

Joint-Commission IUCN initiative on integration of conservation planning methods

Background

Many methods for conservation planning are being proposed and applied at a variety of spatial scales and in different environments. Institutions and research groups have become committed to specific planning methods for a variety of reasons, including effectiveness for achieving their objectives, familiarity with the concepts and technical aspects of application, organizational history and inertia, and the advantages of marketing a distinctive product. Meanwhile, there is increasing uncertainty in the conservation science community and amongst governments and donors about how to choose between apparently competing methods, many of which are being assertively promoted as the tools needed to save biodiversity. This uncertainty impedes cooperation between organisations and scientists, constrains the effectiveness of conservation planning by failing to identify complementarities between methods, and limits the efficiency of funding. There is an urgent need to broaden the understanding of differences and similarities between planning methods and, as far as possible, to identify ways of integrating them. There is also an urgent need for IUCN to distribute this information to its members and other interested individuals and organisations.

Roles of WCPA and SSC

Following the World Parks Congress (2003) and the IUCN World Conservation Congress (2004), the Species Survival Commission (SSC) and the World Commission on Protected Areas (WCPA) have identified integration of planning methods as a major priority. SSC and WCPA act in technical advisory roles to the Members and Secretariat of IUCN, thus providing guidelines on available planning methods to ensure the best possible cooperation between IUCN, its members, and the scientific community.

To this end, SSC and WCPA have convened this targeted initiative to review the main methods for conservation planning and to produce an integrated framework that identifies ways in which methods can be used together or applied in particular circumstances for particular objectives. The primary audience for this framework and its accompanying guidelines will be IUCN Member governments, and non-government organizations, Commission members and staff throughout IUCN's decentralised Secretariat.

Main objectives

The objectives of the initiative are listed below. However, it is important to emphasize from the outset that this is a purely technical initiative and that the purpose of the initiative is not to identify a single IUCN-endorsed method for conservation planning or to rate methods relative to one another. There are four main reasons for this. First, some methods are likely to be complementary. Second, some of the differences between methods will reflect differences in objectives and circumstances under which those objectives are meant to be achieved. Third, advances in conservation planning, as in other fields of science, are supported by development and testing of different ideas and methods and by rigorous debate between proponents of those methods.

Finally, one of the primary roles of IUCN is to convene, facilitate and technically inform processes on behalf of its members and partners. IUCN does not, therefore, recommend a “correct” method for conservation planning but has an important responsibility to advise governments, donors and others on the available methods and ways of understanding and interpreting similarities and differences between them.

The main objectives of the initiative will be to:

- Review the rationale and applications of a wide range of conservation planning methods for terrestrial, freshwater, and marine environments at global, regional, and site scales.
- Develop, using previous descriptive exercises as a platform, an integrated conceptual and technical framework for conservation planning that explains similarities and differences between methods as objectively as possible, demonstrates how some can be applied together, and guides choices among them.
- Prepare a working document for WCPA and SSC to describe the integrated framework and provide guidelines on how the framework can be used by the Union and its partners.

Process

1. Expertise

This initiative is led by Professor Bob Pressey (bob.pressey@jcu.edu.au) at the Australian Research Council Centre of Excellence for Coral Reef Studies, James Cook University, Townsville, Australia and research assistant, Madeleine Bottrill (m.bottrill@uq.edu.au) at the Ecology Centre, University of Queensland, Brisbane, Australia. This initiative is supported by SSC Chair Dr Holly Dublin, WCPA Chair Dr Nik Loupoukhine and a steering group of leading scientists from academic institutions, non-government organizations and independent affiliations (Attachment 1).

For this initiative, Bob and Madeleine operate as a joint Task Force under WCPA and SSC (Bob as Leader, Madeleine as Deputy Leader). The Task Force will update Steering Committee meetings for the two Commissions and present results and directions as appropriate.

2. Framework development and literature review

We have developed an integrated framework of the major stages in the conservation planning process (currently 11 stages). Each stage contains a list of steps that represent tasks and decisions necessary for planners and managers to consider. The list of stages and unpacked steps is outlined in Attachment 2. Each step will include information on its role in the planning process, ways of approaching it, case studies, and references to literature for further reading.

The framework has evolved from Chris Margules (CSIRO) and Bob Pressey’s 2000 Nature paper on systematic conservation planning, and a comprehensive review of wider literature on design, implementation and management of conservation areas,

theory on best practice and application of existing approaches by organizations across the world and in different contexts.

3. Assessment of existing approaches

We have focused our review to extract information about the current conservation planning approaches at the regional scale being developed and applied by a range of organizations and agencies. We are covering monographs, journal papers, book chapters, grey literature, and web-based information. The approaches to be assessed in the context of the integrated framework are listed in Attachment 3.

4. Review

Oversight and review of our work is important to ensure its relevance and accuracy. The nature of our audience and the scope of this project both play large parts in directing what we choose to focus on in the generic framework and how we present the report. We have approached the review process in two ways:

1. Periodic updates sent to the steering group so that all have the opportunity to review and comment.
2. A small group of technical advisors and practitioners, drawn partly from the steering group, who provide insight into the generic framework and the approaches, monitor our interpretations, and suggest ways of presenting the results. Practitioners also contribute “reality checking”, advise on relevance and accessibility and on balancing discussion of theory and application.

Outcomes to date

1. Society of Conservation Biology 2007 Annual meeting, Port Elizabeth, South Africa

Madeleine presented the framework and introduced the objectives of the IUCN initiative and the concept of an integrated generic framework for conservation planning. The presentation was an excellent opportunity for building awareness of the initiative and drawing new members to the technical advisory and practitioners’ review groups. We are also held meetings with members of the steering committee and the technical group at the annual SCB meeting to discuss progress on our activities.

2. WCPA Best Practice Series draft Table of Contents

A major output of this initiative is the production of a WCPA Best Practice Series report. Madeleine and Bob have completed a draft Table of Contents. The table of contents has been distributed for comment to the technical group. Their suggestions and amendments have been integrated into an updated version of the table of contents attached to this document (Attachment 4).

Overview of current and upcoming activities

1. Writing of manuscript for WCPA Best Practice Guidelines Series document

We are currently researching and writing the stages and steps of the integrated framework based on a comprehensive literature review of peer-reviewed journals, reports and manuals and input from technical experts. We have distributed several

stages (Stage 2, Stage 3, Stage 4 and Stage 6) to relevant members of the technical group for their input and verification of our interpretations and assumptions. Sections will then be updated and catalogued as they are completed.

We recently met with the WCPA Best Practice Series editor, Dr. Peter Valentine, at James Cook University. We were able to outline the scope and progress on our manuscript and timeframe for completion of our WCPA Best Practice report on conservation planning. Dr. Valentine provided guidelines for authors and outlined the process for formal agreement from the WCPA Steering committee and IUCN Publications Unit, which we hope to complete in the coming months. Given the timeframe required for peer review, editing and production, we anticipate a publication date of mid-late 2008.

2. Society of Conservation Biology 2008 Annual Meeting, Chattanooga, TN, USA

We have submitted an abstract for an oral presentation, "From conservation planning to action: what's involved in implementation?" at this year's Society of Conservation Biology meeting in Chattanooga, TN USA. If accepted, Madeleine will discuss the key factors involved in securing implementation of conservation actions and describing how our initiative is a comprehensive approach to integrating implementation into a conservation planning framework. We also hope that again the annual meeting will provide an opportunity to meet with key members of the steering group and other technical experts.

3. IUCN 4th World Conservation Congress, Barcelona, Spain 2008

This event will be an important opportunity to showcase the initiative, launch the WCPA Best Practice document and receive feedback from a diverse audience on the relevance and accessibility of the document.

a. Accepted proposal for World Conservation Congress Alliance workshop

We been accepted to host an Alliances workshop titled "Towards a consistent, integrated framework for conservation planning for species survival". This workshop will introduce the framework, showcase programmes currently using the framework to conserve species, and review apparently disparate policy directives (e.g., EU Birds Directive) and NGO directives (e.g., Birdlife IBAs, WWF Global 200, CI hotspots) to demonstrate their complementary contributions to the larger framework.

b. Pending decision on proposal for WCC learning opportunity

We are also awaiting a decision on a proposed Learning Opportunity event, "Applying the WCPA-SSC integrated framework for planning protected areas and other conservation actions" at the WCC. The second proposal is for an extended complementary Learning Opportunity event which will explain the framework in detail to a smaller group of practitioners from regions where capacity for conservation planning is not yet well-developed. This learning opportunity event is targeted at participants who might be familiar with one or more NGO/agency planning approaches, but who have little or no background on recent scientific and applied developments in conservation planning.

Attachment 1.

IUCN WCPA-SSC joint Commission meeting:
Integration of conservation planning methods,
Institute of Zoology, London, 5-7th June 2006

List of invitees, and whether present at the meeting

Bakarr	Mohamed	Yes
Boitani	Luigi	Yes
Cowling	Richard	No
Dinerstein	Eric	No
Dublin	Holly	Yes
Eken	Guven	Yes
Fonseca	Gustavo	Yes
Groves	Craig	No
Lopoukhine	Nik	Yes
Mace	Georgina	Yes
Maze	Kristal	Yes
Mittermeier	Russ	Yes
Morrison	John	No
Parrish	Jeff	Yes
Possingham	Hugh	No
Pressey	Bob	Yes
Robinson	John	Yes
Sanderson	Eric	Yes
Tear	Tim	No
Woodley	Stephen	Yes
Wright	Mark	Yes

Attachment 2.

List of stages and steps of integrated framework of conservation planning

Stages and steps	
Stage 1. Scoping and costing the planning process	
1.1	Considering the boundaries of the planning region
1.2	Designing a strategy for dealing with uncertainty
1.3	Integrating adaptive management and scheduling updates
1.4	Designing a system for critical review
1.5	Designing and costing Stages 2-10
1.6	Assembling the planning team
Stage 2. Identifying and involving stakeholders	
2.1	Identifying stakeholders, their interests and influences
2.2	Developing a strategy for involving stakeholders in the planning process
2.3	Developing a stakeholder communication strategy for mainstreaming the plan
2.4	Assessing and building stakeholder capacity for implementing the plan
2.5	Design a training workshop for relevant stakeholders
Stage 3. Identifying the context for conservation areas	
3.1	Preparing a situation analysis of the planning region
3.2	Assessing threats in context of conservation areas
3.3	Identifying options for addressing threats
3.4	Identifying urgent conservation needs on the advice of stakeholders
3.5	Review and evaluation of effectiveness of existing conservation areas
3.6	Assessing attitudes and perceptions to planning
3.7	Assessing strength of governance systems
3.8	Identifying constraints to establishing conservation areas
3.9	Identifying opportunities to establishing conservation areas
3.10	Identifying actions necessary to complement conservation areas
Stage 4. Identifying conservation goals	
4.1	Agreeing on a biodiversity vision statement
4.2	Expanding the vision statement into goals for conservation areas
4.3	Identifying goals not directly related to biodiversity conservation
Stage 5. Gathering and evaluating threat and socio-economic data	
5.1	Developing a strategy for gathering and managing data
5.2	Preparing data on legal and traditional tenures
5.3	Preparing data on extractive uses
5.4	Preparing data on non-extractive uses
5.5	Preparing data on existing conservation area management
5.6	Categorizing existing conservation areas as fixed or optional
5.7	Preparing data on acquisition and transaction costs
5.8	Preparing data on opportunity and damage costs
5.9	Preparing data on management costs
5.10	Preparing data on conservation opportunities
5.11	Preparing data on threats
5.12	Preparing data on other conservation constraints
Stage 6. Gathering and evaluating biological data	
6.1	Developing a strategy for gathering, evaluating and managing data
6.2	Preparing data on previous assessments of biodiversity value
6.3	Using expert judgements to identify areas with high conservation value

Stages and steps

- 6.4 Gathering data on biodiversity – representation units
- 6.5 Gathering data on biodiversity – special elements
- 6.6 Gathering data on biodiversity – area-demanding species
- 6.7 Gathering data on biodiversity – natural processes
- 6.8 Identifying the characteristic and distinctive features of the region
- 6.9 Preparing data on potential benefits of conservation
- 6.10 Preparing data on transformation
- 6.11 Preparing data on condition
- 6.12 Preparing data on planning units
- 6.13 Preparing data on other conservation features
- 6.14 Compiling datasets for conservation planning

Stage 7. Setting conservation targets

- 7.1 Turning goals into lists of targeted features
- 7.2 Recognising the major limitations of targets
- 7.3 Setting targets for land types
- 7.4 Setting targets for freshwater types
- 7.5 Setting targets for taxa
- 7.6 Setting targets for natural processes
- 7.7 Setting targets for other conservation values
- 7.8 Setting targets for manageability
- 7.9 Adjusting targets for different forms of protection
- 7.10 Using targets to decide where restoration is necessary

Stage 8. Reviewing target achievement in existing conservation areas

- 8.1 Measuring number and total extent of conservation areas
- 8.2 Measuring target achievement for biodiversity pattern from maps
- 8.3 Using generic design criteria as surrogates for biodiversity processes
- 8.4 Measuring target achievement for biodiversity processes from maps
- 8.5 Measuring target achievement for other conservation values
- 8.6 Measuring target achievement for manageability
- 8.7 Measuring biases in target achievement from maps
- 8.8 Designing and applying measures for on-ground review 6.2⁷
- 8.9 Organizing and presenting information from previous steps

Stage 9. Selecting additional conservation areas

- 9.1 Developing the approach to planning – commitments
- 9.2 Developing the approach to planning – exclusions
- 9.3 Developing the approach to planning – representation
- 9.4 Developing the approach to planning – design
- 9.5 Developing the approach to planning – preferences
- 9.6 Developing the approach to planning – costs and tradeoffs
- 9.7 Developing the approach to planning – restoration
- 9.8 Choosing and using conservation software
- 9.9 Developing the conservation plan
- 9.10 Presenting and promoting the conservation plan
- 9.11 Checking data for proposed new conservation areas 4.1⁷

Stage 10. Applying conservation action to selected areas

- 10.1 Deciding how to deal with areas outside the plan
- 10.2 Reviewing the feasibility and appropriateness of conservation mechanisms
- 10.3 Developing a strategy for mainstreaming the conservation plan
- 10.4 Developing a strategy for allocating conservation mechanisms to specific areas
- 10.5 Estimating the cost of implementing the conservation plan

Stages and steps

- 10.6 Deciding on the relative urgency for conservation action between features
- 10.7 Developing a strategy for scheduling conservation action
- 10.8 Preparing for the day-to-day mechanics of implementation
- 10.9 Applying conservation mechanisms to specific areas 7.10⁻, 8.3⁻
- 10.10 Identifying lessons for locating and designing conservation areas 7.10⁻
- 10.11 Reviewing progress in implementation 6.1⁻

Stage 11. Maintaining and monitoring established conservation areas

- 11.1 Scoping the management plan
 - 11.2 Identifying and involving key stakeholders in management decisions
 - 11.3 Identifying the role and context for each conservation
 - 11.4 Identifying broad management goals
 - 11.5 Gathering and evaluating data on each conservation area
 - 11.6 Identifying specific management targets
 - 11.7 Reviewing the achievement of management targets
 - 11.8 Selection and design of zoning and allocation of management resources
 - 11.9 Application of management plan, zoning etc.
 - 11.10 Monitoring with respect to indicators; feedbacks to management
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Attachment 3.

List of regional-scale conservation planning approaches for review and assessment

Approach	Organisation
1 Conservation action planning	The Nature Conservancy
2 Ecoregional planning	The Nature Conservancy
3 Key biodiversity areas and corridor-scale priorities	Conservation International
4 Ecoregion-based conservation	World Wildlife Fund
5 Heartland conservation process	African Wildlife Foundation
6 Living landscapes approach	Wildlife Conservation Society
7 Important bird areas	Birdlife International
8 Wildlands network design	Wildlands project (Reed Noss et al.)
9 Conservation area design for wildlife networks	Yellowstone-to-Yukon Conservation initiative
10 Ecosystem approach	Convention on Biological Diversity; GEF; IUCN; US FWS
11 Biosphere reserves	UNESCO Man & the Biosphere
12 Ecological networks (Natura 2000)	European governments
13 Land and resource management planning	USDA Forest Service
14 Land use planning	U.S. Bureau of Land Management
15 NSW Regional Forest Agreements	New South Wales National Park and Wildlife Service
16 Cape Floristic Region planning approach	South African institutions
17 Priority area planning for Brazilian biomes	Brazilian government, Museu Goeldi
18 Atherton to Alps initiative (A2A) connectivity conservation corridor	NSW Department of Environment and Conservation, Australia
19 STEP: Subtropical Thicket Ecosystem Programme	South African National Biodiversity Institute

Attachment 4.

Proposed WCPA Best Practice Guidelines document
Table of contents

MAIN DOCUMENT

Executive summary

Preface

Acknowledgements

Acronyms

1. Introduction

1.1. Systematic planning for effective conservation

- Why plan?
- Why systematic conservation planning?
- Emphasis on inclusiveness of systematic planning as strategies may have broad application and flexibility
- Scale. This document deal with planning at “regional” scales, by which we mean ecoregions, countries, provinces, or local government areas.
- Plans work and are worthwhile doing (e.g., case studies)
- The contribution of this initiative to the continuing development of this discipline

1.2. Development of independent approaches

- Current cohort of approaches
 - List of approaches (ordination axes (?): public/non-government/academic; developed/developing world application; science/knowledge; policy/legislation/management)
 - Reasons for current biases (e.g., first-world, data-rich, lack of follow-through from planning stages to implementation)
- Reasons for diverse approaches
 - Effectiveness for meeting specific objectives of organisations
 - Familiarity with particular tools and strategies by practitioners
 - Advantages to having unique strategy (e.g., branding)
 - Institutional inertia
 - Historical associations
- Problems with diverse approaches
 - Causes confusion among practitioners, stakeholders and donors
 - Potential conflict between strategies in overlapping regions
 - Impedes cooperation between organisations and scientists
 - Constrains the effectiveness of conservation planning by failing to identify complementarities between methods
 - Limits the efficiency of funding

1.3. Time for reflection on diversity of approaches

- Diversity of approaches needs explanation
 - Understand similarities and differences
 - Need for IUCN to distribute information to its members and potential donors
 - Identify ways to integrate approaches as a way to explain them relative to each other

- Previous attempts to compare and assess approaches
 - (Groves 2003)
 - (Redford et al. 2003)
 - (Conservation Measures Partnership 2004)
 - (Gordon et al. 2005)
 - (Brooks et al. 2006)
- What this document offers in addition to these reviews
- Generic framework as a neutral review, not endorsing single approach

2. Context for conservation planning

2.1. Principles of systematic conservation planning

- Key principles of systematic planning
 - (Margules & Pressey 2000)
 - (Cowling & Pressey 2003)
- Inclusiveness of generic framework

2.2. Global priorities for conservation

- Rationale for global priority setting
- Values of biodiversity at global scale (e.g., representation, irreplaceability, vulnerability, wildness, intactness)
- Summary of major frameworks (e.g., Global 200; CI hotspots; Last of the Wild)
- Advantages and drawbacks of setting priorities at this scale (e.g., Pressey et al. in press)

2.3. Regional conservation planning

2.3.1. Scope

- Definitions of regions
- Relationship between scales: from global (broader) to local (finer)

2.3.2. Application

- Objectives for developing regional scale approaches
- What is purpose of regional plans and what do they aim to achieve?

3. The generic framework in context

3.1. The generic framework

- Brief overview of main stages
- Need to elaborate on steps within stages
- Defining what framework is
 - Dynamic, evolving, open to debate and discussion
 - Examples of evolution since 2000
- Defining what framework is not
 - Not sequential
 - Not prescriptive
 - Static

3.2. Purpose of generic framework

- Conceptual platform for describing approaches
- How we envisage people using the framework
- Neutral approach which is likely to evolve

3.3. Process of framework development

- Began with basic stages of systematic conservation planning approaches
- Some changes at the level of planning stages in the interests of clear organisation
- Most work involved in documenting steps within stages
- Steps initially defined through knowledge of recent literature and planning exercises
- Refinement by reading each approach, identifying gaps and necessary changes
- Additional ideas and information from the literature
- Used steps to produce a profile of each approach
- Consultation with representatives from respective organisation/developer of approach
- Review by technical expert review group of initiative

3.4. Guidelines for use of this framework

- Our recommendations for how to use framework and interpret discussion of key issues
- This will also discuss how users can track use of stages by current approaches. We not describe verbatim if and when an approach considers each stage, rather the table in section 6.2.1 will summarise this

4. Overarching issues

- 4.1. Estimating uncertainty
- 4.2. Planning for resilience
- 4.3. Planning for implementation
- 4.4. Planning the involvement of stakeholders
 - Including experts
- 4.5. Planning for climate change
 - Comparative table similar to that developed for SCB presentation, demonstrating when and how certain issues involved with planning for predicted (and unpredicted) climate change might be incorporated into framework)
- 4.6. Planning for restoration
- 4.7. Planning for intactness
- 4.8. Planning for other values alongside biodiversity
 - These values might include ecosystem services, poverty alleviation, natural resource management, infrastructure/land use planning, sustainable development
- 4.9. Planning for connectivity
- 4.10. Planning outside of protected areas
- 4.11. Integration of regional planning strategies with other scales of planning
 - What assumptions might be made at regional scale about what actions will be contributed by interventions/planning at other scales (e.g., global and local)
 - What extent do planners believe they are being guided by global prioritisations

5. Overview of the generic framework

5.1. Structure of stages and steps within framework

- Introduction to this section will discuss the format for description of each stage:
 - Purpose of the stage
 - Rationale for its inclusion in framework and key issues involved in its application
 - Overview of steps that might be undertaken as part of this stage
 - Contribution of this stage to other stages (and framework as a whole)
 - How much do we need to know/do to resolve this stage and progress?
 - Guidance (what is good practice of this stage?)
 - What data are needed?
 - Who should be involved?
 - When should this stage be considered (and re-considered)?
 - How should this stage be undertaken (list of steps and tools)?
 - Case study of application
- Description of how steps will be described in the following sections:
 - Purpose of step
 - What contribution does this step make to stage as a whole? Outcomes
 - Specific summary of methods (reference to primary literature describing tools and methods)
 - Who uses this step?
 - How have they applied it?
 - What lessons have been learnt from its application? (e.g., case studies)

5.2. How to use and interpret the generic framework

- This is touched upon a little in the previous section about how stages and steps are described. This section will act as a users guide.
- Emphasis on the iterative nature of framework, not linear, but dynamic
- Recommend readers to get an overview of all stages and steps

- Integration and description of existing approaches within framework (not verbatim, but rather highlighting when and how organisations consider certain stages, steps, tools and issues)

5.3. Recurring issues within generic framework

- 5.3.1. Critical review
- 5.3.2. Boundary adjustment for planning region
- 5.3.3. Evaluation of costs of the planning exercise
- 5.3.4. Data review and updating
- 5.3.5. Monitoring
- 5.3.6. Generating capacity for implementation

6. Interpretation of existing conservation approaches integrated into generic framework

6.1. Relative value of certain stages of planning

6.2. Comparative emphasis on issues among assessed planning approaches

- This section might be broken down further into a general summary of overlapping areas between approaches and noted incidences of gaps

6.2.1. Our table of steps covered by each approach

- Inclusion of steps in the planning frameworks of 10+ existing planning approaches

6.2.2. Implications

- This section will discuss in further detail the implications of which approaches are giving emphasis to certain stages and why
- Do steps given special emphasis correspond to the relative value of steps in contributing to a successful set of outcomes?

6.3. Gap analysis

- Where are gaps in the table?
- What steps do approaches not consider? Are these less important steps to an effective conservation plan? What are consequences of not doing these steps?

7. Conclusions

8. Bibliography

APPENDICES

Appendix A. The integrated framework (see Attachment 2)

A1. Overview of stages and steps

- Brief outline of stages and steps (referring reader back to Section 5.0 of main document)

Appendix B. Supplementary material

B1. Glossary and lexicon

- Throughout the course of our assessment of approaches, we will build a lexicon of terms referenced for specific stages. This will be similar to the Conservation Measures Partnership “Rosetta Stone”

B2. Brief summaries of 15+ approaches (see Attachment 3)

- Brief profile of each conservation approach assessed in main document. Profile will include objectives of approach, extent of application and references to key documents.

B3. Further reading on tools and case studies

References

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