

Workshop Stream V
Evaluating Management Effectiveness
11-13 September 2003

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Session Rapporteurs:	Chris Mitchell; Robyn James; Sherrie-Lee Evans; Ian Dutton; Jim Reiger; Robbie Robinson; Eugene Jouberte; Mike Wong; Gonzalo Cid; Kevin Bishop; Sue Stolton; Elizabeth Bennett; John Robinson; John Mauremootoo; Jennifer Hoffman; Fiona Leverington; Pierre Galland
Rapporteurs:	Geoffrey Vincent Jamison Ervin

I Overview

The aim of this Workshop Stream was to present a comprehensive examination of the contemporary status of management effectiveness evaluations, including principles, methods, applications and current issues. Over three days, two plenaries and fourteen workshops (20 parallel workshop sessions) covered a range of topics in four broad themes:

- implementing evaluation systems and processes;
- key ecological, economic, social and institutional indicators for assessing marine and terrestrial systems;
- threats to protected areas including of hunting, invasive alien species and climate change;
- work in progress on the assessment of protected area categories and the certification of protected area management effectiveness.

All workshop sessions were well attended (total workshop attendance across all sessions exceeded 1700) with the level of interest emphasising the growing importance of this issue.

The principal conclusions from the workshop discussions are summarised below, followed by a session by session summary of the workshop outcomes.

The decade since the last World Parks Congress has seen the elaboration of a range of methodologies for assessing management effectiveness. Workshop participants acknowledged that WCPA has made an important contribution through the development of a useful framework for guiding the development of specific methodologies and understanding and evaluating systems for assessing management effectiveness.

If assessment of management effectiveness is to become a routine component of the way in which protected areas are managed there is a need to establish an enabling environment for evaluations, including the need to build an assessment culture and to commit resources and actions to the results that flow from the assessments. There is evidence that this culture is growing within management agencies and with donors, NGOs and others involved in management of protected areas. However, the benefits of monitoring and evaluation can easily be undermined by continual changes in monitoring programs, driven by the changing

views or interests of scientific, technical or managerial staff. The end result is data incompatibility that confounds identification or analysis of trends and a lack of long term data sets. As a consequence, the usefulness of monitoring as an aid to decision making is significantly reduced and this may lead to decline in institutional support for this activity. Long term commitments are required from senior managers so that monitoring protocols and programs become an institutional commitment and are not left solely to the community of scientists and technicians. There is a need for involvement of the latter, but management must understand and support what will be measured and know how the ensuing data will contribute to improving the management effectiveness of the protected area.

Given the proliferation of methodologies for assessing management effectiveness, participants recognised the need for some harmonisation of standards and indicators across systems. The WCPA management effectiveness evaluation framework provides a starting point for this harmonisation but there is still much to be learnt about the most relevant, useful and reliable indicators and assessment methods. Work will continue on development of assessment systems to address methodological gaps, including rapid, site-level assessments of management effectiveness.

Many presenters emphasised the need to use robust, rigorous and scientifically sound methodologies in assessing management effectiveness evaluations. This is particularly important for assessing ecological integrity (recognised as a critical and underdeveloped component of management effectiveness evaluations) but also in other assessment elements. Sound biophysical science is not the only requirement for useful and valid assessments. Other requirements are the need to include consideration of social and cultural elements, including traditional ecological knowledge, into the design, implementation and reporting of management effectiveness evaluations.

A number of institutional and management issues were discussed. These included the need for greater institutionalization and integration of management effectiveness evaluations into all levels of PA management and planning; and the importance of management effectiveness evaluations in enabling adaptive management. Reporting and communication of the results of management effectiveness evaluations was recognised as an area requiring further attention.

The identification and abatement of threats is a key component of effective management of protected areas. Participants stressed the need to recognise that threats occur at multiple spatial and temporal scales, and occur beyond the boundaries of PAs. Addressing individual threats is complicated by the compounding and often unanticipated and immeasurable effects of multiple threats (e.g. climate change, pollution, and resource use) operating together. Assessments of management effectiveness are improving our understanding of threats facing protected areas. Over 600 management effectiveness assessments in 30 countries have shown a strong concordance of a handful of recurring threats and critical management weaknesses. The real and potential impacts of several threats are currently under-recognized, including climate change, invasive alien species, and poaching of plants and animals. Other potential threats, such as genetically modified organisms, have hardly even been identified.

The workshop also considered the results of a study that has been investigating the application of the IUCN protected area management category system. While there are some areas where more work is required to develop and clarify advice about interpretation and application of the IUCN category system, there is strong and widespread support for its continuation as the common language for the protected areas community.

Emerging issues of standards and certification were considered in two workshop sessions, dealing with both issues of certification of protected area category assignment and development of standards for, and possible certification of, management effectiveness. Support for more work on both concepts was expressed with encouragement for WCPA to

move forward with the investigation and testing of these approaches in partnership with other relevant institutions.

II Plenary discussions

Opening Plenary: Management effectiveness monitoring and evaluation

Lead: Marc Hockings

Closing Plenary: Workshop conclusions: Where to from here?

Lead: Marc Hockings

Presenters: Jose Courrau, Bud Ehler, Marc Hockings, Natajaran Ishwaran, Leonardo Lacerda, Kathy MacKinnon, Kulani Mkhize, Rosa Lemos de Sa, Nik Lopoukhine, Moses Mapesa, Mavuso Msimang, Adrian Phillips, Pedro Rosabel, Caroline Stem, Geoffrey Vincent, Marija Zupanjić-Vicar

The opening plenary introduced the issue of protected area management effectiveness monitoring and evaluation. Plenary speakers presented a diversity of experiences and perspectives from around the world to illustrate what is being done and what has been learnt. It was noted that although this issue has only risen to prominence over the past decade, much has been achieved during this period. It was suggested that increasing interest in the issue of management effectiveness indicates a shift within the international protected area community from a focus on “quantity of parks” to “quality of parks”. The closing plenary identified that information management and reporting issues (i.e. how the information from monitoring and management effectiveness evaluations is reported and used) are the next major challenge in this field.

The key points raised were:

- WCPA has developed a framework for assessing management effectiveness that has been widely used to develop a number of assessment methodologies worldwide.
- The management effectiveness community needs to develop benchmarks of excellence, flexible standards, and clearer milestones across methodologies.
- Evaluation tools which provide objective data can be used to resist pressures from powerful lobby and advocacy groups.
- Ezemvelo KZN Wildlife in South Africa has integrated a systemwide management effectiveness assessment into a systematic conservation planning process. The results of the assessment are being used as the basis for budget reallocation and prioritization.
- The World Bank and WWF have incorporated routine management effectiveness assessments into their portfolio-monitoring process.
- The 600 PA management effectiveness evaluations conducted by WWF indicate that the top threats are hunting and poaching of plants and animals, logging, invasive species, fire, and agricultural encroachment. The greatest management weaknesses are lack of funding and staffing, inadequate law enforcement and poor community relations.
- Evaluation of ecological integrity is a cornerstone of evaluating management effectiveness. Sound science, the underpinning of such assessments, can generate volumes of data, but such data are frequently lost over time. Sound information management systems are as important as sound data.
- There is a need to continue to share information and learn from the existing diversity of assessments. Simple indicators and systems can be just as important as more complex management effectiveness evaluation systems.

- Managing and storing data and building institutional memory are key issues to address for the future.
- Monitoring and evaluation needs to be ongoing and built into core business and fiscal decision making.
- There is a need to improve understanding and ways of addressing threats using evaluation tools.
- Protected Area Certification process needs to incorporate verification and move from a reactive to proactive process. Scale of application can range from site-specific to entire protected area systems.
- Restoration of damaged ecosystems will assume more importance in the future. Information from management effectiveness evaluations can help to understand what is required and to monitor the success of restoration efforts.
- Reporting issues and application of results are the next major challenge for management effectiveness evaluations.

III Summary of parallel sessions

Theme: Evaluation systems and processes

Session Vb: Learning from Experiences in Monitoring and Evaluation of Management Effectiveness

Leads: Marc Hockings and Dan Salzer

Session Ve: Regional Experiences in Management Effectiveness Evaluation

Lead: Enrique Lahmann

Session Vm: Using Evaluation for Better Management

Leads: Jose Courrau, Fiona Leverington and Caroline Stem.

Presenters: Katrina Brandon, Lenin Corales, Lindsey Chong Seng, BC Choudury, Claudio Delgado, Nigel Dudley, Jamison Ervin, Peter Goodman, Marc Hockings, Natajaran Ishwaran, Glenys Jones, Leonardo Lacerda, Enrique Lahman, Fiona Leverington, Hugh Logan, John Makombo, Josep Mallarach, Moses Mapesa, Vinod Mathur, B Praveen, Nick Salafsky, Alberto Salas, Dan Salzer, Klaus Schmitt, Caroline Stem, Sue Stolton, Alifereti Tawake, Rodolfo Tenorio, NK Vasu, Daan Vreugenhil, Graeme Worboys.

Parallel sessions within this theme focussed on the process of undertaking evaluations of management effectiveness and the use of evaluation information for adaptive management, reporting and other purposes. Sessions within this area were important in drawing together the lessons learnt from experiences with management effectiveness evaluation around the world. A fuller presentation of these lessons, gathered from practitioners during a preparatory workshop conducted in the lead up to the World Parks Congress, is being published by IUCN (see Leverington and Hockings, in press).

The key points raised by speakers and during discussion were:

Evaluation systems and processes

- There is a broad range of experience in the design and implementation of management effectiveness evaluations, and such assessments are increasingly being recognized as a critical component of protected area management.
- Assessment results need to be clearly linked with improvements in management effectiveness; they must close the loop between evaluation and planning.

- Both site-level and system-level assessments are equally important tools for improving management effectiveness.
- Management effectiveness evaluations need to look at the broad context in which PAs occur, including assessing processes occurring beyond park boundaries.
- Methodologies for assessing management effectiveness should be tailored to the specific needs of the users, and the WCPA framework provides a tool for developing and adapting methodologies.
- Management effectiveness evaluations should become part of the core requirements of PA management, and budgets routinely dedicated for the implementation and reporting of such assessments.
- Both subjective, qualitative scoring and objective, quantitative measurements can provide useful data in assessing management effectiveness; a combination of the two can often be very effective.
- The institutional context of management effectiveness evaluations, including agency support for and commitment to the process, and long-term organizational stability can be critical to the overall success of the assessment.
- Management effectiveness evaluations can and should be an integral part of broad, systematic conservation-planning processes, as well as part of routine monitoring and evaluation processes within park agencies.
- The choice of methodologies for assessing management effectiveness should be guided by the objectives of the assessment, the needs of the users, and the resource constraints.
- Management effectiveness evaluations should look at all aspects of the WCPA framework (context, planning, inputs, processes, outputs and outcomes). Many existing management effectiveness assessments do not address outcomes adequately, including assessment of ecological integrity, which is necessary for establishing targets, identifying research needs, and providing a basis for adaptive management.
- Management effectiveness evaluations can be a particularly important adaptive management tool in rapidly changing areas, such as marine environments and areas with a high degree of threat.
- Reporting and communicating results should be an essential component of the overall assessment process.

Gaps and challenges

- The development of rapid, site-level methodologies for the purposes of adaptive management is still a gap in the suite of existing assessment tools.
- PA managers often lack the capacity to conduct management effectiveness evaluations.
- There is widespread recognition that some aspects of management effectiveness evaluations, particularly the ecological impacts of threats, generally have a paucity of data across many protected areas, and simple methodologies are needed to fill this gap.
- Barriers to the implementation of management effectiveness evaluations include the lack of a conducive environment for undertaking assessments, the absence of an 'assessment culture' in many areas, the lack of understanding of and support for assessments by local communities and PA staff, and the political and sometimes controversial nature of assessments.
- While the hundreds of PA assessments conducted to date have demonstrated a remarkable concordance of the major threats and critical management weaknesses in protected areas worldwide, there have been few concerted and coordinated efforts to address these issues systematically among either governments or NGOs.

Theme: Indicators of management effectiveness

Session Va: Meeting the needs of indigenous and local communities in management effectiveness evaluations

Lead: Hanna Jaireth

- Session Vc: Assessing operational, economic and social aspects of management
Lead: Ian Dutton
- Session Vd: Management of protected areas in arid environments: constraints and prospects
Lead: Abdulaziz Abuzinada
- Session Vf: Assessing Ecological Integrity
Leads: Nik Lopoukhine and Jeffrey Parrish
- Session Vg: Evaluating management effectiveness in marine protected areas
Leads: Charles Ehler and Simon Cripps
- Presenters: Abdulaziz H Abuzinada, Liz Alden Wily, LeAnne Alonso, Kutaibah Al-Sadoon, Salih Al-Soghair, Kamal Batanouny, Claude Beeron, Silvia Benitez, Manuel Bravo, Syb Bresolin, Marco Vinicio Cerezo, Mahmood Akhtar Cheema, Marco Costantini, Simon Cripps, Jon Day, Ian Dutton, Charles Ehler, Asghar M Fazel, Marlon Flores, Moustafa M Fouda, Michael Green, Jean Harris, Marea Hatzios, Chris Herlugson, Hanna Jaireth, Neil Jens, Eugene Joseph, Sylvester Kazimoto, Fiona Leverington, Nik Lopoukhine, Kathy MacKinnon, Chris Mitchell, Pedro Moreno, Nyawira Muthiga, Stephane Ostrowski, Adalberto Padilla, John Parks, Jeffrey Parrish, Robert Pomeroy, Mohammed Rafiq, Jim Rieger, Phillip Rist, Dan Salzer, V. Saway, Roger Sayre, Gilles Seutin, Mohammed Shobrak, Dermot Smyth, Levi Sucre, Kol Vathana, Lani Watson, Stephanie Wear, Nestor Windevoxhel, Stephen Woodley, Long Yongcheng.

Sessions within this theme focussed on the selection and use of indicators of management effectiveness that provide the most useful information on different aspects of protected area management. Sessions were structured around the selection and use of indicators for particular types of environment (e.g. marine, arid) and areas of management interest (e.g. ecological integrity, indigenous and local community issues, operational, economic and social aspects).

Key points raised by speakers and during discussion were:

- In order to facilitate cross-programme learning, and to improve the practice of management effectiveness evaluations, there should be a comparison of common indicators used in management effectiveness evaluations.
- Effective indicators for assessing management effectiveness are those that (1) can be applied and/or adapted across a range of conditions, countries and approaches (2) are efficient at providing high levels of information with a minimum of resources (3) are relative to PA objectives, threats and critical management activities (4) are easy to understand, measure and communicate and (5) are relevant to, and directly linked with, management planning.
- Clear and transparent indicators can help to improve the transparency and public accountability of management effectiveness evaluations.
- When developing indicators, particularly ecological indicators, clear baseline thresholds should be established as reference points for the future.
- Methodologies for assessing management effectiveness, particularly for assessing ecological integrity, must be robust and based on sound science.
- There are several approaches available for assessing ecological integrity, including The Nature Conservancy's RAP methodology and Conservation International's REA methodology. There are also many longer-term, in-depth approaches to assessing ecological integrity.

- Even though management effectiveness evaluations, including assessments of ecological integrity, can be applied universally, such assessments are also scale dependent and should be adapted to the specific context and scale of the assessment.
- Social, economic and institutional indicators are typically not as well developed and not as commonly utilized as biological and physical indicators in PA management. Such indicators should be given more prominence in WCPA-based methodologies.
- Of particular importance to local and indigenous communities are the recognition and maintenance of traditional rights and land tenure, the existence of effective dispute resolution mechanisms, involvement in management decision-making processes, and the incorporation of traditional ecological knowledge into planning.
- International standards and conventions on human rights can be a good starting point for developing community and cultural indicators.
- The subsistence values of PA resources, such as non-timber forest products, are frequently under-recognized in management planning and effectiveness evaluations.
- The monitoring and evaluation of social, economic and institutional indicators in PAs is inadequately linked with broader landscape issues, and closer linkages with sustainability frameworks (e.g. state of environment reports) are needed.
- There is a lack of institutional capacity to develop and measure social, economic and institutional indicators in PA management, and a clear need for the involvement of social scientists.
- Better integration of social, economic and institutional indicators across a range of programmes will enable a better understanding of PA impacts and of broader regional trends outside of protected areas.

Theme: Threats to Protected Areas

Session Vi: Threats to biodiversity and ecological integrity of protected areas from unsustainable hunting for subsistence and trade

Lead: Elizabeth Bennett

Session Vj: Invasive alien species

Leads: Maj De Poorter and Geoffrey Howard

Session Vk: Managing protected areas in the face of climate change

Leads: Lara Hansen and Jennifer Morgan

Presenters: Mohamed Bakarr, Elizabeth Bennett, Brian Child, Maj De Poorter, Helder Lima De Queiroz, Nigel Dudley, Melvin Gumal, Lee Hannah, Lara Hansen, Nasimul Haqu, Jennifer Hoffman, Geoffrey Howard, Lyn Jackson, Paula Kahumbu, Ullas Karanth, Hector Magome, John Mauremootoo, Jeff McNeely, Imene Meliane, T. Milliken, Jennifer Morgan, Antoine Moukassa, Musonda Mumba, Martin Price, John Robinson, Callum Roberts, Lyn Rosentrater, Richard Ruggiero, Dang Van Tao, Xie Yan.

Assessing the distribution, prevalence, impact and source of threats within and across protected areas and protected area systems has become a routine part of assessing protected area effectiveness. Three sessions within the Management Effectiveness Evaluation Workshop examined threats to protected areas, focussing on unsustainable hunting, invasive species and climate change.

Key points raised by speakers and during discussion were:

Unsustainable Hunting

- Hunting and commercial trade in wildlife from PAs across the tropics and sub-tropics are increasing in frequency and intensity.

- Factors facilitating the increase in hunting include: (1) increased demand for wildlife; (2) rapidly decreasing populations of key wildlife species; (3) increased access to protected areas; (4) improved hunting technologies; (5) inadequate management capacity and resources to prevent hunting; and (6) unintended consequences of development programmes.
- Hunting is beginning to have or has already had drastic consequences in PAs, including the extirpation of species and impaired ecosystem functioning. Such effects are not uniform, and are more serious in areas with low wildlife productivity and high levels of commercial trade.
- Addressing the problem of unsustainable hunting is critical both to conserving the biodiversity and maintaining the ecological functions of PAs, and to meet the subsistence and livelihood needs of some of the world's poorest peoples.
- Elements of effective anti-poaching programmes include: (1) emphasizing science-based solutions with accurate data; (2) using traditional ecological knowledge as the basis of educational programmes and enforcement; (3) meeting the subsistence and livelihood needs of local communities through alternative means; (4) including local communities in the design and implementation phases of anti-poaching programmes; (5) designating totally protected no-hunting zones; and (6) curtailing commercial wildlife trade.

Invasive alien species

- Invasive alien species are an urgent and under-recognized threat to protected areas.
- This threat is not distributed uniformly; some areas face a much higher degree of threat than others.
- Many innovative methods for preventing, controlling and eliminating invasive alien species exist; however, lack of awareness of the severity of threat from invasive alien species and the absence of information sharing help to perpetuate problems relating to invasive alien species.
- Effective management of invasive alien species in PAs involve several steps, including: (1) recognition of the potential or existing problems of invasive alien species; (2) evaluation of ecological and social impacts of the threat; (3) decision to act, including to allocate adequate resources; and (4) selection of appropriate interventions.
- When considering management options, prevention must be the top priority, including early warning mechanisms. Eradication where possible is the next best option; where not possible, long-term control is indicated.
- The management of invasive alien species should take an ecosystem approach, focusing on the maintenance of ecosystem functions and processes, rather than simply targeting a single species.
- There is a lack of methodologies for rapidly assessing the extent and severity of invasive alien species, and particularly for assessing the impact of invasive alien species on ecosystem functions and processes.
- There needs to be greater collaboration and knowledge building with existing initiatives that focus on invasive alien species.

Climate change

- Climate change has evolved from a theoretical concern ten years ago to a major and measurable threat to PAs worldwide. A much broader awareness of this phenomenon, and the impacts to PAs, is imperative.
- Major issues in managing the effects of climate change in PAs include: (1) improving the resistance and resilience of natural systems; (2) protecting adequate and appropriate spaces according to predicted scenarios; (3) limiting the impact from other sources of stress; (4) experimenting with a range of strategies; and (5) using the effects of climate change in PAs to advocate the reduction of greenhouse gases.

- Adequate responses to climate change will require increases in staffing levels and budgets, greater collaboration and regional coordination, landscape-level planning, and a long-term planning horizon.
- Climate change affects tropical, temperate and arctic ecosystems, and marine and terrestrial biomes very differently. PA managers should consider the range of specific impacts that climate change is likely to have within their own regions.
- Social readiness for the impacts of climate change (e.g. increased frequency and intensity of typhoons) can also be an important aspect of PA planning, including mangrove restoration to prevent flooding.
- Arctic ecosystems are especially vulnerable to climate change, with compounding threats for resource exploitation, toxic pollution, ozone depletion, localized increases of CO² from thawed permafrost, and decreased ice mass.
- Mountain ecosystems are also disproportionately sensitive to climate change because they are typically isolated, face a high degree of other threats, contain species that are highly sensitive to change, and are frequently the repository for rare and endemic species – many of which are likely to become extinct.
- Some specific strategies to increase resilience to climate change in forest ecosystems include the avoidance of further fragmentation, increased buffer zones around, and linkages between, PAs, and the representation of forest types across all gradients.

Theme: Protected Area Management Categories and Certification

Session Vh: Assessing the IUCN protected area management categories system

Leads: Adrian Phillips, Sue Stolton, Nigel Dudley and Kevin Bishop

Session VI: Protected area management standards and certification

Lead: Nigel Dudley

Session Vn: Protected area category certification

Lead: Marija Zupancic-Vicar

Presenters: Andrea Athanas, Kevin Bishop, Peter Bridgewater, Assheton Carter, Stuart Chape, Jon Day, Philip Dearden, Jose Vicente De Lucio, Nigel Dudley, Pierre Galland, Louise Johnson, Sachin Kapila, Ashish Kothari, Leonardo Lacerda, Guenter Liebel, Josep Maria Mallarach, Vinod Mathur, Gonzalo Oviedo, Adrian Phillips, Kishore Rao, Dave Richards, Robbie Robinson, Pedro Rosabal, Peter Rupitsch, Andrej Sovinc, Sue Stolton, Arnold van Kreveld, Hardy Vogtmann, Marija Zupancic-Vicar.

One session within this broad thematic area heard a presentation of the interim results of a project, *Speaking a Common Language*, that has been assessing the IUCN Protected Areas Management Category System. This session re-affirmed the relevance and importance of the Category System but also called for further work to be done in providing advice on its application. A second session examined the verification process for assigning categories in cases where there is uncertainty or dispute over the appropriate category. The third session within this theme considered the question of approaches that could be used to “guarantee” effective management of protected areas: options discussed included: the development and adoption of minimum standards for management; the formation of an accreditation programme of monitoring and evaluation systems; and certification of protected area management. There was strong support during the session for IUCN and WCPA to continue work on all these related issues.

Key points raised by speakers and during discussion were:

IUCN categories

- There was strong support for the IUCN protected area management categories system, but also recognition that improvements are needed in related guidance on their application, taking into account that the categories are now being used in additional ways to those foreseen when the present system was introduced in 1994.
- There needs to be greater clarity on language and terms (e.g. the words in the definition of a protected area: 'other effective means')
- There is a need to ensure effective links with the CBD process to avoid two systems for categorising protected areas, while recognising that the CBD uses a different definition of a 'protected area';
- There is a need to develop a wider sense of ownership of the categories system based on a common understanding.

Protected area category assignment certification

- A high proportion of PAs on the UNEP-WCMC data base are not yet assigned to IUCN categories, making detailed and accurate analyses of protected area coverage and representativity difficult.
- Country-level classifications of protected areas number in the hundreds; although the IUCN categories system is capable of reflecting these, reconciliation is not always straightforward.
- There is a proposal to establish a voluntary, experimental process of verifying IUCN categorization of PAs in Europe.

Protected area standards and certification

- Recognition that any potential certification or verification system must be a participatory process.
- While certification can attract financial and political support, it is also highly controversial, and any feasibility assessments must include the full range of costs and benefits of certification.
- There are a number of potential barriers to certification of PAs, including lack of infrastructure to manage the process, lack of funding sources, and lack of capacity to conduct certifications. There is also a widespread belief that the limited resources available should go toward improving rather than certifying PA management.

IV Recommendations and Outcomes

The findings from the Workshop Stream on Evaluating Management Effectiveness provided direct inputs into the WPC recommendations, the Durban Accord, the Durban Action Plan, and the Message to the CBD. The full text of these major Congress outputs should be consulted for the complete text of sections relevant to the Evaluating Management Effectiveness Workshop. A summary of the key points is provided below.

- *WPC Recommendation V.18: Management effectiveness evaluation to support protected area management*
Workshop participants affirmed the importance of management effectiveness evaluations in the adaptive management of PAs, encouraged the development of standards and thresholds for PA management effectiveness, encouraged states to report on the findings of management effectiveness assessments, and encouraged the formation of a task force to address emerging issues in certification and verification.
- *WPC Recommendation V.19: IUCN protected area management categories*
Workshop participants reaffirmed their support for IUCN's objectives-based six-category system. However, they recommended an update to the 1994 guidelines in light of the new uses to which the system is being put, e.g. by providing further guidance on the use

and assignment of the categories, and the inclusion of private and community-conserved protected areas, and explaining how they relate to ecological networks and ecoregional planning.

- *Durban Accord and Action Plan*

Workshop participants affirmed the importance of monitoring, evaluating and reporting on the effectiveness of PA management to ensure that, as far as possible, the status and values of the protected area are conserved. They further recognized the importance of an ecosystem approach where adaptive management principles are used to ensure effective conservation of park resources in the face of changes and pressures.

- *Message to the CBD*

Workshop participants proposed the promotion, adoption and implementation of best practice systems for assessing management effectiveness of PAs at the local, national and regional level. They further recognized both the importance of evaluating management effectiveness as a key component of protected area management and the progress in developing and implementing systems for evaluating management effectiveness, specifically the WCPA framework for evaluation. Management effectiveness evaluation processes and results need to be used transparently and methodically at system and site level to improve management outcomes. They also recommended that use of the IUCN categories system should be promoted through the CBD.

Emerging Issues

Unsustainable hunting for subsistence and trade

It was recognized by participants in the Session that hunting and commercial trade in wildlife from many protected areas across the tropics and sub-tropics is rapidly increasing, unsustainable, and many aspects are illegal. Participants in the session considered that this should be identified as an emerging issue requiring further attention. In this regard they highlighted that:

1. Unsustainable hunting and wildlife trade pose significant immediate threats to wildlife populations in many protected areas throughout the tropics, especially in systems where wildlife productivity is low;
2. A wide range of species, even those not currently identified as threatened, are at risk of local extinction as a result of unsustainable hunting across a significant proportion of protected areas across the tropics;
3. The loss of wildlife from protected areas due to unsustainable hunting has adverse effects on the biodiversity and ecological functioning of those areas, and hence of their conservation role;
4. Such loss often has adverse impacts on rural peoples living in and around protected areas, many of whom depend on wildlife for their livelihoods. The people most affected are often the poorest, and most marginalized sectors of society;
5. Solutions must be scientifically based, and specific to the local biological, social and political conditions;
6. Unsustainable hunting can be addressed either by restricting hunting to certain species and/or zones, or by providing alternative incentives for protection, e.g., through ecotourism, or safari hunting of certain species;
7. Commercial wildlife trade must be curtailed because it is extirpating wildlife from many protected areas throughout the tropics and sub-tropics;
8. Participation of local communities is crucial to seek solutions most likely to succeed in conserving wildlife, and in meeting peoples' subsistence and economic needs; and
9. Capacity building of protected area managers is crucial, whether they be local communities, governments or other agencies, to develop and implement strategies to manage hunting in protected areas.

Management of Invasive Species

Management of Invasive Alien Species (IAS) was recognized at the Workshop as an emerging priority issue that should be mainstreamed into all aspects of PA management. The wider audience of protected area managers, stakeholders and governments needs urgently to be made aware of the serious implications for biodiversity, PA conservation and livelihoods that result from lack of recognition of the IAS problem and failure to address it. Promoting awareness of solutions to the IAS problem and ensuring capacity to implement effective, ecosystem based methods must be integrated into PA management programs.

General recommendations

- The lessons learned should provide guidance to the future direction for the WCPA Management Effectiveness Theme, and specific lessons and examples of management effectiveness evaluations should be summarized in a book addressing experiences in evaluating management effectiveness.
- WCPA should consider creating specific task forces to examine the most important threats facing PAs, and to address the emerging issues highlighted in this report.
- The findings should guide the development of a training programme for implementing ecological integrity assessments.

- New methodologies to assess management effectiveness should be developed to address the specific gaps identified in this Workshop Stream, including rapid site-level assessments of management effectiveness, and rapid threat assessments.
- There should be clear targets for the adoption and application of management effectiveness evaluations at site and system levels.
- There should be a coordinated and concerted effort among a range of PA institutions to address systematically the most prevalent and destructive threats, and the most critical management weaknesses, in PA systems worldwide. A clear sub-set of these threats has emerged from a wide number of PA management assessments.
- There should be widespread commitment by funders, governments and NGOs to institutionalize and support management effectiveness evaluations at the site and system levels.

For further information

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Annex

Background Workshop Papers

Hockings M., Leverington F. and James R. (2003) *Evaluating Management Effectiveness: Maintaining protected areas for now and the future*. Briefing paper prepared for the Vth World Parks Congress, Durban, September 2003. IUCN World Commission on Protected Areas.

II Plenary discussions

Opening Plenary: Management effectiveness monitoring and evaluation

Lead: Marc Hockings

Papers Submitted

Hockings M. (University of Queensland), Stolton, S. and Dudley N. (Equilibrium Consultants) (2003) *Management Effectiveness - assessing management of protected areas?*

Phillips A. (WCPA Vice-chair for World Heritage) *Management Effectiveness – where we have come from - an introductory presentation for the Management Effectiveness Workshop.*

Stolton S., Hockings M., Dudley N., McKinnon K. and Whitten T. (2003) *Reporting Progress in Protected Areas – A Site-level Management Effectiveness Tracking Tool*. World Bank/WWF Alliance for Forest Conservation and Sustainable Use.

Presentations Only

Courrau, J. (Consultant, Costa Rica) *Experience with assessment of management effectiveness in Latin America.*

Hockings M. (University of Queensland, WCPA Vice-Chair for Management Effectiveness), Ehler B. (National Oceanographic and Atmospheric Administration, USA) Ishwaran N. (UNESCO World Heritage), Lemos de Sá R. (WWF Brazil), MacKinnon K. (World Bank), Mapesa M. (Uganda Wildlife Authority), Stem C. (Foundations of Success) *Panel discussion on management effectiveness.*

Hockings M. (University of Queensland, WCPA Vice-Chair for Management Effectiveness) *Introduction to the WCPA framework on assessment of management effectiveness of protected areas.*

Hockings M. (WCPA Vice-chair Management Effectiveness Theme) *Opening Plenary: Workshop Stream 5 Evaluating Management Effectiveness.*

Ishwaran N. (UNESCO World Heritage) *Overview of management effectiveness stream.*

MacKinnon K. (World Bank) Lacerda L. (WWF International) *Experience with using a tracking tool for the rapid assessment of management effectiveness at site level.*

Mkhize K. (KZN Wildlife) *Monitoring and evaluation systems and experiences within KZN Wildlife.*

Closing Plenary: Workshop conclusions: Where to from here?

Lead: Marc Hockings

Papers Submitted

Ervin J. (Hardscrabble and Associates) *Workshop 5 – Evaluating Management Effectiveness – Final Rapporteur’s Report.*

Presentations Only

Hockings M. (University of Queensland, WCPA Vice-Chair for Management Effectiveness) *Plenary Session Introduction.*

Hockings M. and Session Leaders. *Presentation and Group Endorsement of WPC Recommendations 18 and 19 and Proposed Work Program.*

Lacerda L. (WWF International), Lopoukhine, N. (Director General, National Parks Directorate, Parks Canada), Msimang, M. (CEO South African National Parks), Rosabal P. (Protected Areas Program IUCN) Zupancic-Vicar M. (Senior Advisor, WCPA) *Panel Discussion on Evaluating Management Effectiveness and Issues Raised in the Workshops.*

Vincent G. (Parks Victoria) *Evaluating Management Effectiveness – Final Workshop Plenary.*

Theme: Evaluation systems and processes –

Session Vb: Learning from Experiences in Monitoring and Evaluation of Management Effectiveness

Leads: Marc Hockings, Dan Salzer

Papers Submitted

Braun A. (ed.) (2003) *Preparing for the World Parks Congress – Managing Effectively in the face of change: What lessons have we learned?* World Commission on Protected Areas, Unpublished Report.

Ervin J. and Goodman P. *Rapid assessment and prioritization of protected area management: lessons learned from South Africa.*

Jones G. (Tasmanian Parks and Wildlife Service, Australia) (2003) *A dummy’s guide to evaluating management of protected areas - lessons from the Tasmanian Wilderness World Heritage Area.*

Leverington F. and Hockings M. (in press) Securing protected areas and ecosystem services in the face of global change; the role of evaluating management effectiveness. in *Securing Protected Areas in the Face of Global Change* IUCN/WRI Ecosystems, Parks and People Project.

Salafsky, N. and Margoulis, R. (Foundations of Success) *Adaptive Management – An Approach for Evaluating Management Effectiveness.*

Schmitt K. (GTZ), Makombo J. (Bwindi Impenetrable National Park) *Experiences in quantitative management effectiveness assessment using the Management Information System MIST in Bwindi Impenetrable National Park, Uganda.*

Stem C. and Salafsky N., and Brown, M. (Foundations of Success) (2003) *A Review of Monitoring and Evaluation Approaches and Lessons Learned in Conservation - Summary Results from the Measuring Conservation Impact Initiative.*

Stolton S. (Equilibrium Consultants) and Chong-Seng L. (Seychelles Island Foundation) *Enhancing Our Heritage - Monitoring and managing for success in natural World Heritage sites.*

Presentations Only

Hockings M., (University of Queensland and WCPA Vice-Chair for Management Effectiveness) *Introduction and review of objectives and relationship of Capacity Building and Evaluating Management Effectiveness sessions.*

Hockings M. *Review of WCPA framework for assessing protected area management effectiveness.*

Jones G. (Parks and Wildlife Service, Tasmania) *State of the Tasmanian Wilderness World Heritage Area Report -- an evaluation of management effectiveness under the 1992 management plan.*

Lacerda L. (WWF) *Country and institutional portfolio assessments – common issues and ways forward.*

Leverington F. (Queensland Parks Service) *Lessons learned from management effectiveness assessment around the world – a summary of an international workshop in Melbourne*

Logan H. (Department of Conservation, New Zealand) *Assessing the state of conservation of World Heritage Properties – lessons learnt from the periodic reporting process in the Asia Pacific Region.*

Salafsky N. (Foundations of Success) *Present Adaptive Management Process with WCPA EME framework situated within it.*

Salzer D. (TNC) and Benetiz.S. (Ecuador) *The Nature Conservancy's Measures of Success experience in assessing management effectiveness of protected areas in Latin America.*

Worboys,G. (Griffith University) Salzer,D. (Conservation Measures Partnership), Hockings M. *Choosing among alternative approaches for assessing management effectiveness.*

Session Ve: Regional Experiences in Management Effectiveness Evaluation
Lead: Enrique Lahmann

Presentations Only

Brandon K. (Conservation International) *Relevant indicators for assessing management effectiveness in different types of parks and social contexts.*

Corales L., (PROARCA CAPAS program, Guatemala) *The PROARCA/CAPAS approach to evaluation of management effectiveness.*

Mallarach J. (Institutió Catalana d'Història Natural) *Comprehensive evaluation of protected areas system of Catalonia - Spain, 2003.*

Mathur V., Choudhury B.C., Praveen, V.B. *Management effectiveness evaluation in India and Nepal.*

Salas A., (IUCN-ORMA, Costa Rica) *Introduction to the session.*

Salas A., (IUCN-ORMA, Costa Rica) *Central American protected Area Systems – experiences in application of similar tools for management effectiveness evaluation.*

Session Vm: Using Evaluation for Better Management

Leads: Jose Courrau, Fiona Leverington and Caroline Stem.

Papers Submitted

Mapesa M. and Stolton S. (Enhancing our Heritage Project Team) (2003) *Using Evaluation Results: Bwindi Impenetrable National Park: Uganda.*

Tenorio Jiménez R. (Administrador Parque Nacional Braulio Carrillo) (2003) *Efectividad de Manejo en Areas Silvestres Protegidas, una herramientas para la Rendición de cuentas y transparencia, Costa Rica.*

Presentations Only

Courrau J. (Consultant, Costa Rica) *Overview of the application of management effectiveness evaluation results, including the four main uses and synergies amongst them*

Lemos de Sa R. (WWF, Brazil) *Case study: Use of evaluation results for public support and advocacy.*

Mapesa M. (Uganda Wildlife Authority) *Case study: Use of evaluation results for resource allocation.*

Tawake A. (Locally Managed Marine Areas Network, Fiji) *Case study: Use of evaluation results for adaptive management.*

Tenori R. (Administrator of Braulio Carrillo National Park, Costa Rica) *Case study: Use of evaluation results for transparency and accountability.*

Courrau J. Leverington F., Salafsky N. and Stem C. (Facilitators) *Working groups discussion with recommendations on lessons learned and strategies for improving the use of evaluation results focusing on transparency and accountability, resource allocation, public support/advocacy and adaptive management.*

Theme: Indicators of management effectiveness

Session Va: Meeting the needs of indigenous and local communities in management effectiveness evaluations

Lead: Hanna Jaireth

Papers Submitted

Jens N. (Conservation Volunteer Alliance, Australia) (2003), *Effective Management of Indigenous and Local Volunteers.*

Smyth D., Beeron C., Bresolin S. and Rist P. (2003) *Development of Cultural Indicators for the Management of The Tropical Rainforest World Heritage Area, Australia*, Rainforest Cooperative Research Centre, Cairns, Australia.

Sucre L. (Central American Indigenous and Peasant Coordinator of Communal Agro forestry) (2003) *Protected areas and Rural Communities: A natural coexistence – Zones of Conflict and Development, A Challenge toward a Governance with Social Participation*.

Presentations Only

Alden Wily L. (Independent land tenure and natural resources management adviser, UK) *Measuring Policy Commitment to Community Management of Protected Areas – Looking at East African Forests*.

Alden Wily L., *Workshop Discussion on Indicators for Community Tenure and Protected Area Management*.

Jaireth H. (TILCEPA) *Introduction to the session*.

Jaireth H. *Workshop Discussion on Cultural Indicators, Participatory Processes and Protected Area Management*.

Jaireth H., Alden Wily L., Jens N., Saway V., Smyth D., and Sucre L. *Panel Discussion on Meeting the Needs of Indigenous and Local Communities in Management Effectiveness Evaluation*.

Jens N. *Workshop Discussion on Effective Management of Indigenous and Local Volunteers*.
Saway V. (Talaandig Tribe, Mt Kitanglad Phillipines) *Indigenous Perspective on Effective Protected Area Management*.

Smyth D. (TILCEPA) Beeron C. (Director, Giringun Elders and Reference Group and Girramay elder) Rist P. (Executive Officer, Giringun Elders and Reference Group Aboriginal Corporation) and Bresolin S. (Cultural Ranger, Centre for Tropical Restoration and Dulgulburra Yidindji elder) *Cultural Indicators For The Management Of Australia's Tropical Rainforests World Heritage Area*.

Session Vc: Assessing operational, economic and social aspects of management

Lead: Ian Dutton

Papers Submitted

Dutton I. (TNC) *Economic, Social and Institutional Indicators of Management Effectiveness: an Overview of Considerations Within and Beyond the Boundaries of Protected Areas*.

Green M. (Broads Authority UK) (2003) *Experience with management planning in a protected landscape: The Norfolk and Suffolk Broads and their catchment*.

Johnson C. (Broads Authority UK) (2003) *Evaluation of management effectiveness in the Trinity Broads; Initial Assessment, A Partnership Project between the Broads Authority, Essex & Suffolk Water, Environment Agency and English Nature, UK*

Padilla A. (2003) *Application of the Site Consolidation Scorecard in the Rio Platano Biosphere Reserve, Honduras*.

Presentations Only

Dutton, I. and Reiger, J. (Facilitators) *Group Discussion on progress and priorities for Social, Economic and Institutional Indicators of Management Effectiveness.*

Flores M. (TNC) *Measuring Institutional Development in Protected Area Management – Overview of method and worst case scenario.*

Herlugson C. (BP) *Industry Contributions – the BP Experience in Biodiversity Conservation.*

Vathana K. (Deputy Director, Dept. of Natural Conservation and Protection, MOE, Cambodia) *Protected Area Development and Review in Cambodia.*

MacKinnon K. (World Bank) *Improved Forest Management – the World Bank/WWF Partnership.*

Moreno P. (Natural Reserves Network Association of the Civil Society, Colombia) *Measuring Institutional Development in Protected Area Management – The Institutional Self Assessment: A Catalytic Tool for the Strengthening of Conservation Organizations - Red de Reservas, Columbia Case Study.*

Reiger J. (TNC) *Overview of Site Consolidation Process in Protected Areas Lessons from the Site Consolidation Scorecard.*

Reiger J. (TNC) *Site Consolidation Process in Protected Areas - Lessons from the Site Consolidation Scorecard.*

Session Vd: Management of protected areas in arid environments: constraints and prospects

Lead: Abdulaziz Abuzinada

Presentations Only

Abuzinada A. (WESCANA) *Introduction with a summary of expected outputs and proposed follow up.*

Al-Soghair S. and Al-Sa'doon K. *Opportunities and challenges of participatory Protected Area management in Saudi Arabia based on a case study of the Ibex Reserve.*

Batanouny K. (Dean, Department of Botany, University of Cairo, Egypt) *On integrating the principles of traditional resource management into modern PA management.*

Cheema M. (Director Resource Unit, Punjab Project, IUCN, Pakistan) *Challenges and prospects of local community participation in effective management of protected areas in Pakistan.*

Fouda M. *Effective management of marine protected areas in the Egyptian Red Sea.*

Panahi M and Fazel A. (Department of the Environment, Iran) *Management issues in the Zagros Mountains of Iran.*

Rafiq M. (Director, IUCN Pakistan Office) *Effectiveness of management of protected areas: beyond boundaries.*

Shobrak M. and Ostrowski S. (The National Wildlife Research Centre, of the National Commission for Wildlife Conservation and Development (NCWCD) Saudi Arabia) *Analysis of management issues related to introduction, reintroduction and restocking of wildlife in Western / Central Asia and North Africa (WESCANA).*

Session Vf: Assessing Ecological Integrity
Leads: Nik Lopoukhine and Jeffrey Parrish

Papers Submitted

Leverington F. and Mitchell C. (Qld Parks and Wildlife Service) (2003) *Kowaris and Koalas: Evaluating the natural integrity of Queensland's protected areas.*

Presentations Only

Benítez S. (The Nature Conservancy) *Case study in ecological integrity measurement: Condor Bioreserve, Ecuador.*

Leverington F. (Queensland Parks and Wildlife Service) *Case study in ecological integrity measurement: Queensland National Park System, Australia.*

Lopoukhine N. (Parks Canada) and Parrish J. (The Nature Conservancy) *Ecological Integrity: What is it, how is it measured, and why is it important for protected area management effectiveness?*

Parrish J. (The Nature Conservancy) *Measuring what matters: The Nature Conservancy's Measures of Conservation Success and Ecological Integrity Measures methodology.*

Panel Discussion *From Theory to Practice: Challenges and Solutions in measuring ecological integrity, and the promotion of its measurement at protected areas around the globe.*

Sayre R. (The Nature Conservancy) and Alonso L. (Conservation International) *Measuring ecological integrity when data are lacking: Approaches to rapid ecological integrity assessments.*

Seutin G. (Parks Canada) *Case study in ecological integrity measurement: Banff and Fathom Five reserve, Canada.*

Windevoxhel N. (PROARCA/CAPAS, Central America) *Translating ecological integrity measurement results into management decisions within protected areas.*

Woodley S. (Parks Canada) *Ecological Integrity as a Model for Understanding and Managing Parks and Protected Areas.*

Yongcheng L. (The Nature Conservancy of China) *Case study in ecological integrity measurement: the Yunnan Great Rivers Project, China.*

Session Vg: Evaluating management effectiveness in marine protected areas
Leads: Charles Ehler and Simon Cripps

Papers Submitted

Bravo M. (2003) *Galapagos Island Marine Reserve Demonstration Case, Galapagos National Park Ecuador.*

Costantini M. (2003) *Miramare Marine Protected area demonstration case - Miramare Marine Protected Area.*

Ehler C. (NOAA) (2003) *Measuring MPA Effectiveness- The Challenges, Approaches and Lessons Learned*.

Hatzioios M. (World Bank) and Cerezo V. (FUNDAECO, Guatemala) (2003) "*MPA Scorecard: A Tool for Tracking and Reporting Progress on Management Effectiveness*"

Joseph E. (Conservation society of Pohnpei) (2003) *Lenger Island Demonstration Case*.

Kazimoto S. and Rubens J. (2003) *Mafia Island Demonstration Case*, Mafia Island Marine Park & WWF Tanzania.

Parks J., Dahl-Taconi N., Arauso A. and Dygico M. (2003) *Biophysical, Socio-economic, and Governance indicators to Enhance Management*.

Watson L. (NOAA) (2003) *Measuring Outcomes of MPA Management: How is your MPA Doing? The WCPA/WWF Management Effectiveness Guidebook*.

Watson L. (NOAA) Parks J.(Community Conservation Network), Pomeroy R. (University of Connecticut), Cid G. (NOAA), Ehler C. (NOAA), Simon Cripps S. (WWF), Jorge M. (WWF) *How is Your MPA Doing? A Guidebook and Indicators to Evaluate Management Effectiveness of Marine Protected Areas*.

Wear S. (The Nature Conservancy) (2003) *Multi-Site Peer Learning: A Tool to Improve Strategy and Management Effectiveness*.

Presentations Only

Cripps S. (WWF) *Drawing Lessons Learned and Building Capacity to do MPA Management Effectiveness Evaluations*.

Day J. (Great Barrier Marine Park Authority) *Evaluation of Management Effectiveness - Strategic Challenges and Lessons Learned in the Great Barrier Reef Marine Park*.

Harris J. (KZN Wildlife Service) *Conducting a Management Effectiveness Assessment in St. Lucia Marine Reserve*.

Muthiga N. (Kenya Wildlife Service) *Assessing MPA Management Effectiveness in the Western Indian Ocean Region*.

Panel Discussion *Building Capacity and developing evaluation programs for Marine Protected Areas*.

Panel Discussion *Lessons learned on applying indicators in Marine Protected Areas*.

Parks J. (Community Conservation Network) *Biophysical Indicators for Planning and Improving MPA Management*.

Pomeroy R. (University of Connecticut) *Governance Indicators for Planning and Improving MPA management*.

Pomeroy R. (University of Connecticut) *Socioeconomic Indicators for Planning and Improving MPA Management*.

Theme: Threats to Protected Areas

Session Vi: Threats to biodiversity and ecological integrity of protected areas from unsustainable hunting for subsistence and trade

Lead: Elizabeth Bennett

Papers Submitted

Bennett E. L., (Wildlife Conservation Society, New York) *Collapse From the Inside: Threats to biodiversity and ecological integrity of protected areas from unsustainable hunting for subsistence and trade - Introductory overview: review of the scale of the problem in protected areas throughout the humid tropics, and the implications for the ecological integrity and local people.*

Child B. (Southern African Sustainable Use Specialist Group; Development Services and Initiatives, Zambia) *Collaboration with local communities to manage protected areas in Zimbabwe and Zambia.*

Gumal M. (Wildlife Conservation Society, Malaysia) *Potential solutions: multi-faceted programmes to take hunting pressure off protected areas in Sarawak, Malaysia.*

Kahumbu P. (Kenya Wildlife Service) *Protecting wildlife in Kenya's parks in the face of high commercial hunting pressure.*

Karanth U. (Wildlife Conservation Society, India) *Protecting India's parks amidst a sea of people.*

Kpelle D., Ampadu-Agyei O. and Bakarr M., (Conservation International) *Use of traditional belief systems in reducing bushmeat hunting in Ghana: An African solution to a conservation crisis.*

Milliken T. (TRAFFIC) *Food for thought: Bushmeat utilization and protected areas in Eastern and Southern Africa.*

Moukassa A. (Wildlife Conservation Society, Congo) *Hunting management in forest concessions surrounding Nouabale-Ndoki National Park, Northern Republic of Congo.*

Queiroz H.L. (Mamirauá Institute for Sustainable Development, Brazil) *Management of hunting in the Amazon: Learning from the experiences of fishing management by local communities in Mamirauá and Amanã Reserves.*

Roberts C. (University of York, UK) *Lessons learned from over-exploitation of marine ecosystems.*

Ruggiero R.G. (US Fish and Wildlife Service, Washington) *The role of government in managing hunting and trade.*

Presentations Only

Robinson J. (Facilitator (WCS)) *Facilitated Discussion on Draft Policy Document: How to manage protected areas to ensure sustainable hunting and the achievement of conservation goals?*

Session Vj: Invasive alien species
Leads: Maj De Poorter and Geoffrey Howard

Papers Submitted

De Poorter M. (ISSG) *Fighting back: there is always SOMETHING you can do.*

Jackson L.F. (Global Invasive Species Program, South Africa) *The Global Invasive Species Programme and Protected Areas.*

McNeely J.A. (Chief Scientist, IUCN-The World Conservation Union) *Invasive alien species and protected areas: Some of the key issues.*

Mauremootoo J. R. (Mauritian Wildlife Foundation) *Mauritius African Case Study II: Mauritius – a History of Degradation and the Beginnings of Restoration.*

Mumba, M. (Wetland Research Unit, University College London) *Invasive Alien Species in the Kafue Flats, Zambia: Mimosa pigra infestation in Lochinvar National Park and the adjacent Game Management Areas (GMA's).*

Xie Y. (Institute of Zoology, Chinese Academy of Science) *Control of invasive alien species in nature reserves in China.*

Presentations Only

Group Discussion *Recommendations on Issues/priorities for IUCN and others to work on as part of work programs (WCPA and other thematic programmes).*

Group Discussion *Summarise restraints (problems to be overcome) in dealing with IAS in the specific Protected Areas context - based on restraints identified in various Regional workshops (GISP, GBF) on IAS in the last two years.*

Howard G. (IUCN EARO) *Practical methods and approaches to address the IAS issue in Protected Areas, including a toolkit and examples of prevention, surveillance, eradication and control especially in the ecosystem context.*

Meliane I. (IUCN Mediterranean Marine Program) *Marine aspects of IAS and Protected Areas.*

Session Vk: Managing protected areas in the face of climate change
Leads: Lara Hansen and Jennifer Morgan

Papers Submitted

Hansen L.J., Biringer J.L. (2003) 'Overview of Climate Change Session', from *Buying Time: A User's Manual to Building Resistance and Resilience to Climate Change in Natural Systems*. Hansen, L.J., J.L. Biringer and J.R. Hoffman, WWF, Gland.

Hansen L.J., Biringer J.L. and Hoffman J.R. (ed.s) (2003) *Buying Time: A User's Manual to Building Resistance and Resilience to Climate Change in Natural Systems*, WWF, Gland.

Presentations Only (Case Studies)

Dudley N. (Equilibrium Consultants) *Resilience-building Strategies in Forest Protected Areas.*

Hannah L. (Conservation International) *South African Protected Areas –Increasing Protected Area Resilience in the Face of Climate Change.*

Hansen L. (WWF Climate Change Program) *South Pacific Coral Reefs: Coral Reef Adaptation Strategy testing in the National Park of American Samoa and Fagatele Bay National Marine Sanctuary.*

Haqu N. (CAN South Asia) *Bangladesh: Climate Change and Freshwater Ecosystems.*

Hoffman J. (University of Washington) *Including Climate Change in the Design of Temperate Marine Reserves.*

Panel Discussion *Specific Issues raised in Session and finalise policy recommendations in relation to climate change and protected areas.*

Price M. (Centre for Mountain Studies, Perth College UK) *Alpine/Montane Systems and Climate Change.*

Rosentrater L. (WWF Arctic Focal Project) *Arctic Ecosystems: Are There Resilience Options.*

Van Tao D. (International Federation of Red Cross and Red Crescent) *Mangrove Restoration and Coastal Resilience.*

Theme: Protected Area Management Categories and Certification

Session Vh: Assessing the IUCN protected area management categories system

Leads: Adrian Phillips, Sue Stolton, Nigel Dudley and Kevin Bishop

Papers Submitted

Phillips A., Stolton S., Dudley N. and Bishop K. (2003) *Speaking a Common Language - An assessment of the IUCN categories of protected areas carried out for the World Commission on Protected Areas by Cardiff University and partners.* An issues paper for the World Parks Congress, Cardiff University and IUCN. (This report was accompanied by a CD Rom with a number of related case studies prepared in the course of compiling the report)

Presentations Only

Athanas A. (IUCN), Bishop K. (Cardiff University, Speaking a Common Language), Carter A. (Conservation International), Dearden P. (Marine Protected Areas Research Group, University of Victoria, Canada), Kapila S. (Shell), Kothari A. (Theme on Indigenous and Local Communities, Equity, and Protected Areas (TILCEPA)) Rao K. (Regional Protected Areas Programme with IUCN Asia Region), Richards D. (International Council on Mining and Metals (ICMM)) and Rosabal P. (IUCN Programme on Protected Areas) *Panel Discussion on to the IUCN Protected Area Management Categories System.*
Chape S. (UNEP/World Conservation Monitoring Centre) *Short response on the following cross cutting issue: Data collection (and links to assignment).*

Day J. (Great Barrier Reef Marine Park Authority) *Short response on the following cross cutting issue: Marine (and multiple use and zoning).*

Dudley N. and Stolton S. (Equilibrium Consultants) *The SaCL project - purposes, methods, provisional findings and draft conclusions.*

Johnson L. (BP) *Short response on the following cross cutting issue: Mining and energy (and controlling land uses).*

Lacerda L. (Manager of Protected Areas Unit with the Forests 4 Life Programme, WWF-International) *Short response on the following cross cutting issue: Forestry (and links to other communities).*

Kothari A. (Theme on Indigenous and Local Communities, Equity, and Protected Areas (TILCEPA)) *Short response on the following cross cutting issue: Local communities and indigenous peoples (and governance).*

Phillips A. *Speaking a Common Language - An introduction.*

Session VI: Protected area management standards and certification
Lead: Nigel Dudley

Papers Submitted

Dudley N., Hockings M. and Stolton S. (2003) *Protection Assured- Guaranteeing the effective management of the world's protected areas – a review of options.* A background paper for the World Commission on Protected Areas, IUCN, Switzerland.

Presentations Only

Bridgewater P. (Ramsar Bureau) *The Ramsar Convention's Montreaux Record: Recognizing and addressing threats to Ramsar sites.*

Dudley N. (Equilibrium) *Should IUCN Consider Certification?*

Group Discussion *To provide guidance on types of guarantees of protected area management effectiveness to the task force.*

Mallarach J. (Spain) *ISO-14000 – experiences in Catalonia, Spain.*

Mathur V. (Wildlife Institute of India) *Standardised self-reporting in World Heritage Sites.*

Robinson R. (Consultant) *Introduction and explanation of the background of Certification.*

Van Kreveld A. (WWF Netherlands) *Pan Parks – an existing certification system for management effectiveness in Europe.*

Vogtman H. (BNF, Germany) *What would certification mean? – experience with other environmental certification systems.*

Session Vn: Protected area category certification
Lead: Marija Zupancic-Vicar

Papers Submitted

Zupancic-Vicar M., Boer A., Gammell A., Helminen M., Krzan Z., Roesler M. and Sovinc, A. (2003) *European Verification and Certification of Protected Areas under the*

IUCN Management Categories. Discussion Paper by the WCPA Europe/IUCN Working Group for the Development of a Procedure for Verifying and Certifying the Status and Management of Protected Areas Based on the IUCN Management Categories.

Presentations Only

Chape S. (UK) *Improving the Effectiveness of IUCN Management Category Designation: a UNEP-WCMC Perspective*.

Galland P. (Switzerland) *Conclusions: way forward, WPC recommendation*

Liebel G. and Rupitsch P. (Austria) *Verification procedure for the Austrian national parks and the example of the Hohe Tauern National Park Carinthia, Austria*.

Sovinc A. (Slovenia) *The Verification and Certification of Protected Areas under the IUCN Management Categories - the European Context*.

Vicente de Lucio J. (Spain) *Experiences with classification of protected areas: Spanish Case Study*

Zupancic-Vicar M. (Slovenia) *Introduction to the session and explanation of the background to certification*.