomes?” In some instances, the answer is equivocal. In other instances, it is clearer. In either case, the findings of performance assessment and evaluation are invaluable for increasing our understanding of management, even where management might equate to doing nothing, in protected areas.

There was consensus that, to maximise their effectiveness, performance evaluation findings must be fed into the management planning process at strategic and operational stages and support the ongoing development of key performance indicators to measure the outputs of plan implementation against desired outcomes.

Respecting Indigenous Knowledge and Culture:

The increasing role of Indigenous people in protected area management was a welcome and consistent message across the Congress' themes.

Of particular interest was the acknowledgement of the role of Indigenous people in the delivery of biodiversity outcomes and the value of investment in Indigenous people and local communities in capacity building in conservation. Key ideas included building best practice cultural protocols and creating a world Indigenous Network for sharing experiences on protected area management.

A related concept, explored at the Congress, is Bioculture, exploring the relationship between human biology and culture, positing that culture is a major human adaptation, permitting individuals and populations to adapt to widely varying local ecologies. This concept resides at the very heart of the Congress – the essential link between human society and nature.

Departmental Response/ Opportunities/Actions:

Part III of the *Conservation and Land Management Act 1984* is an important part of the State's governance framework, establishing the controlling bodies, the Conservation Commission of Western Australia and Marine Parks and Reserves Authority, for the State's marine and terrestrial conservation estate.

For the Conservation Commission, within the context of its legislative responsibilities and government policy, the service unit will seek to integrate relevant, current themes into recommendations made by the service unit to the Conservation Commission and, in turn, by the Conservation Commission to third parties.

Reference to the "Promise of Sydney" will provide an ongoing reminder of where the international organisation representing conservation organisations (IUCN) sees the important flash points for global thought and action over the coming decade.

Topic: Realising and communicating the value of protected areas

Author: Matt Fossey

Background:

A new global public opinion survey has highlighted that the public overwhelmingly support the establishment of protected areas and feel that 50% of the world should be under protection, yet current government targets of 17% and 10% for terrestrial and marine protected area coverage respectively fall well short of this. There was much debate at the Congress about these targets.

Building support for the expansion of the world's protected area network is linked to the concept of 'communication'. A recurring message throughout the Congress was that protected areas continue to require widespread public and (consequently) political support. There is a constant need for explanation and justification. To achieve this, we need to get much better at communicating the values and benefits of protected areas and linkages with economic returns. This goes beyond conserving biodiversity (most people get this!) and extends to ecosystem goods and services that provide economic and societal benefits for human communities.

Description:

Virtually all protected areas support multiple values. Many benefits are currently ignored, misunderstood and under-valued. Planners and managers are often aware of only some of the benefits that their protected areas provide. Traditional perceptions about the value of protected areas can be altered or enhanced by bringing 'other' benefits more centrally into management and by making other stakeholders recognise their significance.

Generally, recognition that protected areas are supplying more than simply 'biodiversity conservation' or recreation increases the comfort of local, state and national governments and makes it easier for them to justify management costs to taxpayers.

For example, in Australia, ecosystem services benefits from terrestrial protected areas are estimated to be worth between \$38 billion to \$204 billion/year. A much larger figure is estimated from marine protected areas through climate moderation and reduced impacts of extreme events by reef and mangrove systems. Visitors to parks and reserves spend over \$23.6 billion a year in Australia, generating revenue for state and territory governments of \$2.36 billion. Refer to [Building Nature's Safety Net 2014](#) report for more figures. Thus, protected areas play a crucial role in sustaining and contributing to our economy, but rarely are they viewed in this way by governments and society.

Issues or Concerns:

Integrating protected area planning and management issues into the agenda of other sectors is still a major weakness in most countries. One speaker summed things up very well by stressing the need to "bring to the table people not in the conservation business," and change perceptions from "conservation as anti-development" to "conservation being about development." Building effective partnerships among governments, local communities and industry is critical to making this happen. Protected areas need to demonstrate a much wider range of benefits than has been appreciated until now. The pressure to produce this kind of information is growing all the time. Planners and

managers must develop ways of assessing all the values of a protected area, and their associated costs and benefits, and build partnerships to ensure that management reflects the full range of benefits.

Many still view the role of communication as being the end point of a planning or management process through means such as media releases, brochures, websites and publications. Communication is an ongoing process, not simply a product.

Communication challenges include: reaching a wide audience about the values and benefits of protected areas, how to effectively communicate benefits, whose values are we trying to understand and communicate, and who is the audience?

Departmental Response/ Opportunities/Actions:

In 2008, WWF developed the [Protected Area Benefit Assessment Tool \(PA-BAT\)](#) to help collate information on the full range of current and potential benefits of protected areas. The main audience is protected area agencies and managers. The PA-BAT looks quite detailed and may be too complicated for us to use on a regular basis however it may be a useful tool if conducted as part of management planning processes or when plans are reviewed.

As well as natural, cultural and social values, planners and managers should consider economic benefits and ecosystem services and integrate these in management planning, education and interpretation and reporting. These, along with other protected area values and benefits, should be documented and promoted during planning processes and when communicating with visitors, politicians and decision makers, industry and the public.

The Parks for People program, part of Parks and Wildlife's [Strategic Directions 2014-17](#) policy, aims to ensure that parks and reserves are valued community, social and health assets. Other opportunities should be explored (e.g. social media) to communicate the full suite of protected area values and benefits. For example, the International Institute for Environment and Development (IIED) has produced a neat little guidance tool [Developing a 'business case' for biodiversity](#). All of us, but particularly those who regularly deal with decision makers from government and the private sector, should have the ability to present a strong business case for biodiversity, parks and reserves. The guide is only brief, but if you're pushed for time, take a quick look at pages 6-7 about the South African example. We could do far worse as an agency than developing a similar list as part of our own business case.

Monitoring and evaluation indicators should be built into the communication process and communication programs from the start so that communication impact can be assessed.

Topic: Using technology to protect our natural environment

Author: Kathleen Lowry

Background:

A common theme across all streams at the IUCN Congress was the advancement in technology and the opportunities this will provide for Protected Area Management. It was recognised that rebalancing the relationship between human society and nature is essential and the engagement of youth is key to the future protection of biodiversity.

Advancements in technology have opened up vast opportunities to access and interpret data, to inform strategic thinking and assist in the development of management strategies. “We believe that technology can help address some of our world’s most pressing environmental challenges and we look forward to working with Australian conservationists to integrate technology into their work.”
(*Dave Thau, Developer Advocate for Google Earth Engine and Karin Tuxen-Bettman, Program Manager, Google Earth Outreach*)

Description:

The IUCN congress was host to a range of new technological launches from Google, NASA, Park Managers and other technological companies/institutions. Below is a list of new apps, programs, or tools that may be of benefit to protected area managers.

Google:

- Google mapping tools were launched to develop the technical capacity of park managers, researchers, and communities. [Google mapping tools](#) were developed to assist with conservation programs.
- [Trekker](#), [Street View](#) and [Open Data Kit](#) on Android mobile devices can assist with parks monitoring and management.
- [Global Forest Watch](#) is a dynamic online alert system to help park rangers monitor and preserve vast stretches of parkland in near-real-time.
- [Google Earth Engine](#) and the Map of Life is being used in a variety of conservation efforts - including monitoring water resources, the health of the world's forests, and measuring the impact of protected areas on biodiversity preservation. There is also a new global resource from The Map of Life for mapping and monitoring biodiverse ecosystems.
- [Global Fishing Watch](#) was launched by Google at the IUCN Congress. Global Fishing Watch is the product of a technology partnership between SkyTruth, Oceana, and Google that is designed to show all of the trackable fishing activity in the ocean. This interactive web tool – currently in prototype stage – is being built to enable anyone to visualise the global fishing fleet in space and time. Global Fishing Watch will reveal the intensity of fishing effort around the world, one of the stressors contributing to the precipitous decline of our fisheries.

NASA:

Extensive data available to monitor climate conditions using science and technology to implement evidence based planning. NASA is a wealth of current data for Ocean biology, physical oceanography eg: ocean circulation, currents, sea surface temperatures, sea ice, etc.

- NASA launched a new book at the IUCN Congress which highlights how the view from space with Earth-orbiting sensors is being used to protect some of the world's most interesting, changing, and threatened places. Titled: ["Sanctuary: Exploring the World's Protected Areas from Space,"](#) published by the Institute for Global Environmental Strategies (Arlington, Virginia) with support from NASA.

Catlin Seaview Survey:

With 40% loss of coral reefs around the globe over the last 30 years, Catlin Seaview Survey is a unique global study working with some of the world's leading scientific institutions, dedicated to monitoring this change and communicating it to the world. Catlin technology partnered with Google and have developed 360° images for underwater surveys and loaded them into Google earth's street view program which creates accurate scientific records of marine environments exposing our oceans for all to see.

Drones:

The use of drones in park management was topical at the Congress. As technology advances rapidly in this area, more and more opportunities for drones are enhanced for monitoring or potentially enforce especially in remote areas with limited resources as well as a safer way to manage parks in remote or dangerous environments.

IUCN Marine World Heritage App:

[IUCN - Launch of Marine World Heritage App will bring marine crown jewels a lot closer](#) to the general public.

Issues or Concerns:

There are some very interesting new advancements in technology, which require resourcing and funding. However there are also opportunities to tap into existing Science funding to partner with some of the above developers to enhance research and monitoring.

Departmental Response/ Opportunities/Actions:

Catlin has contacted DPaW to look at potentially surveying the Kimberley coral reefs. This would be a great opportunity to collect accurate base line data whilst collecting high quality imagery. Opportunities to utilise the 360 degree imagery as part of promoting and sharing the reef with local communities/tourism would lead to more engagement/interpretation and connection to the reef.

With shrinking resources and DPaW's management of more remote areas, drones could be something the department looks into in the future to track/monitor or enforce remote areas.

There were other agencies and Not for Profits organisations that have developed Apps and technology to help engage with youth which would be worth exploring more to sell the parks for people messages. Emphasis is on partner to enable any advancement to occur.

The Department of Fisheries would also be interested in the Global Fishing program as it can assist with enforcement of people fishing inside of sanctuary zones in remote areas.

To finish, some inspiring words...

The following thought provoking and/or entertaining quotes and expressions were gathered from various presentations by Ian Herford, Ewen McGregor and other Parks and Wildlife delegates:

- “Reliable prosperity” (Pat Dodson)
- “I see no future for parks unless they address the needs of communities as equal partners in their development” (Nelson Mandela)
- “Governments are at a resource-protection “crossroads” with most locked into economic platforms that disregard the value of the natural environment”. (James Watson, Society for Conservation Biology)
- “Protected spaces end up protecting us” (Sally Jewel, US Secretary of the Interior)
- “Green infrastructure” (many speakers)
- “The real difficulty is not creating and developing new ideas, but overcoming the old ones” (George Ledec, World Bank)
- “Nature is the GDP of the poor” (Valerie Hickey, World Bank)
- “Nobody outside the environment movement is inspired by tales of woe” (South African delegate)
- “Connectivity can be used as an excuse for creating small protected areas” (Jeff Wells, Boreal Forest, Canada)
- When a development proposal is received by the Great Barrier Reef Marine Park Authority, we ask how it will **benefit** the reef (Andrew Skeat, Great Barrier Reef Marine Park Authority)
- “We need mutual learning, rather than education” (Ashish Kothari, ICCA Consortium, India)
- “Your worst adversaries will not be wicked - they will be well-intentioned but stupid” (George Ledec, World Bank)
- “The focus should be ‘protecting with’ rather than ‘protecting from’” (Warwick Mostert, De Beers South Africa)
- “Conservation of the planet lies not in the hands of protected area managers, but with the CEOs of major companies” (Marius Fuls, EXXARO Resources South Africa)
- “Offsets: the money may be tainted, but t’ain’t enough” (George Ledec, World Bank)
- “The worst thing you can do is to have a bunch of scientists go into another room and then hand down some stone tablets” (Tom Friedman, New York Times)
- “Story-telling can help to change the world – the message must be personal” (Sylvia Earle, National Geographic)
- “People need to feel some ownership: in the history of mankind, nobody has ever washed a rented car” (Tom Friedman, New York Times)
- “Park managers are more likely to save lives than the medical profession” (Jonathan Patz, Professor and Director of the Global Health Institution at the University of Wisconsin)
- ‘It is my opinion that conservation and park management can save more lives, promote more health and deal with more ill health than the public health sector can achieve.’ (Jonathan Patz, Global Health Institute, University of Wisconsin)
- ‘Wouldn’t you love a medicine that would help heart disease and other physical problems and help our mental well-being... its simple – its parks, its protected areas.’ (Julia Marton-LeFevre, IUCN)
- ‘Australian children spend less time outdoors than maximum security prisoners.’ (Richard Fuller, University of Queensland)

- ‘Nature’s goods and services are the ultimate foundations of life and health.’ (Mardie Townsend, Deakin University)
- “Parks are the ultimate natural solution to many issues including health problems...” (John Jarvis, Director, US Park Service)
- “The world’s top 3,000 companies are responsible for one-third of all negative environmental impacts” (Jochen Zeitz, Zeitz Foundation and the B Team)
- “Let’s bring to the table people who are not in the ‘conservation business’ and change their perception from “conservation as anti-development” to “conservation being about development” (Unknown delegate)

And finally the diagram below was used by Morena Mills, a Post-Doctoral Research Fellow from the University of Queensland in a presentation titled “Stakeholder analyses as a key component of a planning process”. It clearly indicates why our goal for community engagement should be “equity” rather than “equality”.

