



*The Protected Area  
Governance and  
Management Book*  
(An E-Book and a Printed Book)



Edited by

**Graeme L. Worboys**  
**Michael Lockwood**  
**Ashish Kothari**

**Book Plan, Table of Contents  
And Chapter Authors**

**EDITION 3**

**28 May 2013**

*The Book Project is proudly sponsored by:*



Australian  
National  
University



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## **FOREWORD: THE E BOOK PLAN, EDITION 2 (23 MAY 2013)**

Edition 2 of the *Protected Area Governance and Management* E Book Plan reflected inputs to the E Book Project by the IUCN WCPA Steering Committee at its April 2013 Montenegro meeting (See the E Book Newsletter No 3). This was a planned part of the E Book's development. Arising from the meeting, the Plan's structure has been slightly changed, a new chapter has been added (Capacity Building), four chapters have been merged (to form two chapters) and one chapter has been relocated. Additional content was sought, chapter titles were refined and these requests have been included. Post meeting, the E Book structure is now considered fixed (for Project operational reasons) as the endorsed IUCN WCPA structure.

The contents however will be refined further as a natural evolutionary improvement of the E Book. As *Principal Authors* further refine the original bullet point suggestions and creatively improve and finalise their final *working* Chapter outline plans (and send them to me), I will update this E Book Plan. This includes identifying the *Supporting Author* team. The initial bullet points of Edition Two are planned to be progressively replaced with these chapter outlines and this information will be shared as soon as it is made available to me. I will create a new E Book Plan Edition with each new Chapter outline received, so please anticipate a number of Editions of this E Book Plan as we progress. They will be numbered sequentially, dated and posted on the web site.

Why am I creating multiple Editions of the Plan during the Project? Well, this E Book Plan provides guidance to *Principal Authors* about the content being developed by other authors. The Plan is the basis for a co-ordinated and integrated approach to a quite complex E Book Project and helps ensure that there is neither duplication nor gaps in the E Book.

So *Principal Authors*....when you are ready....and reasonably satisfied with your Chapter outline could you please send it to me and I will create the next E Book Plan Edition. If you decide to improve it further afterwards, that is OK.....I will simply update and create a new Edition of the E Book Plan.

Many thanks! Graeme Worboys, Project Manager, 23 May 2013.

## **FOREWORD: THE E BOOK PLAN, EDITION 3 (28 MAY 2013)**

Edition 2 has stimulated immediate feedback and I have been able to update the E Book Plan with new information. Even though the E Book Plan is a working document I have also taken this opportunity to tidy it up a bit more. Thank you everyone for your inputs.

Graeme Worboys, Project Manager, 27 May 2013.

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## PROTECTED AREA GOVERNANCE AND MANAGEMENT

### Foreword

**(Principal Author) Graeme Worboys,**

**(Supporting Authors) Ashish Kothari, Michael Lockwood**

- This text will be prepared by the Editors on behalf of a distinguished protected area champion and leader (to be advised)

### 1. Introduction

**(Principal Author) Trevor Sandwith**

**(Supporting Authors) Ernesto Enkerlin Hoeflich, Kathy MacKinnon**

- Introducing the E Book
- The E Book as part of IUCN's Capacity Building Programme
- The E Book as a contribution to global protected area capacity building curricula, the accreditation of curricula and the establishment of a minimum professional standard for protected area managers.....written by the best authors in this field....a truly global contribution
- Why this standard is critical for protected areas, their effective management and biodiversity conservation
- Why this is important for achieving the Aichi Targets (and beyond)
- Providing, from the IUCN GPAP and WCPA executive a reflective statement about the task at hand for protected areas....including the scope and challenges of contemporary protected area governance and management
- The accessibility and approach of this book...deliberate easy read text
- Text for three levels of management presented....spanning from field officer – ranger through protected area manager to chief executive
- The types of audiences the E Book is designed for
- How the E Book is organised (structured) and presented

### 2. Concept, purpose and challenges

**(Principal Author) Graeme Worboys**

**(Potential contributors) Penny Figgis, Ashish Kothari, Vance Martin, Brent Mitchell, Christi Nozawa, Adrian Phillips, Pedro Rosabal**

- The critical role of protected areas
  - The concept of values (background theory)
  - The concept of protection of values (an introduction)
  - Purpose of protected areas and key objectives
  - Significance of protected areas and benefits (an introduction)
  - Impact of protected areas for biodiversity conservation and life support services of Earth
  - Healthy parks, healthy people
  - 21<sup>st</sup> Century strategic targets
- History and concepts of protected areas
  - The earliest protected areas including ICCA's
  - Yellowstone and the national parks concept

- Expansion, diversification, and the expansion of governance types
  - Contested ideas and places
  - Terrestrial and marine protected areas
- IUCN and protected areas
  - IUCN the organisation
  - CNNPA
  - WCPA
  - World Park Congress's: Milestones in protected area management
- Non-conventional protected areas
  - Indigenous and community conservation areas
  - Private protected areas
  - Share governance and co-managed protected areas
- Protected area governance
  - Respect for situational arrangements
  - Governance function (Introduction)
- Management
  - Active management versus paper parks
  - Four functions of management (Introduction)
  - Effective management and the Green List (Introduction)
- Challenges: Threats
  - 21<sup>st</sup> Century threats (Introduction)
  - The rapidity of change
  - Ineffective management
- Types of protected areas
  - Definition of protected areas (IUCN and CBD)
  - IUCN protected area management categories
    - Definition and purpose of Categories I-VI
  - IUCN protected area governance types
    - Definition and purpose of types I-IV
  - World Heritage Properties
    - Definition
    - Buffer Zone
  - Ramsar Wetlands
  - Man and the Biosphere Reserves
    - Definition
    - Core Zones
    - Buffer Zone
    - Transition area
  - UNESCO Geoparks
    - Definition
    - Conservation status
- Areas with conservation outcomes that do not meet the IUCN and CBD definitions
  - The value of "the matrix" for biodiversity conservation
  - Indigenous people's territories
  - Community managed territories and areas
  - Connectivity conservation corridors
  - Conventional urban parks and public gardens
  - Private estates and gardens
  - Greenways
  - Forest areas
  - Wildlife areas
  - Riparian areas
  - Tourist areas
  - Private ecotourism destinations

- Agricultural restoration areas
- Protected areas context to international conventions and strategies
  - Biodiversity Convention
    - CBD 2012-2020 Strategic Plan, Aichi targets and PowPA
  - Climate Change Convention
  - Desertification Convention

### 3. Earth's natural heritage

*(Principal Author) Graeme Worboys*

*(Potential Contributors), Bastian Bertzky, Larry Hamilton, Bill Henwood, Naomi Kingston, Brendan Mackey, Christi Nozawa, Michael Wong, Stephen Woodley, Tatyana Yashina*

- Earth's natural processes
- Geodiversity
  - Types of geoheritage sites
  - Significance of geoheritage
- Biodiversity
  - Biodiversity defined
  - Terrestrial biota
    - Animals
    - Plants
  - Freshwater biota
    - Animals
    - Plants
  - Marine biota
    - Animals
    - Plants
- Global biogeography
  - Biogeographical Realms
  - Some Major Biomes
    - Mountains
    - Marine
    - Grasslands
  - WWF Terrestrial Ecoregions
  - WWF Marine Ecoregions
  - WWF Global 200
  - Conservation International Hotspots
  - IUCN Key Biodiversity Areas (Terrestrial and Freshwater)
  - Important Bird Areas: Birdlife International
  - Alliance for Zero Extinction Sites
- Ecological processes (Introduction)
  - Migrations
    - Insects
    - Birds-flyways (CN)
    - Terrestrial mammals
    - Marine mammals
    - Marine reptiles
  - Terrestrial ecosystem processes
  - Marine ecosystem processes
- Ecological conservation principles
  - Ecological principles for managing for protected areas
  - Managing for ecological integrity
  - Canada's Ecological Integrity System



## 4. Earth's cultural heritage

**(Principal Author) Sue Feary**

**(Potential Contributors) Jannie Lasimbang, Jane Lennon, Ian Lilley, Bas Verschuuren, Rob Wild**

Bio-cultural values and beliefs

- Cultures and their heritage
- Cultural sites and landscapes
  - Sacred natural sites
  - Artefacts and structures
  - Landscapes and seascapes
  - Non-material heritage
- Cultural heritage management principles
  - ICOMOS
  - Burra Charter
- An introduction to cultural heritage management

## 5. Societal influences and global change

**(Principal Author) Nigel Crawhall**

**(Potential Contributors) Ernesto Enkerlin Hoeflich, Leslie Hughes, James Igoe, Ashish Kothari, Moses Mapesa, Eduard Muller Sanjeeva Pandey, Trevor Sandwith**

- Cultural diversity and identity
- World views and attitudes
- Social context
  - Protected area establishment: past impacts on peoples and livelihoods
  - Introducing critical new protected areas: working with people
    - Case studies from India's Great Himalayan National Park
- Population and demand for resources
- Poverty
- Community development
- Politics
  - Human rights and justice
  - Conflict and armed struggle
  - Forms of government
  - Neoliberalism
  - Devolution and engagement
- Economics
  - Globalisation
  - Sustainable development
  - Market-based instruments
- International aid and development
  - International aid: How it works
  - Aid, development organisations and protected areas
    - The World Bank
    - Aid agencies
    - The Global Environment Fund
    - CBD programs
    - UN Organisations
    - PoWPA
    - BIOPARMA

- Development projects and protected areas
  - Integrated conservation and development projects
  - Pressures on protected areas
- Knowledge and science
- Climate change
  - Causes
  - Trends and forecasts
  - Societal impacts
    - Extreme events and disasters
    - Coastal communities
    - Agriculture
    - Fisheries
    - Forestry
    - Social-economic-political implications
  - Environmental impacts
    - Changing oceans
    - Marine ecosystems and species
    - Freshwater ecosystems and species
    - Terrestrial ecosystems and species
- Scenarios
  - Drivers and their interactions
  - Potential futures
- New ways of looking at protected areas
  - Anticipating inevitable changes
  - Changing planet, creative management
  - Functional landscapes
  - Species conservation in a very different world

## 6. Benefits

*(Principal Author) Sue Stolton*

*(Potential Contributors) Nigel Dudley, Charlotte Karibuhoye, Yoshitaka Kumagai*

*Peter Valentine*

- Values
  - Concept of protected area values (cross referenced with Chapter 2)
  - Types of values
  - Values and scale
- Protected area benefits to society
  - Life support services
    - Natural solutions to climate change
    - Biodiversity conservation...protecting the intrinsic values of the planet
    - Healthy parks, healthy people
    - Protecting ecosystem services including clean air and catchments providing clean and reliable drinking water
    - Protecting species diversity and genetic stocks of food sources
    - Retention of carbon
  - Quality of life services
    - Contributing to poverty reduction
    - Open space
    - Clean air, clean water
    - Natural scenery
    - Extant wildlife
    - Amenity migrants

- Cultural and Religious significance
  - Sacred natural sites
  - Biocultural heritage sites
  - Cultural identity
- National pride
  - A nation's finest landscapes and scenery
  - A nation's best flora
  - A nation's best wildlife areas
- Political benefits
  - Peace parks
  - Transboundary protected areas
  - Serial World Heritage nominations
  - Political identity and security (Indigenous territories)
- Economic benefits
  - Tourism benefits
  - Decentralised employment
  - Preventative health benefits
  - Stable catchments, clean water, clean air, protected coastal shorelines, pollination services, fish spawning grounds, cover for crops (like coffee)
  - Land value benefits
- Managing economic benefits
  - Protection
  - Local community needs
- Protected areas as part of a matrix of land-use and sea-use
  - Protected areas in the context of different sectors
    - Agriculture, Forestry, Fishing, Mining, Urban environments, Tourism, Utilities, others
    - Partnerships and co-operation
  - Protected areas and connected landscapes and seascapes
    - Aichi targets and the large connectivity corridors of the World: Interconnected protected areas
    - Australia: A whole-of-continent approach to connectivity conservation
    - Opportunities for connectivity conservation corridors

## 7. Governing protected areas

*(Principal Author) Grazia Borrini-Feyerabend*

*(Potential Contributors) Neema Pathak Broome, Ashish Kothari, Barbara Lausche, Graeme Worboys, Carina Wyborn*

- Concept of protected area governance
- Governance quality
  - Elements of good governance
- Types of protected area governance
  - Government managed protected areas
  - Marine protected areas
  - Private protected areas
  - Indigenous peoples and community conserved territories and areas (ICCA's)
    - Range and significance
    - Legal and policy context
    - Limitations and problems
  - Co-managed protected areas
  - Aichi targets
- Governance roles of different actors
  - Good governance

- Transboundary protected area governance
  - Intra-nation transboundary governance
  - International transboundary governance
- Science and management governance
  - Introducing research governance
  - Scientists and managers working together
    - The Kruger model
- Governance considerations in a rapidly changing world
  - Managing governance in regime changes
  - Managing international treaty and convention governance
- Adaptive governance
- Governance assessment for individual protected areas
- Governance assessment for protected areas systems

## 8. Managing protected areas

*(Principal Author) Graeme Worboys*

*(Potential Contributors) Ben Boer, Jessica Brown, Nigel Crawhall, Barbara Lausche, Brendan Mackey, Vance Martin, Steve Shackleton, Ted Trzyna*

- Process of management
  - Planning
  - Organising
  - Leading
  - Control
- Strategic management
  - Strategic planning
    - Corporate Plan
    - Vision Statement
    - Mission Statement
    - Business Plan
    - Protected Area Plan of Management
- Protected area systems management context
  - Systems of protected areas
    - Protected area systems guidelines
  - Government agency systems
  - Private company systems
  - NGO systems
  - Community conserved areas
  - Context to international conservation initiatives
    - International agreements and treaties
    - Transboundary initiatives
    - Connectivity conservation initiatives
    - Sharing of data (The WDPA)
- Working with government processes and institutions
  - Legislative requirements: Legal considerations
  - Requirements of Parliament
  - Requirements of Government
  - Ministerial requirements
  - Chief Executive requirements
  - Requirements of the Courts
  - Requirements of other authorities
- Working with customary processes

- Requirements of the community and elders
- Customary law
- **Organisation management systems**
  - Management framework
    - IUCN's Management Framework
    - Application in Finland, South Korea, Victoria, NSW
    - Link to Management Effectiveness Evaluation
  - Financial management systems
  - Staff management systems
    - Staff competencies
    - Staff training
    - Staff counselling
  - Visitor use information system
  - GIS and natural and cultural heritage inventory and management systems
  - Media management systems
  - Computer software systems
  - Legal compliance systems
  - Occupational Health and Safety System
  - Insurance system
  - Asset management systems
  - Sustainable management systems
  - Risk management systems
  - Environmental management systems
  - Performance management systems
  - Ecological integrity system
  - State of the Parks Reporting System
  - Management Effectiveness Evaluation
  - Green List
- **Integrated management systems**
  - Integration of information
  - Integrated assets, finance, human resource and output system
  - Integrated assets and risk management systems
  - Management scenario planning
- **Open standards**
  - The concept of Open Standards
  - Open Standards described
  - Application for protected areas
- **Organisational change management**
  - Change as the norm in organisations
  - Organisational change theory
  - Processes of organisational change
  - Managing organisational change
- **Managing Categories I to IV**
  - Managing wilderness
  - Quarantine
- **Managing Categories V and VI**
- **Managing urban protected areas**

## 9. Capacity Building

*(Principal Author)* Eduard Muller

*(Potential Contributor)* David Reynolds

- Concepts: Capacity Development
  - Skills
  - Competencies
  - Levels of capacity development for protected areas
    - Ranger, field officer
    - Protected area manager
    - Executive level
  - Capacity development methods
- Types of capacity development needs
  - Establishing induction training needs: (There are a diversity of protected area operating environments where induction training is needed to help deal with geographic, topographic, vegetation cover, water, caves, wild animal presence, climate extremes, incidents, social environments, political environments, conflict zones and other environmental and managerial considerations)
  - Establishing operational safety training standards needs
    - Defining minimum standards of competencies for operations
    - Defining air, ground, underground, water and marine operational training standards
  - Training to deal with situational governance settings
  - Knowledge and information needs
    - Establishing priority situational information needs
      - Protected area values information
    - Establishing information needs for different staff levels
- Developing capacities
  - IUCN International benchmark capacity development guidance
    - Tertiary protected area curricula
    - Certification
  - Completing a situational capacity needs assessment
  - Tools and methods
    - Formal education
    - Professional training
    - Short courses
    - On-line training
      - IUCN best practice guidelines
      - Professional journals (Parks)
    - In-service training
    - Apprenticeships, internships, mentoring, coaching
    - Exchanges
    - Study visits, workshops, conferences, guest speakers
    - Operational debriefing
    - Preparing publications
- Formal recognition of capacities
  - Experience as learning

- Recognition of qualifications
- Transferability of qualifications
- Certification

## **10. Managing complexity**

**(Principal Author) Michael Lockwood**

**(Potential Contributors) Harry Biggs, Steve McCool, Eduard Muller, David Salt**

- Resilience thinking and social-ecological systems
- Respecting and using diverse knowledge systems
- Adaptive co-management
- Protected area applications
- Creative management

## **11. Knowledge generation, acquisition and management**

**(Principal Author) Charles Besancon**

**(Potential Contributors) Joji Carino, Nigel Crawhall, Brendan Mackey, Tony Varcoe**

- Information needs
  - Organisational
  - Greater government
  - International
    - Protected Planet
  - Community
  - Neighbours and stakeholders
- Information and knowledge sources
  - Traditional knowledge and information
  - Community knowledge
  - Management sourced information
  - Science sourced information
  - Science and local knowledge working together
  - Google style accessible information
- Social and institutional learning processes
- Interfaces between knowledge systems
  - Budget system
  - Assets management system
  - Maintenance system
- Information systems and databases
  - Stand alone and integrated systems
- Knowledge deployment
  - Accessibility of information
  - Protected area outlook reporting
- Research management
  - Science-Management working together
  - Research plan
  - Looking after researchers
- Monitoring
  - Monitoring work
    - Types of monitoring
    - Long term monitoring sites

- Use of monitoring information
- Monitoring and evaluation
- Monitoring for managers
- Priority evaluation subjects for protected areas
- Baseline condition and change in condition evaluation
  - Ecological Integrity

## 12. Leadership for protected areas

*(Principal Author) Julia Miranda Londono*

*(Supporting Authors) Jon Jarvis, Nik Lopoukhine, Moses Mapesa,*

- Leadership concepts
  - Protected areas: A twenty-four hour management world
  - Content knowledge
  - Clarity of purpose – a clear vision - clear messages
  - Teamwork: A protected area whole of system team approach
  - Excellence in communication
  - Situational management for a diversity of events
  - Leadership in incidents
- Strategic decision making
  - Dealing with decisions which may mean the life and death of species
  - Beyond an experience based decision making
  - Securing the right protected area data for decision making
  - Facilitating an optimum analysis of data
  - Assessing experiential advice and empirical information inputs
  - Assessing risk
  - Applying judgement in decision making
  - Scenarios and complexity
- Working with people
  - Inspirational leadership
  - Communicating with people
    - Listening
    - Walking and talking with people
  - Positively working with a diversity of people
  - Negotiation skills
  - Conflict resolution
- Staff management
  - Induction for all staff
  - Team work in protected areas
  - Understanding different types of people (theory)
  - Understanding cultures (theory)
  - Understanding organisational behaviour (theory)
  - Managing industrial awards, compensation, contracts, agreements, rosters, shift work etc
- Staff capacity building
  - Training systems
  - Staff competencies and skills
  - Training programmes, professional development and conferences
  - Mentoring and acting opportunities
- Communication and advocacy
  - Protected areas: For life's sake messages
  - Anticipating the inevitable: communicating change along with responses
  - Resources: Working with finance decision makers
  - Dealing with community protests to key conservation decisions
    - Defining the issue clearly



- Defining the consequences of no action
- Describing with clarity the response needed
- Securing support of politicians
- Anticipating and planning for media interest
- Securing action to achieve conservation outcomes
- Innovation
  - Investing in new ideas and new systems
- Dealing with change
  - Creative solutions for change; Perseverance
  - Building supportive networks

## 13. Planning

*(Principal Author) Penny Spoelder*

*(Potential Contributors) Stuart Cowell, Patrick Gregorson, Colin Ingram, Fiona Leverington, David Phillips, Bob Pressey*

- The nature and purposes of planning
  - A key function of management
  - Pervasive application to all aspects of protected area management
- Planning approaches and types
  - Theories of planning
  - Planning approaches most suitable for protected areas
- Planning and establishing reserve systems
  - Reaching conservation goals
  - Gap analysis: strategic assessment of areas needing protection
    - Aichi Targets and the percentage Marine and Terrestrial Ecoregions conserved
    - Key Biodiversity Areas covered by Protected Areas
    - Alliance for Zero Extinction Sites covered by Protected Areas
  - Systematic conservation planning
    - Decision support software for conservation decisions
  - Ecosystem approach in planning and designing reserve systems
    - Landscape planning
    - Implementation approach
  - Land and sea-use planning: selecting and establishing protected areas
  - Landscape, seascape connectivity conservation planning
- Levels of planning
  - Strategic planning
  - Tactical planning
  - Operational planning
- Common types of protected area planning
  - Budget planning
  - Staff planning
  - Project planning
  - Operational planning
  - Incident planning
- Mainstreaming protected areas with other planning
  - High level strategic plans
  - Land use plans
  - Development assessment planning
- Adaptive management
  - Adaptive management theory
  - Application in protected areas
  - Planning for adaptive management

- Creative management
  - Concept of creative management in a climate change world

## **14. Business Management**

***(Principal Author) To be Advised***

***(Potential Contributors) Barbara Lausche, David Mabunda, Lena McDowell, Andy Thompson***

- Implementing business systems
  - Business planning
  - Budget management
  - Cost effectiveness
  - Best practice management
  - Staff management reporting
  - Assets management
  - Performance reporting
  - Partnership management
- Sustainable finance
  - Revenue sources
  - Pricing services
- Financial management and audits
- Managing commercial (profit based) businesses in parks
  - Agency managed visitor centre operations
  - Not for profit operations in parks
    - The US NPS model
  - A tourism operator paradigm in parks
    - Eco-tourism operation
    - Routine tourism operation
    - Development oriented tourism operation
  - Managing tourism operations
    - Positive working partnerships
    - Incrementalism
    - Third party involvement in decisions
    - Accountability for environmental performance
    - Concept of “quiet enjoyment”
- Contracts, leases and licenses (Andy Thompson, Jim Barborak)
  - Legal documents
    - Characteristics of these documents
  - Management rights, responsibilities and accountabilities
  - Entitlements and punitive consequences
  - Lease-licence servicing responsibilities
  - Revenue return and real costs
  - Environmental impact of leasing and licensing
  - Transferability
  - Unintended consequences
  - Effective negotiation of leases/licences

## **15. Engaging with neighbours, citizens, stakeholders, users, partners and philanthropists**

***(Principal Author) Stephen Dovers***

***(Potential Contributors) Reggie Chappel, David Freudenberg, Linda McMillan, Eduard Muller, Sanjeeva Pandey, John Senior, Mike Tollefson, Rich Weidman***

- Engaging with the citizens and the community
  - Protected areas: Naturally part of the community
    - Working routinely with organisations and groups such as:
      - local government
      - Local tourism groups
      - local schools and education groups
      - police, fire, ambulance and other emergency services
      - community groups including clubs, societies, and senior citizens
      - the local media
    - Working with a local protected area advisory body
    - Providing a range of outdoor recreation opportunities
    - Managing a range of local protected area tourist destinations
  - Healthy parks, healthy people
    - Concept of healthy parks, healthy people
    - Parks and the health system
    - Health and financial benefits
  - Protected areas and youth: Managing opportunities for:
    - Open space and fun
    - Observing and learning about nature
    - Sport and recreation
    - Participation and adventure
    - Participation and improving futures
  - Community education in support of protected areas
    - Accessible, relevant and current information
    - Working with the education system and schools
    - Education in urban environments
    - Technology that supports education
    - Citizen science supporting protected areas
  - Engaging urban communities
- Working with a diversity of new and old stakeholders and partners
  - The business community
  - The health industry
  - The water industry
  - Agriculture
  - Tourism (and others)
- Engagement, approaches and methods
  - Mutual benefit
  - Combined resources dealing with shared issues
- Partnerships and collaboration
  - Working with neighbours
  - Multi-sectoral partnerships
  - Collaboration with religious groups
  - Collaboration with recreation groups
  - Collaboration with key international conservation partners
  - Working with IUCN
- Working with philanthropists
  - A history of philanthropy to protected areas
  - Types of philanthropic support provided and future opportunities

- Working with philanthropists

## **16. Managing media and communication**

**(Principal Author) Stuart Cohen**

**(Potential Contributors) James Kemsey, Dan Laffoley**

- The media and protected areas
  - Types of media
    - Social media
  - How the media works
  - Working with the media
    - Supportive media
    - Adversarial media
    - Social media
  - Strategic use of the media
- Media planning
  - Preparation of a Media Plan
  - Types of media event
    - Opening
    - Launch
    - Event
    - Press conference
    - Contingency advice for the public
  - Type of media targeted
    - Radio
    - Television
    - Video – internet release
    - Print
  - Media support material
    - Press release
    - High profile talent/spokesperson
    - Concise facts sheets
    - Pre-prepared video footage, photographs or other props
  - Timing of the release
    - Avoiding other newsworthy events
    - Evening news considerations
    - Using low news activity
- Media management in an environment of conflict
- Media management skills
  - Media training
- Media at major incidents
  - Press conference timing to suit incident needs and news needs

## **17. Managing threats**

**(Principal Author) Vinod Mathur**

**(Potential Contributors) Jon Day, Malcolm Gill, Samuel Mwandha, Andrew Plumptre**

- Threats to protected areas and biodiversity
- Classifying threats
  - Underlying causes
  - Managing indirect threats
  - Managing direct threats

- Managing human caused threats
  - Habitat destruction
  - Global trafficking in wildlife
  - Poaching
  - Conflict and impacts to wildlife
  - (others)
- Threats: Trends
- Pest animals
- Weeds
- Fire
  - Fire as a threat
  - Fire behaviour
  - Responses to fire
- Pathogens
- (others)

## **18. Managing for climate change (Terrestrial and Marine)**

***(Principal Author) Angas Hopkins,***

***(Potential Contributors) Michael Dunlop, Dan Laffoley, Stephen Woodley, Tatyana Yashina***

- Setting an example: Low emission management
  - Protected area management: Minimising carbon emissions
  - Managing carbon offsets
- Assessing the context of the reserve system in a climate change environment
  - Forecasting marine flooding of coastal lands
  - Forecast biome shifts
- Managing carbon in the landscape
  - Retention of forests and vegetation cover
  - Protection of peat bogs
  - Restoration of disturbed areas and carbon sequestration
- Anticipating the inevitable – risk management planning
  - Incident management: Preparing for more frequent extreme events
    - severe storm events
    - intense rainfall and rapid runoff
    - hail storms and flooding
    - severe dust storms
    - very strong winds
    - catastrophic fire behaviour
  - Dealing with the rapidity of these extreme events
- Dealing with wildlife issues
  - Dealing with big changes: the great wildlife migrations of Earth
  - Displacement and human and wildlife conflict
  - Saving some species: Working with Zoos
  - Management of genetic information resources
  - Facilitating seed banks for flora species
  - Dealing with the extinction of some species

- Managing climate change in marine environments
- Working with researchers: tracking climate change effects and forecasting climate futures
  - Research as an integral part of protected area management
  - Facilitating the research effort needed

## 19. Managing geoheritage

**(Principal Author) Roger Crofts,**

**(Potential Contributors) Jay Anderson, Tim Badman, Kevin Kiernan, Vincent Santucci, Jim Wood, Shin Wang, Kyung Sik Woo**

- Rock exposures
  - Astrobleme sites
  - Volcanic features
- Geothermal sites
- Fossil sites
  - World heritage fossil sites
  - Fossil collection management
- Mineral sites
  - Managing mineral sites
  - Managing mineral collections
- Landforms
  - Karst landforms
  - Danxia landforms
- Soils
  - Soil erosion
- Establishing geoheritage condition
  - Establishing baseline condition
  - Monitoring change in condition
- Geoheritage/biodiversity management
  - Geothermal sites
    - Extremophiles
  - Karst ecosystems
    - Troglobitic fauna

## 20. Managing fresh water, river, wetland and coastal estuary based protected areas

**(Principal Author) Jamie Pittock**

**(Potential Contributors) Harry Biggs, Roger Good, Hugh Govan, John Mathews**

- Fresh water management in protected areas
  - Ecological principles
  - Water quality and water flow regime management
  - Flood events
  - Invertebrate species management
  - Vertebrate species management
  - Recreation management
- Catchment management
  - Restoration - soil conservation works

- Catchment cover: soil protection
- Pollution management
- Fire management
- Impoundments
- Hydro-electric power generation
- Threats
- Sub-surface water management
  - Water table management
  - Aquifer management
- River management
  - Environmental flows
  - Riparian zone management
- Wetland management
  - Peat bogs
  - Marsh
  - Lakes
  - Ramsar Wetlands
- Coastal estuary management
  - Fresh water/salt water interaction
  - Tidal considerations

## **21. Managing marine protected areas**

***(Principal Author) Dan Laffoley***

***(Potential Contributors) Jon Day, Kristina Gjerde, Pippa Heyling, Taholo Kami, Graeme Kelleher***

- Marine protected areas of the world
  - Global distribution of marine protected areas
  - Types of marine protected areas
  - Major marine protected areas of the world
- Marine environments, ecosystems and ecological processes
  - Marine Ecoregions
  - Estuarine and coastal environments
  - High seas
  - Connectivity
- Marine protected area governance
- Marine protected area management principles and practice
  - Community managed marine protected areas
- Marine species migrations
  - Fish
  - Marine mammals
  - Marine reptiles

## 22. Managing for biodiversity, ecological processes and ecosystem services

*(Principal Authors) Kathy MacKinnon and Stephen Woodley*

*(Potential Contributors) Paulina Arroyo, Malcolm Gill, Karen Keenleyside, David Lindenmayer, Brendan Mackey, Jane Smart, Andrej Sovinc*

- Flora species management
  - Monitoring natural condition and any change in condition
  - Pollination processes
  - Pathogens
  - Fire effects
  - Restoration
- Fauna species management
  - Monitoring natural condition and any change in condition
  - Red List and species trends
  - Population management
  - Injured animals
  - Disease management
  - Poaching
  - Translocation of species
- Protected areas and the conservation of genetic diversity
  - The role of refugia sites
  - Conserving wild food genetic resources
  - Facilitating gene bank seed collections
- Biosecurity practice
  - Quarantine measures
  - Managing quarantine
- Invasive species management
  - Identification any new invasives and remove
  - Control measures for existing invasive species
    - Remove
    - Contain any expansion
    - Protect essential heritage phenomena
- Restoration management
  - Establishment of new protected areas (quarries to wetlands)
- Ecosystem management
  - The economic benefits of ecosystem services
  - The concept of healthy ecosystems
  - Boom and bust ecosystems
  - Restoration of ecosystems
- Ecological integrity
  - Parks Canada systems
  - Legislation
  - Management systems
  - Management reporting
- Key ecological process: Fire
  - Natural fire phenomena
  - Fire behaviour
  - Managing for fire
  - Fire behaviour in a climate change environment
  - Fire incident management
  - Fire fuel management



- Key ecosystem service: Water and water catchments
  - Natural condition of catchments
  - Water quality
  - Water yield
  - Water flow regime
  - Subsurface water
  - Monitoring catchment condition
  - Restoration of catchments and carbon sequestration
  - Climate change effects: loss of snow and melting of glaciers
  - Severe weather in catchments
  - Hydro-ecological considerations

## 23. Managing cultural uses and features

**(Principal Author) Fausto Sarmiento**

**(Potential Contributors) Aleindo Argumedo, Edwin Bernbaum, Jane Lennon, Stan Smith**

- Managing for contemporary cultural practices
  - Appreciating and working (or facilitating) with a diversity of cultures
  - Management by or working with indigenous peoples and local communities
- Cultural landscape management
  - Managing sacred natural sites
    - Management by indigenous peoples and local communities
  - Managing cultural sites and landscapes
    - Managing biocultural sites with indigenous peoples and local communities
  - Conserving indigenous heritage by and with indigenous peoples and local communities
- Managing heritage sites, heritage buildings and artefacts
  - Conserving historic sites
  - Conserving historic buildings and heritage structures
  - Conserving artefacts

## 24. Managing visitors

**(Principal Author) Anna Spenceley**

**(Potential Contributors) Seema Bhatt, Colin Ingram, Vance Martin, Sue Moore, Rod Quartermain, TAPAS members**

- Visitor management
  - Volunteers
  - Official visitors
    - Police
    - Fire
    - Emergency services
  - Road and access
  - Business and trade
- Tourism management
  - The tourism industry
  - Types of tourism
  - Marketing
  - Managing market segments
  - Working with the local tourism industry
  - Leadership: Protected area managers guiding the management of tourism
  - Working with community based and community run tourism
  - Revenue management

- Benefits
  - Dependency issues
- Recreation opportunities management
  - Recreation Opportunity Spectrum (ROS)
  - Integrated ROS, Assets Management and Risk Management systems
    - Tasmania Parks and Wildlife work
  - Supply and demand management
  - Visitor impact site hardening
    - An intuitive (but often incorrect) response
    - Maintaining a diversity of recreation opportunities
- Visitor services and facilities
  - Levels of service
  - Risk management
  - Visitor safety
  - Types of visitor facilities
  - Information for visitors
    - E-information
    - Signs
    - Printed information
    - Videos-films
  - Interpretation programs
  - Education programs
  - Monitoring visitors
  - Visitor surveys
- Visitor impact management
  - Visitor impact management frameworks
    - Limits of acceptable change
    - VIM
    - VERP
    - VAMP
    - TOMM
  - Visitor impacts
  - Managing social and community impacts of tourism
    - Establishing frameworks where local communities benefit from tourism
  - Responding to visitor impacts

## 25. Managing operations and assets

*(Principal Author) Patricia Rossi*

*(Potential Contributors) Mike Edington, Graeme Worboys,*

- Planning operations
  - Establishing a project vision and key objectives
  - Describing the project method
  - Risk management assessment
  - Occupational health and safety considerations
    - Site safety
    - Weather conditions
    - Equipment needed
    - Emergency first aid and evacuation
  - Competencies needed
  - Project training-capacity building
  - Budgeting-costings
  - Project milestones

- Performance management
- Cost-effectiveness appraisal
- Minimising operational impacts to the environment
- The project approval process
- Recruitment targets
- Contracting tasks
- Project management planning and evaluation
- Working with contractors
- Environmental impact appraisal
  - Project design: Compatibility with the site
    - Visual impacts
    - Aesthetic – colour impacts
    - Noise impacts
    - Dark sky impacts
    - Disturbance to aquatic or terrestrial fauna
  - Materials to be used
    - Sustainable use considerations
    - Appropriateness of materials for a particular setting
    - Quarantine considerations: Weed and pathogen free materials
  - Pollution
- Sustainable use
  - Energy consumption
  - Materials used
- Operations communication plan and media management
- Infrastructure assets management
  - Types of protected area infrastructure assets
  - Safety standards
  - Assets register
  - Assets maintenance
  - Budgeting for assets maintenance

## **26. Managing resource use and development**

***(Principal Author) Ashish Kothari***

***(Supporting Authors) Rosie Cooney, Eduard Müller, Fred Nelson, Krishna Oli, Sanjeeva Pandey, Tahir Rasheed, Lubomira Vavrova, Graeme Worboys***

- Resource use by local communities
  - Livelihoods and sustainable use
- People living and working in protected areas
  - Category I to IV protected areas
    - Authorised use in protected areas
    - Accommodation and infrastructure services
    - Quarantine services, policing and regulatory services
    - Access services
    - Utility services
  - Category V and VI protected areas
    - Sustainable use practice and management

- Biodiversity conservation management
- Sustainable finance for people
  - Micro-credit schemes
  - Trust funds (Conservation Finance Alliance)
- Development activities in protected areas
  - Conflicts and complementarity
  - Activities of resident/user communities
  - Activities of wider society
- Reconciling development pressures on protected areas

## 27. Managing incidents

*(Principal Author) Graeme Worboys*

*(Potential Contributors) Vinod Mathur, Robbie Robertson, Cam Shollie*

- Types of incidents affecting protected areas
  - Anticipating the inevitable
  - Natural disasters
  - Human caused events
  - Conflict
- Incident management systems
  - Response scales
  - Multi organisation approach
  - System designs
  - Incident control functions and responsibilities
    - Incident Controller
    - Planner
    - Operations Officer
    - Logistics Officer
  - Shift changes
  - Application to non-incident events
- Emergency service responses
- Managing incidents
  - Fire events
  - Wildlife events
  - Natural events
  - Humanitarian disasters
  - Terrorist events

## 28. Managing World Heritage Properties

*(Principal Author) Cyril Kormos*

*(Potential Contributors) Mariam Kenza Ali, Tim Badman, Remco van Merm, Christelle Perruchoud, Peter Shadie, Sue Stolton, Jim Thorsell*

- World Heritage Convention
  - Concept
  - History
  - Natural World Heritage Properties
  - Cultural World Heritage Properties
- Protected areas and World Heritage
- Implementation of the World Heritage Convention

- Operational Guidelines
  - Resource manual
- World Heritage Committee
- IUCN Advisory role
  - Reporting process
  - Technical guidance documentation
  - Outlook Reports
  - Inscription evaluations and expert reports
- ICOMOS Advisory role
- Statement of Outstanding Universal Value
  - World Heritage OUV management
  - State Party periodic reporting
- Management of Outstanding Universal Value
  - Reactive monitoring
  - World Heritage in Danger
- Management of World Heritage Properties
  - Working with UNESCO
  - Working with communities
  - Working with stakeholders
    - The mining industry

## **29. Managing connectivity conservation corridors**

***(Principal Author) Ian Pulsford***

***(Potential Contributors) Keith Bradbury, Olivier Chassot, Ghana Gurung, David Lindenmayer, Brendan Mackey, Maja Vasilijevic, Graeme Worboys, Carina Wyborn***

- Connectivity conservation
  - Concept and terminology
  - Underpinning science
  - Landscape ecology concepts
  - Link to biodiversity conservation
  - Legal considerations
  - A CBD strategic target (Aichi Target 11)
- Protected areas and Corridors
  - Concept of protected area core areas
  - Interconnecting protected areas
  - Working with corridors
- Connectivity conservation corridors
  - Global map of large connectivity corridors
  - Australia: A whole-of-continent approach
- Connectivity conservation governance
- Connectivity conservation management
  - The IUCN Connectivity Conservation Framework
  - Active corridor management
    - Research and prioritisation of on-ground management
    - Partnerships
    - Restoration
    - Dealing with pest animals and weeds
    - Fire management

## **30. Evaluating management effectiveness; and, the Green List**

***(Principal Author) Marc Hockings***

***(Potential Contributors) José Courrau, Fiona Leverington, Graeme Worboys***

- Management effectiveness evaluation
  - Effectively managed protected areas
  - Purpose of evaluation
  - Developing evaluation systems
  - IUCN management effectiveness evaluation framework
  - Guidelines for MEE
  - Core management effectiveness evaluation subjects (GW)
- 'State of the Parks' reporting
  - MEE and State of the Parks Reporting
    - Finland
    - South Korea
    - NSW Australia
    - Victoria Australia
- Agency reporting
  - Use of evaluation information
  - Annual report
  - Outlook report
  - Auditor requirements
- The Green List
  - Concept
  - Method
  - Case studies

## **Conclusion**

***(Principal Authors) Graeme Worboys, Michael Lockwood, Ashish Kothari***

- The E Book Steering Committee will be asked to be quite involved with the development of the content for this concluding statement.