



Framework for Assessing and Improving Law for Sustainability

A Legal Component of a Natural Resource Governance Framework

Paul Martin, Ben Boer and Lydia Slobodian (Eds.)



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Contents

Foreword	ix
Preface	xi
Introduction	1
Law and natural resource governance	1
The challenge of effectiveness	3
Evaluation challenges	4
Using this evaluation framework	5
Case studies	5
The evaluation framework	7
Structure of the framework	8
Conduct initial scoping of natural resource governance issue	9
Specify the legal principle and identify sources and indicators	10
Evaluate implementation of the principle across four levels	11
Has the principle been adequately reflected in formal arrangements?	12
Has sufficient administrative and other action been taken to implement the principle?	12
Has implementation resulted in behaviour consistent with the principle?	13
Do the biophysical and social outcomes demonstrate effectiveness?	13
Implementing the framework	14
Evaluation technique	14
Gathering evidence	15
Reporting on the evaluation	15
Future development of the framework	16
Australia: Participation principle and marine protected areas	17
Natural resource governance issue	17
Legal principle	19
What does the principle look like in practice?	20
Evaluation across different levels	22
Instrumental level	22
Institutional level	23
Behavioural level	24
Outcome level	25
Lessons learned	26
What the principle looks like in practice	26
Early application for ethics approval	26
Use of surveys	27
Use of interviews	27
Use of the matrix	27
Observation in relation to responses	27
Recommendations	28
Appoint strong and independent Chair	28
Effectively manage expectations	29
Improve media engagement	29

Provide for appropriate use of a tool like SAMPIT	30
Sell the message	30
Build trust in the process	30
Ensure a good monitoring system	30
Conclusion	31
Brazil: Participation principle and marine protected areas	33
Natural resource governance issue	33
Legal principle	35
International and regional context	36
Brazilian constitution	36
Infra-constitutional norms: public participation principle and marine protected areas . .	37
Evaluation across different levels	38
Instrumental level	38
Institutional level	39
Behavioural level	41
Outcome level	42
Access to information	42
Participation in decision-making	43
Lessons learned	46
Recommendations	47
Dissemination of precise, complete and up-to-date information	47
Diversification of information channels	48
Capacity building	48
Changes to institutional structures and decision-making, considering actual conditions	48
Adoption of strategic planning	49
Coordination of MPA participatory management with other decision-making bodies . .	49
Stronger administrative structures and more human and financial resources	50
Conclusion	50
New Zealand: Precautionary principle and endangered species	51
Natural resource governance issue	51
Legal principle	52
Evaluation across different levels	52
Instrumental level	53
Institutional level	56
Behavioural level	57
Outcome level	57
Lessons learned.	57
Recommendations	58
Funding better information	58
Acting on known risks and known habits of endangered species	58
Mandatory consideration for endangered species in planning and permitting	59
Closing legislative loopholes	60
Conclusion	60

China: Participation principle and protected areas	61
Natural resource governance issue	61
Legal principle	62
Evaluation across different levels	62
Instrumental level	63
Information disclosure and participation in decision-making	63
Participation in decision-making	64
Access to justice	64
Institutional level	65
Behavioural level	66
Outcome level	67
Lessons learned in evaluation	68
Recommendations	68
Information disclosure	68
Participation in decision-making	69
Access to justice	70
Conclusion	71
Australia: Precautionary principle and endangered species	73
Natural resource governance issue	73
Endangered species in Australia	73
Australia's approach to endangered species regulation	74
Legal principle	75
Legal sources of the principle	75
Fundamental elements of the principle and indicators of its implementation	76
Evaluation across different levels	78
Instrumental level	78
Institutional level	82
Administrative implementation	82
Industry implementation	83
Non-government implementation	84
Behavioural level	84
Courts	85
Decision-makers	86
Outcome level	87
Lessons learned in evaluation	89
The need for multi-disciplinary perspectives	89
Evaluating legal principles which are vague and ambiguous	89
Examining the conduct or behaviour of key institutions	90
Recommendations	90
Mandating the application of the principle	90
Guidelines to accompany the principle	91
Agreeing on key elements of the principle	92
Embedding a culture of precaution in administrative agencies	92
Educating 'non-environmental' agencies about precaution	93
Improving the implementation of complementary principles	94
Conclusion	95

South Africa: Participation principle and protected areas	97
Natural resource governance issue	98
Legal principle	100
Evaluation across different levels	102
Instrumental level	102
Institutional level	103
Behavioural level	103
Outcome level	105
Access to information	105
Public participation	106
Capacity building	106
Awareness raising	106
Transparency	107
Consultation	107
Opportunity to express views	108
Comments taken into account	108
Lessons learned in evaluation	109
Recommendations	109
Conclusion	110
Analysis: Achieving systematic improvement in environmental law	113
Issue 1: Translating broad principles into legal obligations	114
Issue 2: Fit with socio-economic and governance context	115
Issue 3: Resources and implementation feasibility	117
Issue 4: Disciplined and effective implementation	118
Lessons learned in applying the framework	119
Evaluation of law for sustainability: Next steps	120
Additional resources	123
Online indicators	125

Foreword

The sustainability challenges we face today are greater than any we have previously confronted. Each year we are losing over 5 million hectares of forest, and an estimated 10,000 distinct species. Climate change is accelerating, and will have sweeping impacts on marine and terrestrial ecosystems as well as weather patterns. Land, air, freshwater and marine pollution further threatens conditions in the natural environment. These challenges translate into direct impacts on human wellbeing. Poverty, hunger, water scarcity, lack of sanitation and violent conflict can all be linked to environmental problems.

This year, the United Nations adopted the 2030 Agenda for Sustainable Development, which includes 17 Sustainable Development Goals aimed at ending poverty and hunger, achieving justice and equality, and halting loss of biodiversity. These goals are the most ambitious targets for sustainable development ever adopted by the global community. They explicitly recognize the importance of law and governance.

Law is a necessary part of the solution to sustainability challenges. It is not the whole solution – that encompasses a complex system of social, economic and political processes and relationships – but it is an essential component. To achieve sustainability goals, appropriate and well-implemented legal frameworks and tools must be in place. And, importantly, they must be effective. It is not enough that laws are enacted, or even that they are fully implemented – they must work. And to ensure that laws work, we must first understand what makes law effective. What factors contribute to its design, implementation, outcome and ultimate impact? And what can we do to improve it?

This publication represents a valuable initial effort to take on these questions, through empirical assessment and analysis. The framework it presents is a versatile tool for researchers to structure their study of the effectiveness of law for sustainability. The case studies demonstrate use of the framework, and also provide important insights and information about the effectiveness of environmental law in particular countries and contexts.

This volume represents a cooperative effort of the IUCN Environmental Law Centre, the World Commission on Environmental Law, and the IUCN Academy of Environmental Law, working within the framework of the IUCN Natural Resource Governance Framework initiative, led by the Commission on Environmental Economic and Social Policy (CEESP).

We recognize the hard work of the authors of the publication and the research teams that undertook the evaluations presented here. We extend our thanks to the German Federal Ministry for Economic Cooperation and Development (BMZ) for its funding support.

Preface

Paul Martin, Lydia Slobodian and Thomas Greiber

Achieving a sustainable future is one of the most urgent challenges of our time. Fundamental improvements in how we govern and manage our ecosystems and natural resources are needed to loosen the grip of inequity, poverty, and conflict and to enhance human well-being as well as livelihood and development opportunities, adding fuel to the vision of the United Nations Rio +20 conference in 2012.

With these goals in mind, IUCN initiated development of a Natural Resource Governance Framework (NRGF) to assess and improve environmental governance. NRGF is intended to provide a robust, credible approach to assessing and strengthening natural resource governance in diverse contexts. NRGF is a knowledge basket, comprising different standards, processes, relationships, capacity-building materials and tools. Its development is led by the IUCN Commission on Environmental Economic and Social Policy (CEESP).

A core component of this initiative focuses on improving the effectiveness of legal aspects of natural resources governance. This report presents a first step in this process: a framework for assessment of the implementation and effectiveness of legal principles for sustainable natural resource governance. The framework provides a disciplined basis to stimulate constructive discussion about reform while respecting scientific standards of objectivity and transparency. One aim is that this component of the NRGF toolkit will further stimulate a community of practice focused on improving legal aspects of natural resource governance. IUCN has created an online platform to support this work: www.lawforsustainability.org.

The project to develop this legal evaluation framework was led by the IUCN Environmental Law Centre (ELC) and the World Commission on Environmental Law (WCEL) working closely with CEESP. Members of the IUCN Academy of Environmental Law have also been deeply involved in this work.

The development of the framework began with an inception workshop in July 2013, at which representatives of CEESP, WCEL and ELC mapped out the broad approach to the NRGF and explored underlying values of natural resource governance. In August a second meeting focused specifically on the legal aspects of natural resource governance. Over the next couple of months, a draft evaluation framework was developed and refined. This process was led by Paul Martin, in conjunction with Thomas Greiber, Ben Boer and Nick Bryner.

Project leaders agreed to test the framework through trial use to ensure that it does provide objective intelligence to support performance improvement of legal instruments and that it is usable by researchers in different countries and situations. A call for teams to conduct a trial use of the framework was sent to member institutions of the IUCN Academy of Environmental Law in March 2014, targeting a variety of jurisdictions. The teams that took up the invitation each selected a widely accepted principle of environmental law and a particular natural resource governance issue. Their mission was to apply the evaluation framework, and arrive at preliminary conclusions about (1) the effectiveness in use of legal instruments to manage the selected governance issue (including clear identification of potential improvements), and (2) the usefulness and ease of use of the evaluation framework.

This experimental use of a 'beta' version of the framework tested the framework under less than ideal conditions. The teams had varying backgrounds, and spanned undergraduate and postgraduate

levels of experience. The teams received minimal training and support, in the form of an audio-visual instruction, a short 'Q&A' on key issues, feedback on an early draft if the teams provided this, and a collective discussion in June 2014 prior to finalization of their reports. They had limited financial support. Some teams recruited non-law experts to provide additional expertise. Feedback from all teams during the course of pilot testing led to modifications in the framework, improving its precision and usability. Reports were finalized at the end of 2014. All teams reported that the framework was effective for its intended purpose. Their reports, which are included in this volume, provide useful insights into the performance of legal arrangements and objective intelligence about how significant improvement might be achieved.

The following teams conducted the evaluations using the framework:

- Evan Hamman, Katie Woolaston, Rana Koroglu, Hope Johnson, Bridget Lewis, Brodie Evans and Rowena Maguire (Queensland University of Technology, Australia);
- Solange Teles da Silva, Carolina Dutra, Fernanda Salgueiro Borges, Márcia Fajardo Cavalcanti de Albuquerque, Maurício Duarte dos Santos, and Patrícia Borba de Souza (Mackenzie Presbyterian University, Brazil);
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The project was managed by Thomas Greiber and Lydia Slobodian (ELC Legal Officers), supported by Ning Li (ELC Programme Officer), Ann DeVoy (Project Administrator), Thibault Renoux (Legal Assistant) and Anni Lukács (Senior Documentation Officer), and ELC interns Ida Louridsen and Lorena Martinez. Amy Cosby and Miriam Verbeek contributed to editing of this report. Special thanks are owed to Jennifer Mohamed-Katerere (CEESP) and Gretchen Walters for their advice and the support of the NRGF Initiative.

This project was made possible through the generous support of the German Federal Ministry for Economic Cooperation and Development (BMZ).

Introduction

Paul Martin, Ben Boer and Lydia Slobodian

Governance of natural resources poses a significant challenge to achieving sustainable development. Human consumption of resources exceeds renewable production by 1.5 times (Global Footprint Network 2015). The World Wildlife Fund (WWF) indicates that

(f)or more than 40 years, humanity's demand has exceeded the planet's biocapacity – the amount of biologically productive land and sea area that is available to regenerate these resources. This continuing overshoot is making it more and more difficult to meet the needs of a growing global human population, as well as to leave space for other species. Adding further complexity is that demand is not evenly distributed, with people in industrialized countries consuming resources and services at a much faster rate.¹

If this continues, humanity will not be able to maintain its current level of welfare, let alone accommodate the ambitious targets for development and poverty reduction outlined in the Sustainable Development Goals. Managing resource use to achieve these goals will require effective governance.

Governance is a system for shaping behaviour to socially useful ends, involving many participants serving various roles. Those involved in this system include government officials, legal authorities, self-governing organisations and non-government actors such as citizens, industry stakeholders, those being governed and those who are affected by governance. The actors involved in natural resource governance can also pursue objectives that are inconsistent with environmental sustainability and social justice, such as advancing harmful economic developments or socially exploitative activities.

The system depends upon norms that may be translated into formal or informal rules, and upon organisations and institutional arrangements to implement these norms. Governance systems vary between communities, and change over time, and they intersect. Nation-state governance intersects with private sector approaches, such as voluntary commitments or supply chain standards, and with traditional and indigenous norms and practices for conserving and using the natural world. In evaluating governance, it is important to consider the effect of complementary and competing governance arrangements, and the effects of the broader context.

Law and natural resource governance

Law is fundamental to fair and effective governance. Law sets substantive norms, establishes decision-making institutions and processes, and provides mechanisms for accountability and conflict-resolution.

While rules created by nation-states ('state laws') and the community of states ('international laws') are often identified as the essence of law, rules distilled by the courts, and agreements made by citizens and by non-state organisations also create legal rights and responsibilities to the natural world, or to other people in relation to natural resources. Customary rules of indigenous and traditional communities may also be legally binding, within the specific community or more broadly under state laws.²

¹ WWF International (2014). Living Planet Report: Species and Spaces, People and Places, p. 9.

² There are complex challenges in specifying legal principles from non-documented traditional rules. IUCN CEESP is developing other elements of the NRGF to address how such issues are addressed in natural

Concepts and terms

Governance: A system for governing behaviour that involves *interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken, and how citizens or other stakeholders have their say.* (IUCN WCC Resolution 3.012)

Law: A system of rules that govern human behaviour and are recognized as binding. Sources of law can include, *inter alia*, international conventions, national constitutions, statutes, regulations, court decisions, administrative instruments, agreements, standards, customary norms, obligatory traditional practices, and religious decisions or texts.

Natural Resources Law: Laws that control how natural resources are accessed, used and transformed, conserved and how the benefits from the uses of resources are shared. This includes rules related to topics such as:

- the quality of natural resources such as the atmosphere, water, soil, climate;
- how all types of natural resources are allocated or used;
- access to and benefit-sharing related to biodiversity and other natural resources;
- many forms of energy generation; and
- all other activities with potential for actual significant environmental impact.

Evaluation: The process of objectively assessing the implementation and outcomes of legal aspects of natural resource governance.

Principle: A fundamental standard or proposition about the strategic purpose and rationale underpinning legal rules. These might be found as authoritative statements; or deduced from sources such as policy statements, judgements, or the pattern of laws.

Environmentally relevant legal principles, rules and implementation arrangements come from diverse sources.

- a) State-created rules, including constitutions, statutes, regulations, and administrative rules and plans.
- b) Judicial rules, which include judgments of courts and tribunals, and legally binding rulings of other authorities or agents of government.
- c) State-supported private rules – such as industry co-regulatory arrangements or private codes or standards – that are broadly consensual and based in law related to, *inter alia*, contract, property, civil rights, consumer protection, or financial regulation.
- d) International bilateral, or multilateral agreements, rules of international bodies, and other state-endorsed international legal and administrative arrangements, encompassing both hard law (formally ratified as legally binding) and soft law (not ratified or not of a binding nature).
- e) General legal principles that are widely accepted in national or international jurisprudence, particularly as endorsed and clarified by judgments of international and national courts and tribunals.
- f) Rules emerging from specific communities, particularly indigenous or religious communities (sometimes referred to as customary law), which can be recognized by states through specific

laws, bills of rights or constitutional provisions, linking customary rules and norms to the authority and responsibility of the state.

While rules are fundamental in governance, effective natural resource governance requires far more than legal instruments. The quality and integrity of arrangements for creating and implementing rules (organisations and processes) are critical. The effectiveness of law also depends on factors including the quality, integrity, capacities and performance of political, legal, administrative and judicial bodies; and the performance of complementary roles such as those of experts (e.g. physical and social scientists, other professions), government officers (e.g. administrators, police), politicians, and many others. The resourcing, capability and governance culture of all participants in governance are relevant to governance performance.

The challenge of effectiveness

Prior to the mid-1600s, in Western European jurisdictions laws concerning the environment were mainly focused on protecting the interests of the elite in exploitation of natural resources. The importance of public environmental law started to grow around the second half of 1800, and from the 1970s there was an explosion in the number of legal and other instruments both at a state and international level.³ Today, there is no lack of laws and other instruments for natural resource governance. There are thousands of treaties and international agreements, legislative and regulatory instruments and court decisions, and uncounted other instruments that have status in law. Additional governance instruments include taxes, fees and charges; tradable permits; deposit-refund systems; environmental subsidies; and many voluntary schemes.⁴ To this can be added industry codes and standards and marketplace environmental brands, and various tariff and subsidy arrangements (which often promote resource extraction rather than sustainable use or conservation).⁵

It might be expected given the proliferation of instruments that there would be major improvements in the performance of governance. Unfortunately, environmental and social outcomes from natural resource governance fall far short of what is needed to achieve ecological sustainability and social justice. The continuing decline in the world's biodiversity is well documented.⁶ The secretariat for the Convention for Biodiversity has concluded "there are multiple indications of continuing decline in biodiversity in all three of its main components — genes, species and ecosystems."⁷

There is growing recognition that the implementation of legal rules of natural resource governance needs significant improvement (see Rio+20 outcome document 'The Future We Want',⁸ and UNEP's 'Environmental Governance sub-programme').⁹ To achieve more effective laws and governance is

3 Peter H. Sand (2007). 'The Evolution of International Environmental Law'. *The Oxford Handbook of International Environmental Law*. New York: Oxford University Press.

4 See ECOLEX. <www.ecolex.org>; International Environmental Agreements Database Project, <iea.uoregon.edu>; OECD Environmental Policy Instruments. <www2.oecd.org/ecoinst/queries/All_Information.aspx>.

5 For brands see Ecolabel Index. <www.ecolabelindex.com>. Also relevant are the ISO environmental management system, chain of responsibility and life cycle assessment methods.

6 IUCN. Red List of Endangered Species. <www.iucnredlist.org>.

7 Secretariat of the Convention on Biological Diversity (2010). 'Executive Summary'. *Global Biodiversity Outlook 3*. Montreal: CBD.

8 UNGA Resolution 66/288 (27 July 2012).

9 "To achieve their environmental commitments and goals, States need strong legislative, political and judicial systems. UNEP will use its expertise in environmental policy and law to help States further develop these institutions, and enhance their ability to effectively participate in international negotiations." UNEP (2009).

a major challenge that will require frameworks to objectively analyse the performance of the legal aspects of environmental governance, to identify the systemic causes of under-performance. A broad multidisciplinary approach will be needed to achieving the marked improvement that is essential.

The report outlines a framework for evaluation of the effectiveness of legal aspects of natural resource governance to facilitate more informed and transparent dialogue about that performance. The approach encourages an objective appraisal of the implementation of accepted environmental law principles, with a view to reforms that will improve the ‘real-world’ performance of instruments of environmental governance.

Evaluation challenges

At the heart of a scientific approach to continuous improvement lies reliance on objective evidence. Contemporary evaluation methods apply a rigorous empirical discipline to ensure that conclusions about performance are based upon deductions rather than inferences that might be unreliable because of subjective judgements. There are many documented evaluation methodologies applied in different fields, but objective performance evaluation in environmental law is underdeveloped in theory and in practice.¹⁰ This is partly because of the particular challenges involved in analysing the effectiveness of the law in natural resource governance, and thus the need for specialised frameworks for evaluation.

Law is a practical tool of society, intended to shape behaviours to meet social needs. Its purposes are pragmatic and political, and the values and interests it must reconcile or manage are diverse. Governance of the environment occurs at the intersection of biophysical and social systems. Human behaviours and the ecosystems that they affect are very complex and understanding them is very complicated. Among the evaluation difficulties are the uncertainties of causal relationships between laws and social and environmental outcomes, and time-lags between legal interventions and hard-to-measure outcomes.

Legal governance of the environment involves many instruments, often reflecting apparently competing social purposes such as seeking to protect the environment at the same time as producing wealth from natural resources. The resulting complexity is a reflection of the diversity of modern society, and it frustrates simple deductive analysis. Overlaid is the fact that effectiveness is multi-dimensional, involving considerations such as the receptiveness of society, the economic capacity of communities and governments, and the dynamics of power. Proving causal links between a law and an outcome is sometimes impossible and always complicated.

Best practice evaluation aims to rely only on objective facts, rather than subjective information. However legal aspects of governance do involve subjective values. Concepts like justice and fairness cannot be ignored because of analytic difficulties, and legitimate differences in views, or political realities, should not be trivialised. For many performance variables, objective data is not available, or it is costly and difficult to obtain. As illustrated by the evaluations reported in this volume, tasks such as identifying the purpose of a law, determining the content of a legal principle, or evaluating behavioural or biophysical outcomes all involve the combination of objective data, subjective values and politically contested interests. It is possible to assume such complications away to make analysis more technically ‘objective’. However if an evaluation is to support realistic proposals to make

Environmental Governance. Available at <www.unep.org/pdf/brochures/EnvironmentalGovernance.pdf>.

10 Resources on relevant evaluation methodologies are indicated at the end of this report.

environmental law more effective, it must accommodate both objective and subjective realities. The challenge of marrying objectivity with proper consideration of subjective aspects of the law is a reason why formal assessment of the legal aspects of governance requires special evaluation frameworks.

Using this evaluation framework

This volume presents a framework developed by IUCN to provide structure and standards for evaluation of legal effectiveness in natural resource governance. The framework is intended to be flexible. The nature of environmental governance and environmental law, the variety of natural resources and social challenges which are involved, and the diverse capabilities and situations of people who might use the framework makes this flexibility essential. The approach is designed to support evaluation of many different legal aspects of regulatory, market or administrative arrangements that address diverse environmental contexts with issues potentially spanning all taxa, and many social dynamics.

The framework is intended to be useable by researchers with varying capabilities and resources. It does not require the skills of environmental lawyers or any other type of specialist, though, as with any analysis framework, well-resourced users will find it easier to conduct more comprehensive analyses.

To cope with the fact that competing values and other subjective matters are embedded in environmental law, and to ensure integrity in the analysis and reporting, the framework emphasizes transparency. It is designed to support comprehensive analysis and transparent disclosure of the evidence and reasoning supporting conclusions.

Case studies

This volume includes six case studies that apply the framework to evaluation of natural resource governance issues in different countries. Teams from universities in Australia, China, Brazil, New Zealand and South Africa used the framework to examine implementation of two accepted principles of environmental law applied to different natural resource governance challenges. They demonstrated that the evaluation approach does indeed enable well-structured analyses to identify comprehensive reforms that should help improve the effectiveness of environmental governance.

The framework enabled a disciplined and transparent evaluation of the effectiveness of the legal aspects of natural resource governance. The research teams identified specific areas for improvement and provided objective evidence to support their recommendations. Their recommendations span important doctrinal, administrative and implementation aspects of successful environmental law. The evidence and the conclusions they present are transparent and amenable to critical debate as part of a dialogue about improving effectiveness.

The final chapter of this report summarises the outcomes of these experimental uses of the framework, and provides recommendations. The work shows the practicality and usefulness of applying a well-structured empirical approach to understanding the effectiveness of environmental law in different contexts. It suggests that environmental legal effectiveness is most likely where high quality doctrine is combined with implementation arrangements that deal with practical issues like resourcing of implementation; organizational structures that are capable of doing what is required to give effect to the law; and mechanisms to ensure the integrity of the governance system. Overall these evaluations show the need to engage not only with legal governance instruments, but all components of the legal governance system that must operate well to make instruments effective.

This evaluation framework should not be assessed by whether it creates a simple, un-contestable assessment. It should be judged by whether the resulting evaluations provide a transparent and systematic analysis of the performance of legal arrangements, yielding objective intelligence which can be interrogated and contested, and whether they identify specific options to improve the effectiveness of legal arrangements. This framework provides a structure upon which improved evaluation methods and useful evaluations can be built. It can be a catalyst for researchers and practitioners to create a community of practice to advance systematic improvement in the effectiveness of the legal aspects of natural resource governance.

The evaluation framework

Paul Martin, Ben Boer, Thomas Greiber, Lydia Slobodian and Nick Bryner

Governance relies on many mechanisms to shape human behaviour, particularly in relation to natural resources. These mechanisms include regulation, markets and social interventions. Each of these approaches has a legal component. Relevant laws include nation-state laws, international laws, binding customary or religious laws, enforceable private agreements, and other legally binding norms and rules. For effective governance the actions of citizens, civil society and business are no less important than those of governments. Legal aspects of governance should not be considered in isolation from other matters that shape environmental and social outcomes.

Given the complexity of governance processes and mechanisms, there are several entry points for legal evaluation. This framework is based on evaluation of the effectiveness of legal principles relevant to natural resources governance.

Legal principles prescribe the purpose and rationale of laws and their associated administrative and implementation arrangements. Legal principles can be definitively stated in authoritative sources, but this is not necessarily the case.¹¹ Principles can also be deduced, *inter alia*, from international instruments, national legislation, judicial decisions or custom or policy statements. The existence, content or meaning of a principle of legal governance of the environment can be a matter for debate, and may vary by jurisdiction or situation. A great deal of environmental governance scholarship concerns whether a principle does or should exist, or what it means or should mean.

Evaluating legal aspects of governance on the basis of stated or deduced principles rather than on the bases of detailed legal rules is consistent with the social inclusion objectives of this framework. It helps in specifying objective metrics that can be used to test implementation, and reduces the focus on technical legal details. Different legal instruments will contain different rules, worded differently. This can create technical complexities that are counterproductive to evaluation. In contrast, legal principles can be traced across instruments at different levels, and between different jurisdictions. A focus on principles can help avoid evaluations becoming mired in the details of particular legal instruments and can facilitate comparison across jurisdictions.

There is ongoing debate over what are, or should be, the principles of environmental law. There are two difficulties in identifying and describing a principle for the purposes of evaluation. The first is determining the status of a particular aspiration for environmental law as a 'principle' and the second is determining the tangible ('evaluate-able') content of the principle. There is no firm rule about what is a principle of environmental law. Some have a politically endorsed status, others are emergent, and some apply in some jurisdictions but not in others.¹² There is a distinction between process and outcome-based principles, with the former concerning processes of decision-making, (e.g., the precautionary principle) and the latter concerning substantive results, where it should be easier to judge application by looking at the pattern of decision outcomes (e.g., the polluter-pays principle).

¹¹ For examples of principles, see World Commission on Environment and Development (1987). *Our Common Future*. Annexe 1: Summary of Proposed Legal Principles for Environmental Protection and Sustainable Development.

¹² *Ibid.*

Statements of principles do not provide specific indicators of implementation, and so it is necessary for the evaluators to infer these. These difficulties are likely to continue.

In conducting an evaluation of the implementation of legal principles, focusing too closely on the details may lead to confusion, rather than to objective assessment. However, it is important that the principles being evaluated are based on specific legal instruments, rather than grounded only in political aspirations. The framework is concerned with evaluation of *legal* arrangements, rather than philosophical or political matters. If a principle is not actually reflected in a law, then evaluation is not likely to find evidence of its implementation in laws and legal institutions, and so there is not likely to be useful evidence of behavioural or outcome achievements arising from the principle. Investigation of proposals for laws that are not yet ratified by governments or courts would require a different framework.

In practice these problems have not prevented the effective use of the evaluation framework. Transparent evaluations, which state the evaluators' choice and interpretation of the principle and the indicators that they have used, make it easy to interrogate their choices. This allows room for debate about the evaluation including the choices and interpretation of possible principles. This should contribute to rather than detract from the purposes of the framework.

Structure of the framework

The framework involves evaluating implementation of the principle across four levels. Each highlights a different aspect of the implementation challenge, and taken together they provide an overall assessment of performance and areas for improvement. Following initial scoping of the natural resource governance issue, the evaluators identify and describe the relevant principle and the evidence at these four levels that they would expect to see if the principle was being effectively implemented. The evaluators then obtain and analyses objective data to see the degree to which these effectiveness expectations are being met and examine why those indicators are or are not being met, at each of the levels. Based on this, the evaluators can judge the implementation and effectiveness of the principle, providing evidence for that judgement.

The four levels of the evaluation are:

- **Instrumental:** The extent to which the legal principle is embodied in legal instruments such as legislation, regulation, judicial decisions and other formal instruments. Depending on the nature of the issues, embodiment in non-government instruments such as industry codes or market standards may also be considered.
- **Institutional:** The extent to which the laws are translated into and supported by implementation arrangements, such as organisational structures, accountabilities, strategies and programs and budgets. Implementation arrangements by people and organisations outside of government affected by the legal requirements are also relevant to the performance of a legal instrument.
- **Behavioural:** The extent to which the behaviours of relevant people and organisations reflect what would be expected if the principle were being effectively implemented. Depending on the issue, many behaviours by people and organisations might be relevant – such as government officers, administrative bodies; industry or citizen organisations.
- **Outcome:** The degree to which biophysical and/or social outcomes of the implementation of the principle are consistent with the implicit purposes of the legal principle.

The structure of the framework is summarised in the diagram below.

<u>Specify the principle</u> for purposes of evaluation: 1. Identify what principle exists, and its legal sources. 2. Specify the fundamental elements of the principle. 3. Identify indicators of implementation a. Legal b. Institutional c. Behavioural d. Outcome	INSTRUMENTAL LEVEL Has the principle been adequately reflected in <u>formal legal arrangements</u>? 1. Formal ratification of rules and administration. 2. Adopted laws (statutes, regulations) for implementation. 3. Allocation of responsibility and accountability.
	INSTITUTIONAL LEVEL Has sufficient <u>administrative and other government action</u> been taken to implement the principle? 1. Allocation of responsibilities and resources. 2. Administrative arrangements. 3. Implementation and effectiveness accountability.
	BEHAVIOURAL LEVEL Have the implementation actions resulted in <u>patterns of behaviour</u> consistent with the governance aims of the principle? 1. Action taken by those with implementation roles. 2. Action taken by those with complementary or support roles. 3. Desired patterns of behaviour by the targets of implementation actions.
	OUTCOME LEVEL Do the <u>biophysical and social outcomes</u> demonstrate implementation and achievement of the purposes of the principle? 1. Purposeful implementation. 2. Integrity of implementation. 3. Objective performance measures.

It is not necessary that the evaluation steps take place in the order set out above. The process may be iterative rather than linear. However, following the process as described here does assist in ensuring an objective and comprehensive evaluation.

The approach can be applied across a whole country, or regions within a country. It can be used to evaluate rules and institutions in different jurisdictions, to stimulate critical debate about the effectiveness and fairness of natural resources law. While not yet applied to this use, it should be useful to evaluate international legal governance arrangements. The most important outcome of evaluation is not a precise judgment about how effective (or not) is a legal arrangement. Of far greater importance is the usefulness of objective evaluation in enabling constructive dialogue about improving the outcomes of natural resources governance.

Conduct initial scoping of natural resource governance issue

An initial scoping process can provide a holistic understanding of the natural resource problems and natural resource governance failures or shortcomings in the jurisdiction, and allow the evaluators to appreciate diverse interests and perspectives. A comprehensive evaluation should be broadly based. It should engage those affected by the natural resource governance issues. From the outset the evaluators should actively consider and guard against the possibility of bias.

The scoping study should examine:

- a) The state of natural resources for the targeted ecosystem, area, country, or region and the priority areas that may require improvement;
- b) Issues of social inclusion or exclusion in natural resource governance;
- c) The human interests and political positions involved; and
- d) The legal and governance arrangements that relate to the key issues of concern.

This will help to identify potential issues and questions, sources of data and possible analyses that will provide the most robust evaluation, within the resources that are available.

The process might be initiated through collaborative workshops across a region. These would identify priorities and natural resource governance challenges for the region. They could involve experts in natural resources law and governance working with representatives of groups that are affected by natural resource governance. Ideally, regardless of the approach any scoping should ensure that diverse (including competing) perspectives are heard and understood.

Specify the legal principle and identify sources and indicators

A starting point to specify the legal principles to be evaluated is instruments such as international treaties, statutes and regulations, as well as scholarly works, court judgments, government policies and agreements. Formal instruments from authoritative legal sources confirm that a principle has legal status, and can help to distil and explain the principle but these are not always available. Private and administrative norms, including customary law, are also important. Evaluation of the implementation of legal principles that are not clearly specified in authoritative documents poses additional challenges for defining the principle and asserting that it has legal status. However provided that the principle is specified on the basis of evidence, and that evidence is objective, then a credible basis for evaluation can be formed. Later criticism of proposed principles or their meaning is likely to contribute to rather than detract from improvement of natural resource governance.

Legal principles should be distinguished from guidelines for the design of legal governance systems, which prescribe an overall ‘architecture’ of that system. Examples of these system design concepts include ‘smart regulation’ or ‘hybrid governance’ approaches. There are also general standards of good governance such as following the rule of law, and the need for strong parliamentary oversight and judicial independence for implementation. This framework focuses on evaluating *legal* principles, though these types of non-doctrinal guidance about better governance can inform proposed improvements in the implementation of legal principles.

Following is an example of how a specific statement of a principle might be deduced from different sources. The example considers a possible principle supporting indigenous people’s rights to benefit from natural resources, in a hypothetical jurisdiction.

- a) State-created rules, a national constitution or administrative law may provide a broad legal obligation, for example, to consider the interests of indigenous peoples in making administrative or judicial decisions. A principle of ‘indigenous social justice’ and of ‘intergenerational equity’ might be distilled from this (or may be specified in policies, laws or other instruments).
- b) In court judgments implementing such laws or issues, the principle might be refined to consider the need for affirmative actions, or perhaps a guarantee of the inclusion of indigenous community views in administrative processes, to ensure that consultation takes

place. Administrative rulings might guide rules for Indigenous people's access to government resources or land. These can further expand the interpretation of the principle, or provide detailed indicators of implementation.

- c) In addition, indigenous communities may have principles for custodianship and recognition within their customary rules that could help to refine the meaning of the principle found within the state law.

Putting these various sources together would allow an evaluation team to propose what the principle is in law, what it might mean in practice, and what would be the indicators of its implementation at the four levels used in this evaluation framework.

Identification and clarification of principles could also draw on other legal sources, including international law, to give more precise definition to the principle and its indicators. This may also be supported by scholarly works or judicial statements, or perhaps by international organisations such as the IUCN or UNEP. Statements of aspiration or political positions that have not been received into law should be treated with caution, as they may not have any legal status even if they are politically important. The legal sources upon which the evaluators rely should be identified to ensure transparency and to enable debate about the principles. Transparency reduces the risk of political manipulation or unfair criticism.

The framework set out here requires that the evaluators not only identify the legal principle, but that they specify what objective criteria or indicators they will use to test its implementation. They should clearly document these indicators at each of the four levels indicated in the diagram above: legal arrangements, institutional arrangements, behaviours and outcomes. Legal principles might be expressed in different ways for different natural resource issues (e.g., forestry, minerals extraction, water management, etc.) and indicators are likely to be different depending on the issues. If evaluators' understanding of the principle is not clear, or not stated in ways that others can understand, then they may find it difficult to specify what they would expect to find if the principle was being implemented.

Evaluate implementation of the principle across four levels

Once the principle has been identified and described, evaluators must gather evidence of its implementation and effectiveness, based on the specified indicators. This is likely to involve a process similar to triangulation of a location when navigating, using different information from various sources to obtain a 'fix' on a position. Evidence is likely to vary in its objectivity, political credibility and its value in proving a causal relationship between implementation of the principle and social, environmental and economic outcomes. However different types of evidence can be brought together to support an inference about the implementation and performance of legal principles. This is conceptually the same as judicial decision-making on the balance of probability, as opposed to scientific deduction purely on the basis of objective evidence.

Four levels of indicators have been identified in the diagram above. The four levels allow the evaluation to move beyond assessment of legal instruments and the institutions related to governance, to also focus also on behavioural observations, changes to practice, and outcomes (environmental, social, economic, and cultural). In combination they provide a comprehensive picture of implementation and effectiveness. Identification of the best measures, and the frameworks of analysis and data gathering for each, is important. The levels are increasingly difficult from an empirical analysis point of view, partly because of the increasing complexity of the causal relationships that are involved.

Evaluation of principles against all of the selected indicators may involve evaluation of diverse matters such as program management, public policy, organisational or individual behaviour, social change and impacts, and environmental outcomes. A comprehensive evaluation may therefore require a multi-disciplinary team, particularly in relation to the third (behavioural change) and fourth (social and biophysical outcome) levels. Evaluators should consider how they will obtain the skills and information sources that they need, and the frameworks that they intend to use. Experience with use of the framework suggests that effort invested in planning these aspects when scoping out the evaluation will pay dividends.

Has the principle been adequately reflected in formal arrangements?

Having identified the principle being evaluated, and specified its meaning in practice with indicators at the four levels, the next step in the evaluation is to test whether the principle has been converted into relevant law or other binding rules. The team assesses whether the laws in the jurisdiction satisfy the instrumental indicators that they have established as criteria.

What specific legal instruments are likely to be relevant will depend upon the principle, the legal architecture of the jurisdiction and the nature of the issues to which it is being applied. Bearing in mind the broad definition of law discussed earlier in this report, the legal instruments that should be interrogated include:

- Laws within the jurisdiction that can be expected to incorporate the principle and translate it into local effect. These may include environmental or social regulation, administrative laws, court judgements, and other legal instruments.
- Other complementary rules, which may include industry codes or standards, guidelines, administrative plans, and government policies.

This step may involve some of the same legal documents that were used to identify the legal principle, leading to some circularity in the analysis. In other cases the environmental law principles will be drawn from one type of document (e.g. an international convention) and the formal adoption will be found in another class of document (e.g. laws within a jurisdiction). Provided that reporting is transparent, circularity should not undermine objective evaluation that is open to constructive critique.

Has sufficient administrative and other action been taken to implement the principle?

Implementation of environmental laws depends upon many institutional arrangements. Typically, responsibility for the required actions must be allocated to an institution that has the authority to do what is needed. Sufficient financial and human resources must be secured, and implementation strategies and plans be put into effect. Institutional arrangements may also be required of those being governed, who may have to reallocate resources or put in place management arrangements. There may be organisational matters required of intermediaries and other stakeholders.

Evidence to evaluate institutional implementation by government agencies will typically consist of evidence of bureaucratic arrangements such as Departments or Agencies, Courts or Ministers being made accountable for implementation, or of budgets and strategies to implement these laws. Department reports, budgets and interviews are likely to provide this information. Freedom of information rules can facilitate this evidence gathering. For non-government stakeholders, documented evidence of their institutional preparedness to implement may be more difficult to obtain,

partly because of commercial or political confidentiality. The evaluations that were conducted to test the framework indicate that direct enquiry of non-government bodies about their implementation actions can yield useful evidence.

Has implementation resulted in behaviour consistent with the principle?

The ultimate purpose of law is to change human behaviour, to achieve specific outcomes. This involves not only behaviour of regulated entities, but also of government actors and others involved in governance, and of affected individuals and communities. Implementing a governance principle may involve many different people serving a variety of roles. The behaviours that are relevant can be diverse.

Evaluating behavioural change is likely to involve evidence from observations, interviews and surveys about the degree to which legal rules and institutional arrangements are being faithfully implemented. What evidence is needed depends upon the evaluators' decisions about what behaviours of which actors are important for effective implementation. The evidence that may be relevant includes:

- Evidence of the actions of government agencies in implementing the governance arrangements. This can include further evidence of whether sufficient resources are allocated, whether the law is being actively pursued and whether roles of government officials are being effectively performed.
- Evidence of the behaviour of other actors in the governance system, including the legal profession, judiciary, policing and administrative agencies, providing indications of whether these behaviours are consistent with implementing the principle, or not.
- Indications of whether the behaviour of the 'target' communities is consistent with effective implementation, or not. These communities may those targeted for control (e.g. industrial polluters, wildlife smugglers, illegal occupiers) or to receive benefits or support (e.g. displaced minorities, indigenous communities).
- Evidence of the behaviour of the broader community, such as the patterns of consumption and conservation activity, attitudes and behaviours towards indigenous and other minorities etc., and whether they reflect behaviours expected if the principle is being implemented.

The case studies in this volume illustrate a number of approaches to test the behavioural effects of laws to implement natural resource governance principles. There are many opportunities for innovative methods to provide insights into this dimension of effectiveness.

Do the biophysical and social outcomes demonstrate effectiveness?

Evaluation of social, ecological or economic performance should be based on objective social and biophysical evidence of the outcomes being achieved compared with the indicators, to the extent that this is possible. This might involve social evidence (e.g., measures of social equity, resource access and ownership statistics, health and welfare statistics, surveys); biophysical evidence such as species or habitat loss, or other environmental outcomes; or economic outcomes, such as indigenous peoples' share in natural resource wealth, or productivity from the use of resources.

While there are many difficulties in obtaining reliable evidence of outcomes from the implementation of environmental law, there is a vast amount of information in the scholarly, professional, and bureaucratic literature. Academic studies, consultancies, theses, and published reports can all yield evidence. The opinion of experts who have first-hand knowledge from their own experience can also be evidence if

primary research is not feasible. However gathering and analysing this information is time consuming and can be complicated.

The teams who used the framework found the outcome evaluation level of the framework the most difficult to apply. This was to a large degree due to limited time and a lack of technical skills and resources needed to obtain stronger primary or secondary evidence of outcomes. It is expected that problems of complex causes and uncertain effects will often be an issue. New approaches are likely to develop to overcome these problems, and this is likely to contribute to improving the effectiveness of environmental law as a component of natural resource governance.

Implementing the framework

This framework was tested by six teams from various countries who selected the implementation of two legal principles for evaluation – the precautionary principle, and the principle of participation. These case studies are summarized in the following chapters. The experience of the teams provides lessons and illustrates aspects of framework that are discussed in the concluding chapter of this volume. Key lessons and guidance on implementing the framework are described below.

Evaluation technique

Evaluation is a discipline and profession in its own right. There is an extensive literature, and many practice guides are available. Some are indicated in the resources section at the end of this report. Evaluation methods are well developed in public health and education. They are far less common in the law, though there are useful examples and guidelines. The absence of objective information about the performance of legal instruments and institutions impedes the scientific approach to improving effectiveness, which is based on theory, experimentation and evaluation leading to improved theory.

Formal evaluation tries to eliminate subjectivity in judging whether an intervention, such as a program, instrument or strategy results in specific outcomes (such as conservation or degradation of nature, or increased or reduced social inclusion). However the cause-effect relationship between a legal intervention and an economic, social or environmental outcome is complicated. An outcome may be due to ‘non-law’ factors like the budget for implementation, corruption, community attitudes, power or personal relationships. Aspects of natural resources law are value-laden (e.g. concepts of social justice, or important aspects of sustainability). Trade-offs between competing values are not amenable to precise empirical analysis, though scientific techniques can make trade-offs more transparent. Credible conclusions about the effects of legal interventions are therefore likely to be based on a process of ‘triangulation’, using different types of evidence to support evaluative judgments. Drawing conclusions based on the balance of evidence (including objective and subjective data) is likely to be more feasible than attempts at pure deduction, though using objective data should always be the ‘gold standard’. It is vital that evidence is as objective and unbiased as possible and that the evaluation is transparent, allowing for criticism, disagreement and correction. Particular caution is needed with opinions, data or examples from potentially biased sources, even though this evidence may be easy to obtain.

Formal evaluation methodologies often involve sophisticated approaches applied by trained experts using specific data. The framework described here can be used by people with varying levels and types of education and resources, in situations where gathering particular data may be difficult. It takes a broad, simple approach, in which many different data gathering and analysis methods may

be used depending on resources, capacity, and context. To the maximum degree, conclusions should be based upon empirical data, the analysis should be objective, and the process and the data should be clearly presented and transparent. Factors that might undermine the reliability of the evaluation, or weaknesses and limitations to the work, should be declared.

Gathering evidence

It is important to plan how to efficiently obtain evidence at each of the four levels. Carefully scoping the issues and finding efficient methods and instruments for evidence-gathering is an integral part of the evaluation. Those who have used the framework report that spending time in carefully thinking through the most efficient methods for gathering and analysing the evidence is a wise investment.

Evidence-gathering may include:

- Searching the relevant literature, including academic and professional publications, and reports from stakeholder groups. This is a basic step that should be part of any investigation of the effectiveness of law or policy. Use of different types of secondary evidence, including scientific reports, can improve evaluations. To do this well requires time, and may require specialised expertise to interpret technical literature.
- Interviewing knowledgeable informants. Experienced people are important ‘data pockets’, who may direct the investigation towards additional sources as well as providing their own evidence. Tapping into data pockets can provide useful insights at very low cost. Conducting surveys, discussion or focus groups, and other social research investigations. These approaches can be useful, but may require specialist skills and time.
- Primary investigation of relevant social or environmental or economic phenomena.

Reporting on the evaluation

How an evaluation is reported depends upon its purpose, its audience, and its content. Bearing in mind the purpose of evaluation to stimulate constructive dialogue about improvement, it is important that reporting is objective and transparent. An evaluation report should include the following content:

- A clear statement of the purpose of the evaluation, by whom it was conducted and for whom it was carried out.
- Explanation of the framework, including a description of the analysis, the data, and the reasons why that approach was chosen. To assist future evaluations it will be useful to report on methodological issues, such as lessons from experience about the process.
- An explanation of the legal principle that is being examined, with a clear statement of its content and meaning, and the sources from which it was derived.
- An explanation of the indicators of implementation and effectiveness that were selected, why they were chosen and what evidence was used for evaluation.
- A statement of the findings of the evaluation about implementation and effectiveness based upon the evidence. The statement should be specific about positive and negative conclusions, and where possible provide an explanation as to causes. Limits to the reliability of the conclusions should be revealed.
- Recommendations to improve the implementation and effectiveness of the selected principle. Where the rationale for recommendations is not clear from the other reported information, the reasons should be spelt out.

Future development of the framework

Debate about the effectiveness of the law that is informed by objective data and analysis is needed to drive improvement. The evaluation framework is designed for groups with varied capabilities and resources (nation-state agencies, international bodies, NGOs and community groups). It can be applied to different aspects of environmental governance within different jurisdictions, and it can help to build a body of knowledge and practice. Over time and through use, a shared knowledge base and norms can develop around evaluation of the effectiveness of legal arrangements. As expertise and data are developed, new methods and approaches will be developed, and the quality of interpretation of evaluations, causes and effects will improve. The approach described here will contribute to this evolution.

Australia: Participation principle and marine protected areas

Karen Bubna-Litic, Emma Goreham, Taylor Pope, Kvitka Becker and Alex Craig¹³

Historically, marine areas in South Australia were protected by aquatic reserves established under fisheries legislation. In 1991, the Commonwealth government tried to promote a biogeographic and ecosystem approach through a national representative system of Marine Protected Areas (MPAs).¹⁴ Despite this push, none of the MPAs designated as aquatic reserves were specifically designated to protect biodiversity.

The need for marine parks in South Australia to protect marine ecosystems and biodiversity was recognised by the government that released the Marine Parks Bill in 2006.¹⁵ The proposed Act highlighted conflicting values within the community including issues of conservation, commercial and recreational fishing, tourism, and employment. Under the Marine Parks Act 2007 (SA), provision was made for community participation in the declaration and management of marine parks.¹⁶ The purpose of this research is to evaluate the implementation and effectiveness of the participation principle in protecting marine biodiversity in the current governance arrangements for Marine Parks in South Australia.

Natural resource governance issue

Internationally, marine parks are recognised as a key tool for protecting and conserving habitats and marine biological diversity. Much like land-based national parks, marine parks play a central role in maintaining ecological processes, protecting areas of natural and cultural heritage, and assisting in adapting to the impacts of climate change.

In 1991, the Commonwealth announced the initiation of a 10 year marine conservation program, called 'Ocean Rescue 2000' to ensure the conservation and sustainable use of Australia's marine and estuarine environments.¹⁷ A key component of this initiative was a commitment to expand Australia's existing marine reserve system, through the establishment of a national, representative system of Marine Protected Areas (NRSMPA). NRSMPA was endorsed by States/Territory under the Inter-governmental Agreement on the Environment (IGAE).¹⁸

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¹⁴ Australian Government, Department of the Environment. 'Goals and principles for the establishment of the NRSMPA'. *Marine Reserves*. <www.environment.gov.au/resource/goals-and-principles-establishment-national-representative-system-marine-protected-areas>.

¹⁵ National Parks South Australia. *Second reading speech to the Marine Parks Bill 2007*. <www.environment.sa.gov.au/marineparks/Learn/history/legislative-requirements>.

¹⁶ Marine Parks Act 2007 (SA) §§ 10, 29.

¹⁷ Anon. (1991). *Ocean Rescue 2000*. <<http://www.ciesin.org/kiosk/ebs/Declarations/EBGCD-0002.txt>>.

¹⁸ Marine Protected Areas Working Group (2007). *Progress in implementing the National Representative System of Marine Protected Areas (NRSMPA)*. Available at <<http://www.environment.gov.au/system/files/resources/49a94ad1-c85e-4acc-9eca-e56687f16974/files/nrsmpa-report.pdf>>.

South Australia is empowered under its Constitution to create laws to manage its waters out to 3 nautical miles from the coast (or territorial baseline).¹⁹ It has a chequered history in protecting marine diversity, even though the marine and estuarine waters of South Australia represent some of the most unique and biologically diverse waters in the world.²⁰ However, after fifteen years of extensive planning, 19 marine parks came into operation in October 2014.

South Australia first introduced legislation to establish marine protected areas (MPAs) under the Fisheries Act 1971 (now the Fisheries Management Act 2007 (SA)). The Act provided specifically for the protection of the aquatic habitat in South Australia through the creation of Aquatic Reserves.²¹ The Act also provided regulations to restrict and regulate all activities within these protected areas. The following four broad management objectives were specified for Aquatic Reserves:²²

- Conservation and protection from over-exploitation
- Optimal utilisation and equitable distribution of resources for community benefit
- Participation of the community in fisheries management
- Fostering recreational and commercial fishing.

Despite the Commonwealth's attempts throughout the 1990s to assist States to adopt a biogeographic/ecosystem approach to the identification of MPAs, none of the MPAs in South Australia designated as aquatic reserves were specifically designated to protect biodiversity.²³ 'Hotspots' of species richness, as well as both representative and 'unique' examples of ecosystem types for biodiversity conservation (as recommended by the NRSMPA), were not considered important reasons for MPA establishment until more recently. Historically, in South Australia, perceived social benefits have shaped MPA identification and selection. Only very small percentages of the marine bioregions were designated as MPAs. Under this focus on the social benefits to determine MPAs, some of South Australia's coastal fish and crustacean species reached the 'fully exploited' status.²⁴

There are conflicting values inherent in applying the participation principle to MPAs in SA. Environmental, economic and social values all need to be considered when implementing this principle. Various gaps have been identified in the identification and management of MPAs which illustrate these conflicting values. These include over-fishing, disturbed breeding grounds, the need to protect older fish with a high reproduction rate, the impact MPAs have on the fishing industry (with smaller areas of water to exploit resulting in a smaller catch), the loss of value of fishing licences, and issues of tourism. Many of the communities depend on the fishing industry for employment, as it is their way of life, and there is an associated fear of job losses and unemployment in these regions. This has been described as a 'convergence of conflict',²⁵ which has to be managed.

19 National Parks South Australia. *Frequently Asked Questions*. <<http://www.environment.sa.gov.au/marineparks/FAQs>>.

20 K.S. Edyvane (1999). *Conserving Marine Biodiversity in South Australia - Part 1 - Background, Status and Review of Approach to Marine Biodiversity Conservation in South Australia*. South Australia Research and Development Institute. Available at <www.ffc.org.au/FFC_files/MPA%20refs/SARDI%20reports%20and%20maps/marine_biodiversity_part1_full_version.pdf>.

21 Fisheries Management Act 2007 (SA) § 4.

22 *Ibid.*, § 7(1).

23 J.L. Baker (2000). *Guide to Marine Protected Areas*. Adelaide: South Australia Department for Environment and Heritage. pp. 39, 49.

24 *Ibid.* p. 51.

25 Rob Lewis (2014). 'Convergence of Conflict'. *SA Life*. Letters to the Editor.

The objective of the Marine Parks Act is to develop a comprehensive, adequate and representative (CAR) network for marine parks for South Australia.²⁶ The focus is on conservation, rather than fisheries management.²⁷ The Department of Environment, Water and Natural Resources (DEWNR) administers the Marine Parks Act. Two independent bodies have been established under the Act: the Scientific Working Group (SWG) and the Marine Parks Council (MPC). The objective of the SWG is to advise on technical and scientific matters relating to the marine environment, or any other matter referred to it by the Minister for Environment and Conservation.²⁸ The MPC is a statutory advisory council, its role being to provide advice to the Minister on matters associated with the establishment and management of the marine parks.²⁹ It has a role in monitoring, evaluation and reporting as well as community consultation and stewardship.

Community consultation was embedded in the process on the understanding that the success of marine parks depends on stewardship by the community, leading to a government commitment to public understanding, community engagement and consultation.³⁰ The establishment of marine parks was based on a number of design principles gathered from best international practice and reviewed by the SWG, which advised on biophysical principles, and the Marine Advisory Committee (later the MPC), which advised on the socio-economic, or community design principles.³¹ These design principles are intended to be used by local communities to guide their submissions during the boundary consultation process.

Legal principle

The three pillars of public participation have been recognised as access to information, public participation and access to justice.³² Arnstein has equated this principle to citizen power but in many instances the ability to achieve this is limited by its legislative context.³³ Although falling somewhat short of full citizen power, central to this principle is effective participation of stakeholders in the decision-making processes. As many decisions are complex, capacity building is also an essential element

26 Marine Parks Act 2007 (SA) § 8(1)(a).

27 See National Parks South Australia. *Second reading speech to the Marine Parks Bill 2007*. <www.environment.sa.gov.au/marineparks/Learn/history/legislative-requirements>, p. 3.

28 DEWNR (2014). Marine Parks Scientific Working Group Annual Report 2013-2014. p. 5.

29 Marine Parks Act 2007 (SA) § 29.

30 Government of South Australia (2012). *Marine Parks Design Principles: Guiding the development of South Australia's Marine Park Boundaries*. Adelaide: South Australia Department for Environment and Heritage.

31 These principles included precaution, comprehensiveness, adequacy, representativeness, connectivity and linkages, resilience and vulnerability, ecological importance, synergy with existing protected areas, complementing existing terrestrial and marine management practices and conservation agreements, giving consideration to the full diversity of marine uses, respecting indigenous interests and culture, giving consideration to cultural heritage, ensuring ease of identification, compliance and enforcement, providing for education, appreciation and recreation. No community consultation was used in the process of adopting the design principles, as they had come from best international practice. However, some stakeholders indicated that they had wanted consultation on the design principles.

32 *Rio Declaration on Environment and Development* (1992) Principle 10. In 2010, the United Nations Environment Program (UNEP) provided guidelines for how states can implement these elements of Principle 10 within their legal frameworks. See United Nations Environment Program (UNEP) (2010). *Guidelines for the Development of National Legislation on Access to Information, Public Participation and Access to Justice in Environmental Matters*. Nairobi: UNEP.

33 Sherry R. Arnstein (1969). 'A Ladder of Citizen Participation'. *Journal of the American Planning Association* 35(4):216-224.

of this process. The UN Earthwatch program has said that, unless the community has the capacity to receive the information from the authorities, to interpret it, and to incorporate it into the decision-making process, the amount and quality of information provided is irrelevant.³⁴ It is unreasonable to expect an informed debate regarding complex, technical issues without providing the public with adequate time and resources to effectively participate. By building capacity, it is possible to moderate powerlessness and equalise some of the disparities, thereby supporting more equitable participation among dispute participants.³⁵ Capacity building can therefore be described as the process by which ‘individuals, groups, organisations, institutions and societies develop abilities (individually and collectively) to perform functions, solve problems and set and achieve objectives.’³⁶ The principle of public participation can be stated as: *do all stakeholders, including the general public, have the capacity to access and comprehend all information relevant to the decision-making process, along with an effective avenue through which their informed input can be incorporated into the process?*

What does the principle look like in practice?

In effective implementation of the participation principle, three things are expected: 1) all stakeholders have the ability and the capacity to participate; 2) there is to be transparency and accountability in the decision-making process; and 3) the process is fair.

1) All stakeholders have the ability and the capacity to participate.

a) Decision-makers identify and include all relevant stakeholders.

Stakeholders should be involved early in the process, possibly setting the terms of reference of the consultation. Meeting invitations need to be open and circulated widely and advertised in traditional and social media. This could include the distribution of flyers in community meetings and holding public information days well in advance of the start of the process. It is important to have a long lead-time to alert all stakeholders and to target local businesses, such as fishing and dive shops.

b) Stakeholders have the ability and capacity to participate in terms of opportunity in time and location, and understanding and knowledge of technical issues.

Ensuring that stakeholders have the ability to participate requires effective dissemination of information, in both soft and hard copies. The information needs to be comprehensive and updated regularly to ensure there is little disparity between the knowledge base of the stakeholders and the decision-makers. Information needs to be offered in multiple languages and widely available e.g. in public libraries; council offices; government departments; stakeholder/community associations; public meetings; through booklets and fact sheets. Before submissions are invited, the decision-maker needs to ascertain from the stakeholder group, their ability to understand the information in order to formulate a strategy for building the capacity of the stakeholders.

The capacity building needs of the community, in terms of capacity to access the process and capacity to understand the technical information need to be identified. Capacity to access the process includes the ability to afford to participate, access to transport to attend meetings and access to babysitting/ childcare services as needed. Building knowledge capacity requires identifying the gaps in knowledge

34 UN System-Wide Earthwatch. *Earth Watch and Agenda 21, Information for Decision-Making*. <<http://www.earthwatch.unep.net/>>.

35 M. Lloyd-Smith (2008). ‘Information, power and environmental justice in Botany: The role of community information systems’. *Journal of Environmental Management* 90(4):1628-1635.

36 P. Ballantyne, R. Labelle and S. Ruggard (2000). *Information and Knowledge Management: Challenges for Capacity Builders*, Policy Management Brief 11. Maastricht: ECDPM.

and facilitating training so as to minimise the disparity between the knowledge base of the stakeholders and the decision-makers. The disseminated information may include information on environmental quality, environmental impacts and regulation. Much of it may be so technical that part of the process is to build the capacity of the stakeholders to understand the technical and legal information being presented. Ascertaining the knowledge base of the stakeholders will continue throughout the process and to this end, a mechanism needs to be established whereby the ability of the stakeholders to participate can be tested throughout the participation process. Constant monitoring of stakeholder knowledge through feedback mechanisms is required with further training implemented, if needed. Participants could be trained through an online repository system or through face-to-face workshops.³⁷ Participants will need to give feedback as to the effectiveness of this capacity building training, which will allow for the process to be improved and changed, while it is happening.

All participants should have an equal opportunity to participate. Practical measures to remove barriers to participation include canvassing of alternate meeting times (day, evening and weekends). The decision as to where the meetings take place should be taken jointly by stakeholders and decision-makers. Online meetings may be the most suitable for remote stakeholders, but internet access can be an enormous problem in remote access. There is also a need for disability access and translators. The consultation process – whether it takes place at public meetings, focus groups, working groups, online, or written submissions – needs to be in a safe environment. There needs to be an opportunity for further participation throughout the process, as it progresses, or as new information comes to light.³⁸

2) There is transparency and accountability in the decision-making process.

Timely feedback should be given to the stakeholders. Stakeholder feedback will be incorporated into the decision-making process and stakeholders will be informed as to how this has occurred. Written submissions should be responded to individually.

There should be avenues for third party appeals, where persons who feel they have been excluded from the process have access to a review procedure before a court of law or another independent and impartial body. Open standing provisions can facilitate this.

There also should be independent monitoring of environmental, economic and social outcomes relating to the marine parks. This may include an independent assessment of the marine environment and monitoring of a sustainable commercial fishing industry. A stakeholder/community monitoring group needs to be part of this process. Information obtained from continuous evaluation of the management strategy should be accessible to the public, who can then feed comments back to the community-monitoring group.

3) Stakeholders have participated in a fair process resulting in the establishment of marine parks that are adaptive to changing environmental, economic and social conditions, resulting in greater protection of the marine environment.

A fair process can be facilitated by establishment of an authority that is responsible for ensuring public participation. Ongoing involvement and full participation of stakeholders would help in the process of

37 For a discussion of an information repository system, see K. Bubna-Litic and M. Lloyd-Smith (2004). 'The Role of Public Participation in the Disposal of HCB's-An Australian Case Study'. *Environmental and Planning Law Journal* 21:250-287.

38 This was illustrated in the answers to questions put to the representative from the Department of Environment, Water, Natural Resources (DEWNR).

adaptive management by improving feedback mechanisms and increasing resilience. Stakeholders/community need to trust the process and be involved in a community-monitoring group. The Marine Parks need to be resilient to a change of government.

Evaluation across different levels

The research team evaluated the effectiveness of the participation process through a number of 'objective' methods. This included an analysis of legislation and government websites, meetings with members of the Department of Environment, Water and Natural Resources (DENWR), an online survey of participants and semi-structured interviews with peak stakeholder groups.

Instrumental level

The principle of public consultation in the development of marine park areas is reflected through a number of governance instruments across South Australia. The Blueprint for the South Australian Representative System of Marine Protected Areas (SARMPA)³⁹ is one of the key commitments under the Living Coast Strategy, which outlines six key objectives for protecting the sustainable use of South Australia's coastal, estuarine and marine environments.⁴⁰ The Blueprint recognises that to support this strategy there must be opportunities for encouraging the community and industry involvement in decision-making on local environment issues, resulting in a greater sense of responsibility, understanding and ownership of coastal estuarine marine environment decisions.⁴¹ It recognises the community's role in developing the SARMPA for three main reasons: 1) local communities have a vested interest in the health and productivity of their local marine environment; 2) they can contribute local expertise often gained from generations working and living in the area; and 3) they are more likely to accept the resulting management systems if they contribute effectively to the process.⁴²

The main drivers for public participation in the marine parks process are found in the Marine Parks Act. The Act specifies the contents of a marine park management plan and sets out the critical public consultation requirements. The Act was described by the Minister as 'a significant milestone in delivering the government's policy commitments outlined in the Blueprint for SARMPA including zoning marine parks for multiple use, encouraging community involvement and developing mechanisms to address displaced fishing and aquaculture effort.'⁴³ Under the Act, the Minister must consult with relevant persons with an association with a marine park, including indigenous peoples, about the measures that should be taken to further the objects of the Act.⁴⁴ One of the objectives of the Marine Parks Act is to 'assist in allowing ecologically sustainable development and use of marine environments.'⁴⁵

39 Government of South Australia (2004). *Blueprint for the South Australian Representative System of Marine Protected Areas*. Department for Environment and Heritage. Available at <http://www.environment.sa.gov.au/marineparks/Learn/Marine_park_science/scientific-reports>.

40 Government of South Australia (2004). *Living Coast Strategy for South Australia*. Department for Environment and Heritage.

41 Fisheries Management Act 2007 (SA) § 4.

42 Government of South Australia (2004). *Blueprint for the South Australian Representative System of Marine Protected Areas*. Department for Environment and Heritage. p. 9.

43 Government of South Australia, DEWNR (2007). *Report on Marine Parks Bill 2007* (revised on 18. 10. 2007).

44 Marine Parks Act 2007 (SA) § 22(1)(f).

45 *Ibid.* § 8(1)(b)(iv).

The Government should encourage public involvement in providing information and contributing to processes that improve decision-making.⁴⁶

Under the Marine Parks Act, in establishing marine parks, the Minister must seek the advice of the Marine Parks Council.⁴⁷ The Minister must take this advice into account and may take into account any other matters they think fit, before recommending to the Governor that an area must be proclaimed as a Marine Park. The Minister must give public notice of this proclamation, specifying where it can be inspected and inviting submissions from interested persons on the boundaries of the marine park, for at least a six week period. The Minister must consider these submissions and has the discretion to take them into account and recommend that the boundaries of the marine park be altered.⁴⁸

Once the boundaries have been established, the Minister has three years to establish management plans for the marine park.⁴⁹ The Minister is required to publish a notice to make a management plan. The notice must include a description of the environmental, social and economic values of the area concerned, a draft of the plan, and an impact statement of the expected environmental, economic and social impacts of the management plan. The Minister must seek the views of a range of peak stakeholder group representatives and others in relation to the draft management plan. The availability of the draft management plan needs to be published in the Gazette and in a newspaper. Interested persons may send written representations in relation to the draft within the period specified in the notice.⁵⁰ Section 14(5) of the Act expands the group of stakeholders, allowing the Minister to seek the views of any person they choose. However, Section 14(10) states: “A failure of the Minister to comply with a requirement of this section does not affect the validity of a management plan.”⁵¹

This subsection highlights a gap in the community participation requirements. This discretion given to the Minister, in effect, allows him to disregard any part of section 14.

Institutional level

The Marine Parks Act establishes a Marine Parks Council, whose role is to advise the Minister on the establishment and management of the marine parks, including the provision for community consultation. This council consists of ten members, one of whom “must be a person who has extensive involvement in community affairs.”⁵²

Looking outside of government, a number of organisations (both pre-existing and newly established) have adopted the responsibility for representing various stakeholder groups in the implementation and management of the marine parks. The South Australian Marine Parks Alliance (SAMPA) was established to represent the interests of the South Australian commercial fishing sector in matters dealing with the marine parks. Over the past few years SAMPA has provided a platform for discussion and resolution of issues such as the monitoring of marine parks to assess their impact, the re-allocation of resources from the commercial sector to other sectors, compensation for those whose rights have

⁴⁶ *Ibid.* (SA) § 8(3).

⁴⁷ *Ibid.* (SA) § 10.

⁴⁸ *Ibid.* (SA) § 10.

⁴⁹ *Ibid.* (SA) §14 (1).

⁵⁰ *Ibid.* (SA) §§ 10, 14.

⁵¹ *Ibid.* (SA) § 14(10).

⁵² *Ibid.* (SA) § 24(3)(f).

been affected by marine parks, and the operational details of the management plans.⁵³ SAMPA is now managed as a part of Wildcatch Fisheries SA Inc.

RecFish SA is the recognised peak body for advising the government on recreational angling issues. It advocates on behalf of 236,463 recreational anglers in South Australia.⁵⁴ In a project developed in partnership with RecFish SA, researchers from the University of Canberra (funded by the Fisheries Research and Development Corporation) at the time of this evaluation were conducting a survey to garner the views of the public in relation to the future direction of recreational fishing in South Australia. The survey was developed in consultation with South Australian recreational fishers. The results will be made available to the public. RecFish SA also offers support for anyone who has difficulties with the survey, in an effort to facilitate public participation.

The South Australian Marine Conservation Alliance, established in May 2011, is an alliance between The Wilderness Society, Australian Marine Conservation Society, Conservation SA, Friends of Scaale Bay, and Flinders University Underwater Club to represent the interests of conservation in relation to the marine parks. The Alliance's position statement provides that the organisation 'strongly supports community consultation,' and strives to implement community information and education initiatives into the ongoing management of the marine parks.⁵⁵

The Marine Parks Scientific Working Group (SWG), made up of South Australia's most recognised marine scientists, provides independent advice to the government on all matters of marine conservation initiatives, including marine parks. They helped prepare the design principles on which the marine parks process was based.⁵⁶ The role of scientific information in the participation process was the cause of some concern to all peak stakeholder groups.

Behavioural level

Implementation of the participation principle has occurred at a behavioural level both inside and outside of government. On the introduction of the Marine Parks Act, the Minister stated that the establishment of marine parks requires a long-term commitment to public understanding, communication and participation.⁵⁷ At that time, independent market research showed that 88% of respondents were in favour of the creation of marine parks.⁵⁸ In September 2006, after the draft bill was release for public comment, 16 public meetings were held in 15 locations around South Australia, attracting interest from over 670 people. Respondents submitted 162 written submissions on the draft bill. All submissions were considered in the final bill.⁵⁹

In theory the establishment of the MPLAG's was an example of the government department going beyond what was required under the legislation. It was an attempt to work collaboratively with the community in relation to applying the design principles and developing the zoning and management of the Marine Parks. In practice, the antagonism in many of these meetings meant that some stakeholders

53 Wildcatch Fisheries. <<http://www.wfsa.org.au/index.php/marine-parks>>.

54 RecFish SA. <<http://recfishsa.com.au/>>.

55 South Australian Marine Conservation Alliance. *Position Statement on Marine Sanctuaries*. Available at <<http://www.conservation.sa.gov.au/files/SAMCA-Statement-Marine-Sanctuaries-Final.pdf>>.

56 See National Parks South Australia. 'Scientific Working Group'. <http://www.environment.sa.gov.au/marineparks/Learn/Marine_park_science/scientific-working-group>

57 National Parks South Australia. *Second reading speech to the Marine Parks Bill 2007*. <www.environment.sa.gov.au/marineparks/Learn/history/legislative-requirements>. p. 2.

58 *Ibid.*, p. 3.

59 *Ibid.*, p. 3.

withdrew from the process. This was sometimes a result of the physical set-up of the rooms whereby community members who were able to attend as these were open meetings, were able to yell abusive comments down at members of the LAG's. According to one of the peak stakeholder groups, there was no consultation on the design principles, the document framing the development of SA's marine park boundaries. "This," they said, "started the whole process on the wrong footing."⁶⁰ This may be more of a perception generated from the group's unhappiness with the final result, as these principles were based on a review of criteria adopted across Australia (including national guidelines)⁶¹ and internationally. Two independent advisory groups, the SWG and the Marine Advisory Group (now the MPC), reviewed the principles and gave advice to the SA government.

Outcome level

The process of the design and management of marine parks involved a comprehensive public consultation process. At the end of this process, 19 Marine Parks were designated in South Australia. Restrictions on commercial fishing and other uses came into force from October 2014.

The process began in 2006, when the State government released the Marine Parks Bill. In its introduction into Parliament, the Bill was described as a significant milestone in delivering the government's policy commitments, which included 'zoning marine parks for multiple uses, encouraging community involvement and developing effective mechanisms to address displaced commercial fishing and aquaculture activities.'⁶² The main objective stressed that the role of marine parks should be for biodiversity conservation, not fisheries management, which is addressed under the Fisheries Management Act 2007. The Draft Bill was developed through consultation with key stakeholder and across government. A three-month state-wide consultation process took place, whereby 16 regional public meetings were conducted. Around 112 submissions were received.⁶³ Adjustments were made to the Bill and it passed through Parliament and was assented to on 29 November 2007.⁶⁴

In 2009 the outer boundaries of South Australia's Marine Park Network were released and a state-wide consultation process took place. Three regional Pilot Working Groups were created, and tasked with advising the government on the outer boundary design. Between late 2009 and May 2011, the government began engaging with communities across the state to gather local advice for the development of draft management plans. During this time 13 Marine Park Local Advisory Groups (MPLAGs) were established, 67 public MPLAG meetings were facilitated and numerous informal workshops, meetings and public information days were held around the state. The advice received from the MPLAG was displayed on the marine parks website and at the Adelaide Boat Show. The information gathered during this period was used to assist the government to develop marine park zoning, aimed at minimizing impacts on existing recreational and commercial users, while achieving conservation aims.

60 Interview with peak stakeholder representative, December 2014.

61 ANZECC / TFMPA (1998). Guidelines for establishing the national representative system of marine protected areas Australian and New Zealand Environment and Conservation. Canberra: Environment Australia.

62 Government of South Australia (2004). *Blueprint for the South Australian Representative System of Marine Protected Areas*. Government of South Australia, DEWNR (2007). Report on Marine Parks Bill 2007 (revised on 18. 10. 2007). p. 1.

63 DEWNR (2012). *Finalising Management Plans for South Australia's Marine Parks*. Available at <<http://www.environment.sa.gov.au/files/4bb32ac5-5936-4afd-8a81-a12e00e4e6be/mp-gen-finalisingmanagementplanssummary-nov12.pdf>>.

64 *Ibid*.

In late 2011, the Premier and Environment Minister announced that additional consultation with key stakeholder groups would take place. In 2012, representatives of the conservation, recreational and commercial fishing sectors engaged in a two-day forum where broad agreement was reached on priority areas for conservation. The priority areas of conservation were released for public comment in July 2012, along with the full set of draft zoning maps. From August to October 2012, the formal eight week, state-wide community consultation on draft marine park management plans (including draft zoning arrangements and draft management strategies) took place. In November 2012, the Marine Parks Council gave its advice to the Minister of Sustainability, Environment and Conservation on the Draft Marine Parks Management Plans Public Consultation, making recommendations on community engagement and education, habitat underrepresentation, compensation for displaced fishing effort, buffer zones and the implementation of sanctuary zones. Nineteen marine parks were declared in South Australian waters in 2009, covering more than 26,000km² of sea.⁶⁵

The final zoning was released on 29 November 2012, with fishing restrictions phased in over 2 years. At present, 44% of South Australian waters are Marine Parks, with 38% classified as multiple use and 6% classified as highly protected sanctuaries ('no take zones'). Sanctuary zones are the core conservation areas in marine parks, protecting the feeding, breeding, nursery and resting areas for marine species.

Despite this process, in August 2014, a Private Members Bill was introduced into the SA Parliament proposing the abolition of twelve of the previously agreed to marine parks. It failed by only one vote. This raises the important question of how a decision, which resulted from an extensive and 'effective' participation process, could be undone so easily.

Lessons learned

The evaluation process revealed many challenges and lessons. Many elements of an effective participation process cannot be measured objectively, and need subjective metrics. An evaluation can benefit from interdisciplinary teams and careful thought and planning with regards to interviews, surveys, analytical methods, and practical issues such as applying for ethics approval.

What the principle looks like in practice

When trying to find 'objective' evidence of the effectiveness of environmental law principles, the first step is to break the principle into its elements in terms of what it will look like in practice. This needs to be separated from the question of whether it has been incorporated into legislation and supportive administrative arrangements. This is an important step in the evaluation process, one that lawyers may not be comfortable with. Many of the elements of the principle will be common across jurisdictions and so the work done in this project can be applied across other jurisdictions.

Early application for ethics approval

Gaining ethics approval to undertake the surveys and questions can be a cumbersome process, both in answering the questions and waiting for ethics approval. With a limited timeframe, applying for ethics approval needs to be done earlier rather than later in the process. Some sharing of ethics approval pitfalls may help to streamline this process in different jurisdictions.

⁶⁵ *Ibid.*

Use of surveys

A survey can be helpful but the questions have to be carefully considered. For example, when using a survey asking people for their opinion on the effectiveness of the process, it is likely that those disgruntled with the process are more likely to respond. This reduces the reliability of the results. It can be best to use researchers with experience in survey design and analysis. For example, use of the Likert scale on some of the questions would have made the data collection more robust and the analysis easier. The team of legal researchers were inexperienced in designing surveys and it is recommended that a data analyst be part of future teams. A database of survey questions in relation to each principle could be helpful. With a large number of submissions, it can be time consuming to get access to participant's contact details in order to conduct a survey online.

Use of interviews

Semi-structured interviews can be more useful than the survey questions in that they allow the interviewees to explore in more depth the nature of the principle, how effectively it was implemented and what improvements could be made. Semi-structured interviews can help inform the survey questions, so it is useful to conduct these in advance of surveys. It is important to understand one's own personal bias when conducting interviews. Researchers should record the interviews to ensure the conversation is captured.

The description of how the principle is intended to operate formed the basis of the questions that were asked of the participants. It is therefore crucial to set out what the principle would look like in practice if it was fully implemented. The key question is what 'real world' evidence would be found if the principle was fully implemented.

Use of the matrix

A matrix was used to review implementation of the main elements of the principle. This highlighted gaps particularly in relation to the interview questions. The interviews ended up being quite long and the transcripts showed that many of the interviewees spent a lot of time talking about issues unrelated to the principles we were investigating. It would have been more helpful for the survey and the interviews and thus the overall results if the matrix had been used early in the research process, rather than as an analysis tool right at the end of the process.

Observation in relation to responses

Although the research team can state with certainty what the responses were, drawing conclusions about these responses is not always clear. One example was in relation to the science that was presented in support of the zoning and management of marine parks. One of the elements identified by the research team of an effective public participation process is rigorous and independent science informing the participants. When asked whether this was evident in the process of zoning and management of marine parks in SA, the responses were split and extreme. Some thought the science was excellent and some thought the science was hopeless. This is a somewhat surprising result as there was a SWG specially established for this purpose. Rather than an objective evaluation of the science, were these responses reflective of participant satisfaction/dissatisfaction with the final results? A more precise way for determining an answer to these questions is needed.

Recommendations

Most of the peak stakeholder groups thought the public participation process was effective. The comments the research team received from the peak stakeholder interviews confirmed that the commitment of the representatives from DEWNR was an important factor. One of the interviewees suggested that one of the measures for successful community consultation process is for regional communities to take ownership and stewardship of the marine reserves.⁶⁶ A recommendation was put to the government suggesting that the marine parks become part of the regional economy and used to promote the region, generating new economic growth, based on more passive tourism such as environmental tourism, rather than fishing tourism.

In practice the community consultation in the marine parks process involved large numbers of members of the community. This was most likely due to political commitment at the highest level as well as the commitment to the public participation process by the representatives of DEWNR. An example of this can be seen in the process of establishing local advisory groups to develop the management plans. Under the legislation, the Minister is to develop these plans on the advice of the Marine Parks Council and the Scientific Working Group. The government decided to establish the MPLAG's and this added to the perceived success of the participation process, because the community felt they were involved from the start. As has been detailed earlier in this chapter, the aggression shown in some of these MPLAG meetings, forcing some stakeholders to exit the process, was a major shortcoming of the participation process. Another side effect of the heated discussion within the MPLAGs was that some didn't conduct all of their five designated meetings (which excluded some community members). Those with strong leadership in the chairing role were able to achieve more representative outcomes.

Being dependent on committed individuals is setting the scene for failure in the absence of such individuals. A better solution may be to have a robust method for applying participation principles to any natural resource protection process. The South Australian government has established a consultation protocol called Better Together. It includes 6 principles of consultation and a website, YourSay, for community contributions.⁶⁷ Although contributions for the Marine Park process closed nearly three years ago, comments are still available on the site.⁶⁸

This research has identified eight major areas for improvement in the effectiveness of the participation process. Although all eight relate to the specific Marine Park legislation, the suggested improvements can have general application when implementing the participation principle.

Appoint strong and independent Chair

There was a withdrawal of some of the conservation groups from the process due to aggressive behaviour towards them during meetings. A strong Chair is needed in this type of situation. Those LAGs with Chairs with good leadership skills had a more productive process.

Sometimes the Chair was put into a difficult position as they were also a member of the local community. This potential conflict of interest could be overcome by having an independent Chair. Another way of dealing with conflict that may arise during the meetings is for the meetings to be mediated by a

66 Interview with Marine Parks Council.

67 Better Together. <<http://bettertogether.yoursay.sa.gov.au/>>. See also, Government of South Australia. *Better Together: Principles of Engagement*. Available at <<http://saplan.org.au/assets/better-together.pdf>>.

68 <<http://yoursay.sa.gov.au/blogs/your-perspective-on-marine-parks>>.

trained mediator, or two. Co-mediators have the advantage of being able to facilitate break-out group enabling the establishment of common ground between some of the conflicting parties.

Recommendation: Appoint independent Chair with strong leadership or appoint mediators as co-Chairs

Effectively manage expectations

Involving a large representation from the community is important and large numbers of community members were involved in this process, but at the same time the process must be managed well. For example, the legislation requires a ‘comprehensive, adequate and representative’ system.⁶⁹ Participants need constant reminding of this legislative requirement and what it might mean. The idea of the MPLAG process was excellent. The best way of managing this process effectively is to be upfront about the expected outcome and set strict boundaries so the participants know what to expect in terms of the process.⁷⁰

Recommendation: Effectively manage expectations by stating boundaries and expected outcomes up front.

Recommendation: Ensure each stakeholder group is represented in the MPLAGs.

Improve media engagement

It is useful to provide the media good press releases and to cooperate with them so they will assist the process. Media training is recommended for those managing the process. A related issue that came up in the stakeholder interviews was the relative advantage of social media in dealing with the loud-mouthed person who tends to dominate traditional meetings. Although dominating people are also on social media sites, ‘social media does allow the quieter, more reserved person the opportunity to be able to construct a good response in their own time, in their own words without harassment.’⁷¹ Social media should not be used to facilitate discussion as this would only allow the ‘loud mouthed person’ another avenue in which to vent their opinion. Rather it should be used to enable a wider range of people to participate and needs to be designed to be less intimidating for these people. This would be facilitated by having a platform to participate without the opportunity for others to comment.

Recommendation: Facilitate access to social media and allow online input as an alternative to face-to-face meetings.

Recommendation: Provide media training for those managing the process.

69 Joint ANZECC / MCFFA National Forest Policy Statement Implementation Sub-committee (1997). Nationally Agreed Criteria for the Establishment of a Comprehensive, Adequate and Representative Reserve System for Forests in Australia. Canberra: Commonwealth of Australia; Marine Parks Act 2007 (SA) § 8.

70 Stakeholder interview.

71 Stakeholder interview.

Provide for appropriate use of a tool like SAMPIT

A computerised tool (SAMPIT) was used to support engagement. The survey responses were vocal in respect to this online tool. The government representatives explained that this is a tool to allow participants to plot the areas that they used in their commercial and recreational pursuits so that the final sanctuary zones would have less than 5% overlap. A similar tool can be useful in the designation of marine parks. However, the survey responses were not all positive. People did not trust how the tool would be used by decision-makers and some manipulated its use by mis-locating 'good spots'. Suggested improvements to the tool are making it simpler and more user-friendly and providing the opportunity to ask questions and get feedback about its effectiveness. Greater clarification of how the tool would be used is recommended.

Recommendation: A tool like Sampit can be useful but its use needs to be explained well and there needs to be trust in the way it will be used.

Sell the message

The attributes and skills of the people running the process need to be identified and applied. They need to develop trust, and to be seen as neutral, thick skinned and able to diffuse aggression and abuse. Another required skill is to be able to clearly articulate the objectives of the relevant law. In the example of the SA Marine Parks, the Marine Parks Act makes it clear that the objective of declaring marine parks, including sanctuary zones, is conservation, not fisheries management. The Act requires a comprehensive, adequate and representative system of marine parks. The design process is not about avoiding peoples' 'favourite fishing spots.' This message was not made clear enough. The responses from the survey and from the stakeholder interviews show that the community was confused about this, with comments such as, 'we already have the best fisheries management in the world', and 'we already manage our fisheries so why do we need marine parks'.

Recommendation: Employ a strong education campaign explaining the clear message to the community.

Build trust in the process

The responses from the surveys and some of the stakeholder interviews indicated the belief that the science was inadequate. This was despite an independent and rigorous SWG providing scientific information for the community. The problem may have been less about inadequate science and more about the ability of those wanting to derail the process to sow seeds of doubt into the minds of the general community. This is a problem replicated in the debate around the science of climate change. The solution is to build trust in the process, which can then lead to an acceptance of evidence based science. Improvement is required in order to build trust in the process. The need to maintain trust was one of the central implementation and effectiveness concerns arising from the evaluation.

Recommendation: Recognise the need to build trust in the process. Keep going back to the community to test that trust is being established and maintained.

Ensure a good monitoring system

At the time of evaluation, the Marine Parks Council (MPC) had been abolished and incorporated into a National Parks Council, when the MPC was meant to implement a monitoring process. The National Parks Council has not yet been established and it seems that the role of monitoring, evaluation reporting and stewardship will now be in the hands of DENWR.

Recommendation: Establish a community based monitoring group with representatives from each of the 19 Marine Parks and to give the community a sense of stewardship.

Conclusion

At first glance, the implementation of the participation principle in Marine Parks in Australia seems to have been effective. There is 'objective' evidence that many aspects of the principle were implemented effectively. However, the community felt that the principle hadn't been effectively implemented, and the research identified some areas of improvement in practice. One of the key stakeholder groups was excluded from the process because some of the consultation meetings were not a safe place for them to be. This offends one of the key elements of an effective consultation process, that all relevant stakeholders are included and given the opportunity to participate.

Brazil: Participation principle and marine protected areas⁷²

Solange Teles da Silva,⁷³ Carolina Dutra, Fernanda Salgueiro Borges, Márcia Fajardo Cavalcanti de Albuquerque, Maurício Duarte dos Santos and Patrícia Borba de Souza⁷⁴

Marine protected areas⁷⁵ (MPAs) are legal instruments to safeguard the integrity of marine ecosystems and biodiversity. They must also safeguard the rights of local and traditional communities living in or near coastal zones, ideally with full consideration of, and active participation by, users of marine environmental resources in the areas' management.

Participation in the process of creating and managing MPAs is a key not only to acceptance of their establishment, but also to their administrative success.⁷⁶ Brazilian law does recognize the participation principle as fundamental for the creation and management of MPAs, but improvement is still needed in the implementation of this principle by public authorities.

Natural resource governance issue

Marine and coastal degradation as a result of human pressure on natural land and marine resources raises problems such as the physical destruction and alteration of habitats, marine pollution, introduction of exotic species and overuse of marine fishery stocks, in addition to climate change and other factors. In this context, marine protected areas (MPAs) are fundamental for sustainable development and, in particular, for the conservation and sustainable use of marine biodiversity.⁷⁷ They are just as important as terrestrial protected areas (TPAs), although these have received more attention. They contribute equally to achieving the objectives of the World Conservation Strategy, namely: maintenance of essential ecological processes and life-support systems, preservation of genetic diversity and sustainable utilization of species and ecosystems.⁷⁸

However, only a very small share of the marine environment is being carefully preserved.⁷⁹ To reverse that situation, the 10th Conference of the Parties of the Convention on Biological Diversity (CBD) in 2000 adopted the Aichi Biodiversity Targets, a set of goals aimed at reducing the loss of biodiversity,

72 Research Project Brazilian Strategy for the Sustainable Management of Living and Non-Living Marine Resources, Coordination for the Improvement of Higher Education Personnel (CAPES/ Brazil). Research Project Law and Sustainable Development: biodiversity management and protection (Mack Pesquisa Institute/ Brazil).

73 Researcher on Productivity at National Council of Technological and Scientific Development (CNPq/Brazil).

74 Mackenzie Presbyterian University, Brazil.

75 A 'marine protected area' is: "Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment." G. Kelleher and R. Kenchington (1992). *Guidelines for Establishing Marine Protected Areas. A Marine Conservation and Development Report*. IUCN. p. 13.

76 G. Kelleher (1999). *Guidelines for Marine Protected Areas*. IUCN. p. 21.

77 CDB Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) (10-14 March 2003). Recommendation VIII/3.

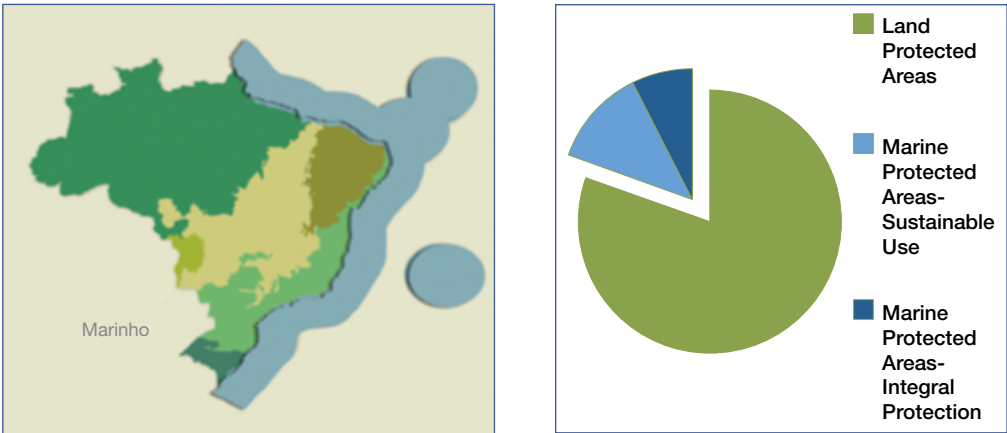
78 IUCN (1980). *World Conservation Strategy*. IUCN/FAO/UNEP.

79 Secretariat of the Convention on Biological Diversity (2004). Technical Advice on the establishment and management of a national system of marine and coastal protected areas. CBD Technical Series no 13.

including goals for the marine environment. Target 11 provides that at least 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, be conserved through effectively and equitably managed, well-connected systems of protected areas. These marine and coastal areas must establish more restrictive protection against harmful uses, and link their management to the conservation and sustainable use of marine biodiversity. To that end, the processes by which they are created and managed must consider all stakeholders, i.e., the full variety of players must be able to express their opinions on the management of natural resources, and administrative decisions must take those opinions into account by building a participatory, transparent and equitable process to create and manage marine areas.⁸⁰

Brazil ratified the CBD and must pursue the Aichi Biodiversity Targets by expanding its MPAs. Brazil initially structured its biodiversity protection strategy around the National Plan for Protected Areas – PNAP (Decree n. 5758/2006), whose principles include promoting participation, social inclusion and citizens’ rights in the management of protected areas. The Plan’s objectives include promoting “diversified, participatory, democratic and transparent governance of the SNUC,” clearly prioritizing the participation principle. The objective of governance in these areas is to reduce conflicts and, ultimately, to find new institutional, political and legal arrangements conducive to sustainable development. Marine and coastal zones are sites of conflicts between artisanal and industrial fisheries, real-estate/port developers and fisher folk, mining interests (oil, sand, clay, etc.) and riverside communities who conserve the environment, and even between authorities and administrators in different levels of government (federal, state, municipal).

Figure 1. Brazilian Federal Protected Areas⁸¹



According to official data, the Chico Mendes Institute for the Conservation of Biodiversity (ICMBio), which is responsible for proposing, establishing, managing, protecting, overseeing and monitoring federal conservation units – now manages a total of 320 federal protected areas, including terrestrial,

80 It is fundamental to take into account human dimensions to the acceptance and success of MPAs. Anthony Charles and Lisette Wilson (2009). ‘Human dimensions of Marine Protected Areas’. ICES Journal of Marine Science 66:6.

81 Marine biome map. Source: ICMBio. ‘Unidades de conservação’. <<http://www.icmbio.gov.br/portal/biodiversidade/unidades-de-conservacao/biomas-brasileiros.html>> accessed 15th January 2015.

marine and coastal units.⁸² There are 63⁸³ marine and coastal protected areas, 24 of which are integral (more restricted) protection units, while the other 39 are sustainable-use conservation units that allow for human activities in the ecosystem, i.e., sustainable use. These areas protect a variety of biomes: Marine (33 MPAs), Amazon (14 MPAs), Atlantic Forest (11 MPAs), Marine and Coastal (2 MPAs), Pampa/Plains (2 MPAs) and Cerrado/Savannah (1 MPA). Of São Paulo's seven MPAs, one is an integral protection conservation unit and six are sustainable-use conservation units. The protected biomes are Marine or Coastal-Marine Zones.

The categories vary depending on each area's objectives and historical processes. The majority of marine extractive reserves (marine RESEXs), for example, are located in northern Brazil and specifically in the State of Pará, due to the organizing process of artisan fishing communities and crab gatherers in response to threats and invasions of their territories, under pressure from predatory fisheries. In the south and southeast, meanwhile – and particularly in the State of São Paulo – marine environmental protection areas (marine APAs) represent the largest number of MPAs protecting the Atlantic Forest, Coastal and Marine-Coastal biomes. A variety of players helped bring these APAs into existence, including public authorities, representatives of settlements and the associations of professional fisheries and shellfish growers, as well as fishery entrepreneurs, organizations to defend the ocean and ecotourism, amateur and sports fishing enthusiasts, nautical and eco-tourism, and other groups.

While there are many documents analysing MPA management, including case studies on specific marine protected areas, few of them look at MPA governance issues or the effectiveness of the legal principle of participation in creating and managing those areas.⁸⁴

Legal principle

Participation can be seen as either a procedural or a substantive norm. In law, various terms may be used for the participation principle: citizens' participation in the administration of public affairs, community participation, social participation, consultation and others. No matter which term is used,

82 Conservation units or 'protected areas' are framed in 12 types divided into two groups, according to the National System of Conservation Units: a) integral-protection conservation units, whose purpose is to preserve nature by allowing only indirect use of natural resources (Ecological Stations, Biological Reserves, National Parks, Natural Monuments and Wildlife Refuges); b) sustainable-use protected areas, in which we seek to reconcile nature conservation and sustainable use of its share of natural resources (Environmental Protection Areas, Areas of Ecological Interest, National Forests, Extractive Reserves, Wildlife Reserves, Sustainable Development and Private Natural Heritage Reserves). This number of conservation units does not include RPPNs (Private Natural Heritage Reserves).

83 These areas are located along Brazil's marine and coastal zones from the far north "mouth of the Oiapoque River (04°52'45"N) to the mouth of the Chuí River (33°45'10"S) and from the municipal borders on the coast to the west out to the 200 nautical miles limit, including the areas around the Rocas Atoll, the Fernando de Noronha and the São Pedro/São Paulo archipelagos and the islands of Trindad and Martin Vaz, located beyond the maritime limit." MMA, Secretaria de Biodiversidade e Florestas/Gerência de Biodiversidade Aquática e Recursos Pesqueiros (2010). *Panorama da conservação dos ecossistemas costeiros e marinhos no Brasil*. MMA.

84 Cf. Barbara de Moura Banzato (2014). 'Análise da efetividade das unidades de conservação marinhas de proteção integral do Estado de São Paulo'. Master's Thesis. Programa e Pós-graduação em Ciência Ambiental da Universidade de São Paulo; Felipe Augusto Zanusso Souza (2012). 'Desafios e perspectivas da participação social nos conselhos gestores de duas unidades de conservação na Baixada Santista do Estado de São Paulo'. Master's Thesis. Programa de Pós-graduação em Ciência Ambiental da Universidade de São Paulo 2012; Peter Jones, Wanfei Qiu and Elizabeth De Santo (2011). *Governing Marine Protected Areas - Getting the Balance Right*. Technical Report. United Nations Environment Programme.

the general goals are to advance participatory democracy, legitimize decisions made by governments, and reduce conflicts. There is no participation without information. Access to information – a keystone in any democracy – is intrinsically linked to the effectiveness of the participation principle.

International and regional context

In the environmental field, the participation principle has been recognized in various international documents.⁸⁵ Principle 10 of the the 1992 Final Declaration of the United Nations Conference on Environment and Development (Earth Summit) states that:

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.⁸⁶

Ever since, international instruments such as the Aarhus Convention have reaffirmed the need to apply the democratic participation principle, based on the tripod of access to information, public participation and access to justice in environmental affairs. In the regional context of Latin America and the Caribbean, negotiations are underway to adopt a specific regional instrument to implement the rights to access to information, to participation and to justice in environmental affairs.⁸⁷ In addition to specific international texts on the participation principle, other multilateral environmental conventions also express the need to strengthen participation around specific themes, for example to protect biodiversity and manage protected areas and to protect wetlands.⁸⁸ This movement towards the adoption of international declarations and treaties has led states to materialize the principle, assuring participation in processes that create and manage protected areas.

Brazilian constitution

The 1988 Constitution creates an environmental protection regime (art. 225), which imposes upon Public Authorities and society as a whole ('the collectivity') the duty to defend and preserve the environment. The Constitution enshrines, albeit indirectly, the participation principle for environmental affairs, since defending and preserving the environment requires access to environmental information

85 For example, the World Charter for Nature established that "23. All persons, in accordance with their national legislation, shall have the opportunity to participate, individually or with others, in the formulation of decisions of direct concern to their environment, and shall have access to means of redress when their environment has suffered damage or degradation." UNGA Resolution 37/7 (28th October 1982). 'World Charter for Nature'.

86 Rio Declaration on Environment and Development (1992) Principle 10.

87 The United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (adopted June 25, 1998). Aarhus, Denmark.

88 CBD, COP Decision X/31 (18 - 29 October 2010). 'Protected Areas'. B. Issues that need greater attention: 3. Management effectiveness, ("Invites Parties, taking into account the target for goal 1.4 of the programme of work, which calls for all protected areas to have effective management in existence by 2012 using participatory and science-based site planning processes with full and effective participation of stakeholders, and noting that to assess the effectiveness of the management, specific indicators may also be needed to: ... b) Include information on governance and social impacts and benefits of protected areas into the management effectiveness evaluation process;"); Ramsar Convention COP Resolution VII.8 (10-18 May 1999). 'Guidelines for establishing and strengthening local communities' and indigenous people's participation in the management of wetlands'.

and power to participate in decision making.⁸⁹ In addition, the Constitution assures to all persons the right to receive information in their own or the general interest from public agencies, except for information whose secrecy is essential for the security of society and of the state (art. 5, XXXIII).

Infra-constitutional norms: public participation principle and marine protected areas

General infra-constitutional norms on participation, as well as those specifically related to protected areas, have enshrined the participation principle, as a basis for governance. First, the National Policy on Social Participation recognizes participation as the right of a citizen and establishes the objective of consolidating it as a method of government (Decree n. 8243/2014).⁹⁰ Meanwhile, the National System of Conservation Units – SNUC (Law n. 9985/2000) includes among its guidelines the assurance of effective participation by local populations in the creation, establishment and management of conservation units (art. 5, III), as well as support for cooperation from non-governmental organizations (NGOs), private organizations and individuals in managing conservation units (art. 5, IV). In addition, the National Plan for Protected Areas – PNAP (Decree n. 5758/2005) lists among its objectives the promotion of diversified, participatory, democratic and transparent governance for the SNUC, prioritizing implementation of the participation principle.

On access to information, Brazilian law assures public access to environmental data and information as a right (Law n. 10,650/2003) and sets forth procedures to be followed by public authorities to assure access to that information (Law n. 12,527/2011). There are also policies and plans that affect MPAs and the participatory principle, for example the National Policy for the Environment (Law n. 6,938/1981), the National Policy for Maritime Resources (Decree n. 5,377/2005), the National Policy for the Sustainable Development of Traditional Peoples and Communities (Decree n. 6,040/2007) and the National Plan for Coastal Management (Law n. 7,761/1988).

The participation principle is particularly relevant to MPAs at three different moments: a) the creation of conservation units, when the law requires a prior public consultation; b) the establishment and operation of the management board, as a mechanism to assure public participation in management of the conservation unit; and c) the drafting and approval of each unit's management plan, the technical document based on a conservation unit's general objectives, which sets forth its zoning and rules on land use and natural-resource management, including the provision of physical structures necessary to manage the unit.

89 Álvaro Mirra (2011). *Participação, processo civil e defesa do meio ambiente*. São Paulo: Letras Jurídicas. pp. 101-121.

90 This executive decree grew out of a major dialog underway between civil society and the government and recognizes possibilities for direct participation by society in federal administration affairs. As soon as it was issued, it was targeted by critics from conservative political sectors. Academics and legal practitioners from around the whole country published a manifesto supporting the decree for expanding civil participation by getting new forms of social networks involved. Conservatives mobilized in the National Congress to revoke the decree, arguing that it violated prerogatives of the Congress and therefore could not be adopted by decree. On October 28, 2014, the lower house of Congress, the Chamber of Deputies, voted to overturn the Executive Decree when it approved a Draft Legislative Decree (n. 1491/2014), which is now before the Federal Senate for final deliberation.

Evaluation across different levels

The research team established objective indicators of the extent to which the legal principle of participation has (or has not) been implemented across the four levels of evaluation. To test these indicators, the team undertook a bibliographical survey of applicable legislation, along with an exploratory gathering of documentation at the Chico Mendes Biodiversity Conservation Institute (ICMBio) – the federal agency responsible for managing federal protected areas in Brazil, headquartered in Brasília – and a survey of the situation of federal MPAs, in order to identify the presence or absence of management boards and management plans in each, as well as of environmental education activities for neighbouring communities and training of members of the management board. Field research included qualitative, non-directed interviews with the managers of federal and State MPAs located in the State of São Paulo.

Instrumental level

While the 1988 Constitution ascribes to society as a whole the duty of defending and preserving the environment, Brazil's infra-constitutional National Environment Policy enshrines the principle of community education, to prepare communities for active participation in defending the environment. The guidelines, norms and procedures for creating and managing conservation units under the National System of Conservation Units (SNUC, established by Law n. 9985/2000) and its implementing decree (n. 4340/2002), along with Normative Instructions published by the ICMBio, also invoke the participation principle.⁹¹ These instruments thus adopt participatory mechanisms such as consultations prior to the creation of protected areas and management boards that include the participation of a variety of stakeholders.

The first step to create a protected area is an application – by public authorities, civil society or the scientific community – to environmental agencies, to protect a given area. After technical studies are complete, the law requires a public consultation. The consultation process – compulsory for the creation, expansion or changes to conservation units – is regulated by a 2002 decree and is indeed only a consultation.⁹² The administrative procedures to organize public consultations are detailed in the ICMBio's Normative Instruction n. 5, in 2008. At least 15 days before the consultation, three acts are required: (a) publish an announcement of the public consultation in the Official Gazette inviting the public at large and providing the date, location and time; (b) send invitations to mayors of municipalities and governors of states covered by the proposed conservation unit, with a justification for the proposal and a map of the area; and (c) publish on the internet the justification for the creation of the unit and a map of its boundaries. The announcements must also make clear, in the appropriate language, any implications for the population living in or near the area.

After a conservation unit has been created, the law also requires participation by society in management boards, which have either consulting or decision-making powers, depending on the category in which

91 The ICMBio has two main regulations on this. ICMBio Normative Instruction n. 1/2007 provides guidelines, norms and procedures for the preparation of participatory management plans in federal conservation units that are either extractive reserves or sustainable development reserves. ICMBio Normative Instruction n. 9/2014 provides guidelines, norms and procedures for the formation, implementation and modification of the membership of management boards in federal conservation units.

92 Prior consultations are not compulsory for the creation of ecological stations and biological reserves, which are integral protection conservation units. This exception was introduced to handle cases where the urgency of conservation measures justifies intervention by public authorities, bypassing the public consultation stage, because ecological stations and biological reserves are conservation unit categories used only in cases of great biological importance, fragility or threat to natural resources.

they are classified.⁹³ The boards were regulated in 2002, and contribute to decisions made by the management agency, namely the ICMBio for federal units and the State Forestry Foundation, for São Paulo. The head of the conservation unit chairs them and, whenever possible, must ensure parity in the representation of public agencies and civil society.⁹⁴ The responsibility of conservation unit boards includes oversight of the drafting, implementation and review of the unit's management plan assuring its participatory nature. The board must express its opinion regarding any project or activity that may potentially impact on the conservation unit, its buffer zone, mosaics or ecological corridors. All board meetings must be open to the public, with an agenda published as soon as each meeting is called, and must be held in an easily accessible venue.

The management board must be established, preferably, before or along with the drafting of the management plan. The management plan is a technical document that must be drafted within five years following the creation of the conservation unit.⁹⁵ This document outlines the zoning of the conservation unit, guidelines for its use and management of natural resources. Broad participation must be assured for the population living in or around the MPAs – be they extractive reserves, environmental protection areas or areas of relevant ecological interest.⁹⁶

In procedural terms, participatory concepts are embodied in the law through precise rules prescribing procedures that assure the effectiveness of the participation principle in the creation of protected areas, and in the establishment and operations of management boards. The same cannot be said however, for the drafting and approval of management plans. To make the participation principle truly effective in the implementation of protected areas, much more information must be made available in objective and comprehensible language, and mechanisms must be created to assure the participation and training for board members, particularly from traditional populations.

Institutional level

The National Registry of Conservation Units (CNUC), required by art. 50 of Law n. 9985/2000, is run by the Ministry of the Environment and provides official information from Federal, State and municipal agencies on the SNUC.⁹⁷ Conservation unit management offices enter the information provided into the registry, although the information is often outdated. In 2014, the State of São Paulo created the Information and Management System for Protected Areas and Areas of Environmental Interest (SIGAP), in order to integrate, organize, catalogue and provide information on State protected areas.⁹⁸ Because SIGAP is not completely functional, evaluation of its effectiveness was not possible.

93 For MPAs, there are consultative boards for integral protection conservation units (ecological stations, biological reserves, national parks, natural monuments and wildlife refuges) and also in sustainable-use conservation units (environmental protection areas and areas of relevant ecological interest). Only extractive reserves (which are also sustainable-use conservation units) have deliberative boards, with decision-making powers.

94 Decree n. 4340/2002, Art. 17, §3. Public agencies from all three levels of the federation must be represented, in addition to agencies from areas such as scientific research, education, national defense, culture, tourism, landscaping, architecture, archeology and indigenous peoples and agrarian-reform settlements. Civil society representatives must include the scientific community and non-governmental organizations with proven work in the region of the CU, the population living in and nearby the CU, traditional communities, owners of land inside the unit, workers and the private sector active in the region, and Watershed Committee representatives.

95 Law n. 9985/2000, Art. 27, §3.

96 *Ibid.*, Art. 27, §2.

97 Ministério do Meio Ambiente, Cadastro Nacional de Unidades de Conservação.

98 State Decree n. 60.302/2014.

There are also initiatives undertaken by non-governmental organizations, some with official support, to clarify issues affecting administrative procedures in public consultations on the creation of conservation units. One example was the publication in 2005 of the 'Guide to Public Consultations for Conservation Units.'⁹⁹ Other partnerships between governments and NGOs have discussed the usefulness of public consultations and made suggestions to enhance them.¹⁰⁰

At a Federal level it is ICMBio's responsibility to support implementation of Federal conservation units (CUs) and promote participatory management. Its activities include: (a) rule-making, establishment, restructuring and operations of the CU consulting and decision-making boards; (b) providing support for more wide-ranging public consultations about specific issues or regulations; and (c) developing guidelines for participatory management throughout the processes of creating and re-categorizing CUs and drafting and implementing their management plans.

ICMBio has issued normative instructions that implement the participation principle in the creation and management of protected areas, particularly MPAs. In December 2014, the ICMBio published its Normative Instruction n. 9, with guidelines, norms and procedures for the establishment, implementation and modification of the composition of management boards for Federal CUs.¹⁰¹ It is significant that this instruction does not determine the composition of the board, but provides that the number of representatives and the sectors to be represented shall be determined by the board itself, in order to enhance participation. It also requires that economically vulnerable local communities are able to participate in the work of the board. Guidelines were also produced for managers and members of the board.¹⁰²

At the Federal level and in the State of São Paulo, the managing agencies of the CUs (ICMBio and Forestry Foundation) hold public consultations when they create or make changes in conservation units. They also involve the public in working on the composition and establishment of management boards, and hold participatory workshops to draw up management plans.

Implementation of the participation principle also includes innovative structural and procedural practices. One example of structural initiatives was the creation in 2012 of a virtual library for the Acaú-Goiana Extractive Reserve, through which access to information and participation has enhanced interaction among members of the Resex deliberative board. Documents available include the minutes of the board's meetings.¹⁰³ A good example of procedural innovations is the participatory process through which local actors help manage conflicts in the Baleia Franca Environmental Protection Area, including workshops that use conflict analysis methodology.

99 Roberto Palmieri, Adalberto Veríssimo and Marcelo Ferraz (2015). *Guia de Consultas Públicas para Unidades de Conservação*. Imaflora/Imazon.

100 Cf. joint publication by WWF-Brazil, the Forestry Institute and the São Paulo State Forestry Foundation: Luciana L. Simões and Luiz Roberto N. Oliveira (2010). *Consulta pública e unidade de conservação*. Athalaia Grafica Editora.

101 Instrução Normativa ICMBio N.09 (5 December 2014), Article 13, Paragraph VII.

102 Carlos Abirached et al. (2014). *Conselhos gestores de unidades de conservação federais: um guia para gestores e conselheiros*. ICMBio.

103 Reserva Extrativista Acaú-Goiana - ICMBio and Laboratório de Ecologia e Gerenciamento de Ecossistemas Costeiros e Estuarinos (LEGECE), 'Biblioteca Virtual da Resex Acaú-Goiana' <<https://sites.google.com/site/bibliotecavirtualdaresex/home>> accessed 4 January 2015.

Joint ICMBio/WWF-Brazil studies on the effectiveness of management of Federal conservation units, carried out with RAPPAM (Rapid Assessment and Prioritization of Protected Area Management) method cycles, have been very useful both for analytical purposes and for assuring transparency when implementing the participation principle. The RAPPAM method seeks to show whether activities have actually met the needs of conservation units to achieve their goals.¹⁰⁴ The assessment of the decision making process for MPAs, according to the RAPPAM method cycle, shows a clear improvement in internal organisation of the board as the score for existence and effectiveness increased from 35% in 2005-6 to 48.5% in 2010. However, there was a decrease in transparency of decision-making (down from 80% in 2005-6 to 69.1% in 2010) and effective social participation in management decision-making (from 74.3% in 2005-6 to 50.9% in 2010).¹⁰⁵

Behavioural level

Despite efforts put into creating MPAs, and their management boards, and into formulating and adopting management plans, there is a shortage of basic information (and what information is available is often disorganized) and a shortage of field personnel for effective management in both Federal and State protected areas.¹⁰⁶ There is also no planning to ensure the financial sustainability of the SNUC system.¹⁰⁷

Several influences have affected the implementation of the participation principle in the creation and management of MPAs. Key influences include: (a) Brazil's international commitments, particularly under the Convention on Biological Diversity and the Aichi Targets; (b) the development of a strategy for protected areas; and (c) the very process of Brazil's democratization, which among other outcomes led to the adoption of a new Constitution in 1988. While the Federal government created 23 MPAs in the 1970s and 80s, only ten were created in the 1990s. The process of creating MPAs was consolidated after 2000. Of the 24 Resex MPAs only two were created in the 1990s and all the others have come into being since 2000. The consolidation of democracy and in particular the rights of traditional people (fisher folk, crab gatherers and others) have been fundamental for the emergence of this category of MPAs.

Beyond the mere existence of an MPA or of its management board, however, the context for implementing participation in the management of protected areas is very important. Discrepancies in public policies can cause fragmentation in the administration of marine biodiversity and undermine the institutional role of management boards.¹⁰⁸ During the interviews, public officials spoke of an episode in which a management board, in dialog with a fishing community, produced a list of fishing techniques that would be allowed in a particular MPA, only to have them declared improper days

104 WWF-Brazil and ICMBio (2012). Efetividade de gestão das unidades de conservação federais: avaliação comparada das aplicações do método Rappam nas unidades de conservação federais, nos ciclos 2005-06 e 2010.

105 *Ibid.* p. 111.

106 "Though implementing an effective management council was a priority of every MPA manager, in many cases the lack of MPA staff and other resources had largely limited the ability of officers to place the implementation of management councils in the forefront of their agendas". Leopoldo Gerhardinger *et al.* (2011). 'Marine Protected Dramas: The Flaws of the Brazilian National System of Marine Protected Areas'. *Environmental Management* 47:630.

107 Jaime Gesisky (2009). *Pilares para a Sustentabilidade Financeira do Sistema Nacional de Unidades de Conservação*. Brasília: Ministério do Meio Ambiente.

108 Leopoldo Gerhardinger *et al.* (2011). 'Marine Protected Dramas: The Flaws of the Brazilian National System of Marine Protected Areas'. *Environmental Management* 47:630.

later by the environmental authority. The fishermen only found out about the latter decision when inspectors caught them. The community then rose up against the board, which had lost its credibility as an institution, and the situation took months to be resolved.

Outcome level

At the outcome level, problems exist in terms of access to information and education, and participation in decision-making. Information provided by the National Registry of Conservation Units (CNUC) can be incomplete or outdated, and the presentation of information may be confusing. Capacity building may be lacking in some areas. Many marine protected areas at the federal and state levels have failed to establish management boards and adopt management plans.

Access to information

The National Registry of Conservation Units (CNUC) is important for providing access to information on CUs. It is possible to undertake an online survey of conservation units based on standardized forms; however it will be incomplete as not all CUs have these or the information provided is outdated. The ICMBio site does reproduce data from the CNUC and one can query conservation units per biome. For MPAs, in January 2015 there were 33 records on standardized forms from 2007, 19 in 2010, 4 in 2011, 2 in 2012 and 1 in 2013. One record is not accessible and three MPAs have not been included in the registry. Nor have MPAs created in October 2014 been included in the registry. The information provided by the ICMBio site on management boards and management plans is more up to date. For ordinary citizens, the presentation of the information is confusing and may be misleading. For example: (a) records in the ICMBio site for some CUs do not identify the management boards; (b) some existing management plans have been left out on the ICMBio site; (c) there is no information on the makeup of management boards; and (d) the minutes of meetings are not available to the public over the internet. To access such documents, one must present an application through another site (Information Access Portal) or directly, in writing, to the responsible environmental agency or respective management board.¹⁰⁹ On the standardized records, only three MPAs report that they have web sites: the Guaraqueçaba Ecological Station (a Wikipedia entry), Lagoa do Peixe National Park (a blog) and Jericoacoara National Park (Google).

For the State of São Paulo, since the SIGAP is still being developed it could not be evaluated. The objective of SIGAP is to be a tool for planning, integration and publicity on what public authorities are doing in protected areas. However the Forestry Foundation (FF) – the State’s environmental agency responsible for managing protected areas – does offer information on MPAs, since the FF uses the internet to disseminate information. There is still no general classification of marine areas with regards to their location (land, marine or coastal). There is simply a separate reference to marine APAs. Management plans that are complete (none available), in the drafting process or awaiting approval are published in full on the site. The minutes of management board meetings could not be found. To access the minutes, the research team made a written request to each management board. In two cases, obstacles were raised. In one, no answer was received and in the other the research team was asked to “cut back” the request, since the team was informed that material is organized by only one employee, who would be unable to provide all the minutes requested. Citing the Access to

109 Governo Federal Brasil. ‘Acesso à Informação’. <<http://www.acessoainformacao.gov.br/>> accessed 15 January 2015.

Information Law¹¹⁰, the team reiterated the request, and got no further answer. Therefore, although the government claims that it respects the principles of public access to information, there is still much to be done to effectively achieve this.

Though it does not make information fully available, the internet is the most often used vehicle for sharing information. The internet is helpful in many ways, such as facilitating access to other authorities and to stakeholders involved in managing protected areas, but it should not be the only means used, considering the country's social conditions. Internet access is still restricted for most Brazilians, particularly indigenous and traditional communities, as well as many who live in or nearby CUs.¹¹¹

With regards to capacity building, including environmental education and sensitization, 15 Federal MPAs reported on their standardized forms that they carry out environmental education campaigns in surrounding areas. Seven report activities involving capacity building for board members, access to environmental information, meeting with users of natural resources in or around the CU and the reinforcement of the CU's participatory management. Of the standardised reports on State MPAs, only one refers to an environmental education campaign in surrounding areas, while four speak of environmental education campaigns for users of natural resources and three MPAs left this section blank.

Field investigation determined that in State MPAs: (a) in general the chairs of management boards have degrees in life sciences; (b) the managers report attention being given to the CU's role in promoting environmental education and sensitization for the public at large, including communities in areas affected by the protected area; and (c) some of the reported activities are sponsored by both public agencies and private organization's (associations, NGOs and firms). However, the fact that they do not report initiatives for training in sustainable management, collective bargaining, conflict resolution, etc., may indicate an insufficient concern with developing the skills of management board members.

Participation in decision-making

Participation depends on information being made available during the initial stage of decision-making processes. For the official list of new RESEXs in the pipeline, the data in the general table on the Federal government's official web site is entirely out of date.¹¹² Even if it were current, just providing information on environmental education is not enough. Much more high-quality information is needed for effective participation in decision-making processes. Filling out general information on forms is not enough to ensure adequate management. All stakeholders need to have in-depth knowledge about the protected area, its history of settlement and/or interventions, and present-day pressures and interests at stake, and they must have the capacity and means to effectively participate in the decision-making process.

Regarding the public consultations that must be held prior to the creation of conservation units, the research team found 21 Brazilian higher court decisions via an online search using the terms

110 Federal Law n. 12.527 (November 19, 2011).

111 Instituto Brasileiro de Geografia e Estatística (IBGE) (2013). Pesquisa Nacional por Amostra de Domicílios (PNAD).

112 IBAMA. 'Áreas em estudo para criação de novas Reservas Extrativistas'. <<http://www.ibama.gov.br/resex/nova.htm>> accessed 5 January 2015.

‘conservation units’ and ‘public consultation.’¹¹³ The majority of the higher-court verdicts interpreted the law in favour of the need for public consultations to create protected areas, affirming the democratic principle and acknowledging the diversity of interests in conflict. They also confirmed the need for abundant publicity around the official call for a public consultation. However, there is no obligation (a) to notify personally all affected proprietors; (b) to hold public meetings in each of the affected municipalities; or (c) to guarantee the affected population any additional channels to make their voices heard. The requirement that public consultations take place prior to the creation of MPAs is evident in the general law that created the SNUC.

Problems also exist in relation to management boards and management plans. Of the 63 Federal MPAs, 50 have established their respective management boards and 25 have adopted management plans. Of that total there are:

a) 24 integral protection conservation units:

- Nine marine national parks (marine PARNAs). Seven have management boards and seven have management plans. Seven are classified as marine biomes, and none are located in the State of São Paulo.
- Eight ecological stations (ESECs). All have management boards, but only four have management plans. Four of them are classified as marine biomes, and two of these are located in the State of São Paulo (the Tupiniquins and the Tupinambás ESECs). Both have boards, but only the latter has a management plan.
- Four biological reserves (REBIOS). One has a management board and three have management plans. Three are classified as marine biomes, and none are located in the State of São Paulo.
- Two wildlife refuges (REVISs). Both are classified as marine biomes and neither is located in the State of São Paulo. Only one has a management board and neither has a management plan.
- One Natural Monument (MONA). Located in the State of Rio de Janeiro, it is classified as a marine biome. It has a management board, but no management plan.

b) 39 Federal marine sustainable-use conservation units:

- 24 extractive reserves (RESEXs). 19 have management boards and only one has a management plan. Twelve are classified as marine biomes, and none are located in the State of São Paulo.
- 12 environmental protection areas (APAs). All have management boards, but only nine have management plans. For protected biomes, five are classified as marine or marine/coastal. Only one is located in the State of São Paulo (the Cananéia Iguape Peruíbe APA).
- Three areas of relevant ecological interest (ARIEs). Only one of them has a management board and another has a management plan. Two are located in the State of São Paulo, one of them classified as a marine biome (the Large and Small Queimada Islands ARIE), which does have a management board but has not presented a management plan.

113 We had done our research at the Federal Justice Council Site of ‘unified decisions’ - <<http://www.cjf.jus.br/juris/unificada/Resposta>> - and updated our research till November 3rd, 2015. If we conduct research with the same search using terms in each Higher Court, the number of decisions is different. This might indicate a problem with the indexing or updating of search engines.

In quantitative terms, the two main Federal MPA categories are marine RESEXs (24) and APAs (12). A total of 36 sustainable-use CUs are MPAs, and only one of them is a marine APA located on the coast of São Paulo. The situation regarding marine and coastal RESEXs is discouraging. Of the total 21 marine and coastal RESEXs (leaving out the three created in 2014), only 12 have management boards and only one has a management plan. This is an issue as RESEX management boards have deliberative powers, as well as a responsibility to set up decision-making mechanisms that guarantee the effective participation of traditional communities in the management of the protected area.¹¹⁴

In the State of São Paulo, all seven marine and coastal/marine MPAs, have established their management boards, but none have management plans. They include:

- a) One integral protection conservation unit:
 - One park, the Laje de Santos Marine Park;
- b) Six sustainable-use conservation units:
 - Three environmental protection areas (APAs);
 - Two areas of relevant ecological interest (ARIEs);
 - One marine extractive reserve (RESEX).

In São Paulo, the main MPA categories are marine APAs. While the existence of management boards in all these MPAs indicates a mechanism for participation, in practice the absence of management plans defeats any chance for real management, and even more so effective participation. The six MPAs created in 2008 should have had their management plans approved by the legal deadline in 2013. In the marine APAs, the process is underway, as management plans are being drafted. This process is supported by two environmental consulting firms, funded by the Inter-American Development Bank (IDB), with through the program entitled 'Social-environmental Recovery of the *Serra do Mar* and of Mosaic Systems in the Atlantic Forest.'¹¹⁵

The legal deadline for approving the management plan at the Laje dos Santos Marine Park, created in 1993, is long gone. In 2013, in an effort to address this omission and in response to the potentially polluting activities taking place near the park, the management board approved a 'Public Use Emergency Plan' to organise activities like tourism, environmental education, research and diving, while banning professional, amateur or sports fishing.¹¹⁶ A call for bids is out to hire expert consultants to draft a management plan for the park, but there is no timetable for when this process will be finished. Therefore it was not possible to analyse whether there will be any participation in the development of the management plan and, if there is, to what degree it is actually effective.

Of all the nine Federal and State MPAs in São Paulo where the research team undertook field visits eight have management boards and three have approved their management plans.¹¹⁷ In these MPAs,

¹¹⁴ See more detailed information on RESEXs at the Socioenvironmental Institute (ISA) site. Instituto Socioambiental. 'Unidades de conservação no Brasil – Reserva Extrativista' <<http://uc.socioambiental.org/uso-sustent%C3%A1vel/reserva-extrativista>> accessed 15th January 2015.

¹¹⁵ According to the Forestry Foundation, the plan is drafted in stages, as follows: (a) environmental and socioeconomic diagnosis; (b) participatory diagnosis, including dialog with society to incorporate demands, particularly from local communities, adjusting it to the reality of the protected area; (c) zoning; and (d) planning of management. Today, reports on the first two stages are being reviewed by the Forestry Foundation. In two interviews, Forestry Foundation officials responsible for these reviews stated that these stages may have to be repeated, due to the low quality of the reports.

¹¹⁶ Fundação Florestal (2013). *Plano Emergencial de Uso Público*. Parque Estadual Marinho Laje de Santos.

¹¹⁷ We were unable to do the field research in all MPAs run by the State of São Paulo, due to time constraints.

authorities comply with the legal requirement for an official public call for society to participate in management boards and in drafting their management plans, through announcements in official gazettes, with sufficient publicity regarding scheduled official sessions for each protected area. Management boards, meanwhile, have their parity composition mandated by law, with representatives from the government, private sector and civil society. In practice civil-society representatives occasionally end up representing government interests. Interviews with the chairperson of each management board raised the issue of the legitimacy of civil-society representatives, particularly those from fishing associations. It was mentioned that conflicts arise when the MPA is not effectively managed. An initiative to organise management boards into 'thematic chambers' around the conflict has helped enhance the participation of stakeholders.

Information published in official gazettes and notices for stakeholders to participate in the management of protected areas are important, as demonstrated by the fact that representatives from authorities, researchers, university staff and members of non-governmental organisations always attend. For traditional populations comprehensive engagement is rare, for a variety of reasons. The geographic location of most communities makes it hard to travel to the public consultation particularly when attempting to participate in the decision-making process for the management of the areas. Ultimately, this is an economic problem.

The level of organisation within the local population also has an impact on both the creation and the management of any MPA as to the direction the decisions take and the prioritisation of interests. If a population is reluctant to participate, it may be as a result of various factors such as (a) political alliances and influences that hold back dialog with this democratic forum; (b) systemic disdain by the management agency for contributions made by the management board; or (c) sluggishness in the drafting of plans and delays in the implementation of guidelines established by each board.

Lessons learned

The team faced several challenges in applying the framework including:

1. The search for data on the internet showed that although data exists, it is not organised and/or is outdated. The first challenge was to survey both Federal and State MPAs. Another problem was that data was taken off the Internet for months before the elections.¹¹⁸
2. The document survey and other objective assessment indicators gave rise to a debate among members of the team on the issue of participation and the effectiveness of rights.
3. The bibliographic survey identified the existence of case studies, but a nearly total absence of general studies on MPAs and participation.
4. The research team was unable to gain access to many documents, particularly the minutes of several management board meetings.
5. The research team was unable to interview all of the MPA managers, because they did not show up to scheduled meetings, they did not return phone calls or they did not have time available.

¹¹⁸ The governor of São Paulo partially restricted access to the content of several portals and electronic communication channels of agencies linked to the State government, from July 5 through October 5, 2014, alleging that the federal election campaign legislation prohibits institutional publicity for three months prior to elections. This imposed unjustifiable restrictions on citizens' access to information, since no distinction was made between what was and was not institutional publicity.

6. The research team was unable to verify whether all the MPAs had had consultations prior to their creation, and thus decided to do a study of court records, to at least identify cases in which the lack of prior consultations had given rise to litigation.
7. The dimension of administrative, human and financial resources for MPAs merits a separate study, to look into the system's weak and strong points.

In the interviews, the researchers' main concern was to avoid interfering in the depositions, leaving the participant free to raise and reflect upon points they deemed relevant to the issues. The issues had been presented to them through the invitation to be interviewed, along with a consent form authorizing the audio to be recorded. The difficulties in scheduling interviews, and the refusals and no-shows indicated the intensity of conflicts of interest in certain MPAs.

Interviews require a multidisciplinary team to help prepare the researchers for qualitative, non-directed interviews, to draft the 'invitation to participate' and the 'information sheet and consent form.' However the legal approach must remain central, along with a professional approach that can make use of contributions from other fields such as sociology, anthropology, economics, and political science to develop an innovative method that can enrich discussions on the implementation of legal principles.

The interpretation of interviews requires enough time for a legal reflection on the material. Time constraints, for example, kept us from interviewing all the players involved in MPA management, and from analysing some issues such as overlapping dominions of participation, when MPAs themselves overlap.

When researching court rulings, another important aspect is how rulings are indexed. Often one cannot do a generic search, since the key words will not identify the rulings being sought. It would be worth re-doing this search at the São Paulo State Higher Court of Justice, specifically at the specialized Chamber on Environmental Law.

Another caveat is that the mere presence of active social players may not be a reliable indicator of effective participation, since the situation may still favour local elites. The fact that participation may reproduce social inequities, of course, is a risk that evaluators cannot ignore.

Finally, the framework must be seen as a process that can evolve and be adapted to the context where it is applied, just as implementation of the participation principle is also an emerging process, which can have a positive impact on the consolidation of governance over natural resources.

Recommendations

The following seven specific recommendations could improve the effectiveness of the law incorporating the participation principle in MPAs in Brazil.

Dissemination of precise, complete and up-to-date information

Precise and complete information must be made public, including the identification of land, coastal or marine protected areas and whether they are designated Federal or State areas. Official sites run by the management agencies responsible for managing the conservation units should set up specific electronic pages for each management board containing more than just general information, such as locations. For example the dates of the decree that created the unit, the names of institutions and representatives sitting on its management board, and their functions and terms of office should be included. The board's action plan and bylaws should be posted along with the minutes of their

meetings and decisions, including documents related to MPA management (such as use concession contracts among public agencies and resolutions made by RESEXs).¹¹⁹

Projects involving the creation or re-categorization of conservation units must also be published. This is not a hurdle for the creation of MPAs, but rather the beginning of a dialog among stakeholders and society at large. Environmental agencies could create a page on their websites with all the proposals they receive, including the category, name, State, area and date of filing at the appropriate authority, along with updates to any evaluation or approval procedures. Constant updating of the information is the key to making it valid and allowing people to be informed and participate.

Diversification of information channels

Overall, information that reaches the public at large must be clear, objective and comprehensible, both over the Internet and through other channels such as radio, television, print media, etc. Stakeholders with no access to those channels must also be catered for, especially the affected traditional communities. There must also be a channel for the public to make direct contact with protected area boards to make suggestions.

Capacity building

There is a need for environmental education targeting natural-resource users and other segments active in the territory under the influence of MPAs as the standardized reports indicate the utter inadequacy of such work. There must also be capacity building activities available for board members, public officials and other stakeholders on topics such as sustainable management, collective bargaining, conflict resolution and decision-making on environmental affairs. Investing in the development of leaders is equally important, avoiding any elitism on boards that might distance them from the people's needs and social movements. Technical skills for board members should also come hand-in-hand with political skills, to help them understand that boards are, in Dagnino's words, spaces of conflict.¹²⁰

Changes to institutional structures and decision-making, considering actual conditions

It is fundamental that there be parity in the composition of management boards, that they be inclusive and operate transparently, and that they allow public access to their decisions, recommendations and other documents.

It is advisable that a study be done on the institutional structure (management boards) and on decision-making processes in MPAs, to decide whether or not consultative boards should gain deliberative powers. Currently the only MPAs with deliberative boards are the RESEXs.¹²¹ This aspect is meaningful

119 The Socio-environmental Institute (Instituto Socioambiental, or ISA) has a database on conservation units in the Amazon containing general information, characteristics, contacts, news, overlaps, documents and maps. For marine RESEXs, for example, see Instituto Socioambiental. 'Reserva extrativista'. <<http://uc.socioambiental.org/uso-sustent%C3%A1vel/reserva-extrativista>> accessed 15 January 2015. WWF has created and maintains an observatory on conservation units which provides data from the National Registry of Conservation Units in a clearer presentation, including basic data, legal situation, management plan and maps: WWF. 'Observatório de Unidades de Conservação'. <<http://observatorio.wwf.org.br/sobre/>> accessed 15 January 2015.

120 Evelina Dagnino (2002). 'Sociedade civil, espaços públicos e construção democrática no Brasil: limites e possibilidades' in Evelina Dagnino (ed). *Sociedade civil e espaços públicos no Brasil*. Paz e Terra. p. 285.

121 Sustainable Development Reserves also have deliberative management boards.

since the nature of the board can influence its degree of autonomy to decide on issues relevant to the protected area. In any case, it is not the board's consulting or decision-making responsibility that determines whether the positions it takes will have any practical consequences. Indeed, the tangible role of boards – whether they have consultative or deliberative powers – is to contribute to the management agency's decisions and to help implement them.¹²² This means that changes to ensure inclusive participation in directing public policies must be assessed not only from a legal standpoint, but above all based on real conditions. As Cormier-Salem said, in developing countries one must investigate the role of participatory democracy in the context of local public-policy making.¹²³ She suggests there is room for a critique of collective action methods, but that this is not an impediment to legal, institutional, economic and technological innovations, nor to the mobilization of players into new arenas. These factors may bring out or even intensify conflicts, while also generating knowledge to be shared, rules to be redefined and social connections to be reactivated. In other words, it is worth considering that ideal conditions for management boards do not grow solely out of the will of laws, but from a political will pushing for their participatory management. Brazil's MPAs, still in the throes of structuring their management boards, are far from this stage.

Specific initiatives, such as participatory workshops and awareness-raising actions, must proliferate in MPAs to bring the local population and traditional communities into decision-making processes. Management board decisions may be made by consensus or by vote, but it is essential that this rule be decided objectively and be adopted into the MPA board's bylaws. No asymmetries should remain in political and economic conditions, and all participants must be assured equal opportunities in decision-making.

While conflicts should be avoided, it is important to establish a dispute settlement mechanism, to preserve confidence in the system. Appeals to outside bodies must be a last resort. It is vital to have a discussion on whether the management board's decisions will be binding or not. Ultimately, if a board's decisions do not actually bind the Administration to act, or if they have no impact on management of the areas, then the involvement of society in their implementation becomes senseless.

Adoption of strategic planning

The right level of participation relates directly to the management plan, since with no planning, participation in management is worthless. That is why strategic action plans must be drafted and adopted based on the management plans, in constant dialog with the MPA's management stakeholders, particularly traditional populations in the RESEXs. Not having a management plan, however, cannot justify not having an action plan, which should be based on the conservation unit's objectives and present challenges. The board must apply strategic-planning tools to monitor and assess outcomes, including periodic management reports.

Coordination of MPA participatory management with other decision-making bodies

The effectiveness of participation in MPA management also depends on coordinating management boards with other official bodies, particularly authorities responsible for fisheries, navigation and coastal planning. The survey identified problems with conflicting, overlapping rationales for protection.

122 And, as Gohn has made clear, what determines the nature of a board is not its nature at all but the process in which it is involved. *Maria Gohn (2003). Conselhos gestores e participação sociopolítica* (2nd ed). Cortez.

123 Marie-Christine Cormier-Salem (2014). 'Participatory governance of Marine Protected Areas: a political challenge, an ethical imperative, different trajectories' SAPIENS 7 [Online].

Nationwide, MPA management cannot be dissociated from the National Coastal Management Plan, to harmonize different uses of natural resources in MPAs with the conservation of all marine biodiversity.

Stronger administrative structures and more human and financial resources

Most of the MPA management boards that were analysed operate in precarious settings and must be provided with administrative structures and sufficient human and financial resources to manage each area as planned.

Conclusion

The ratio of Brazil's vast marine territory¹²⁴ to the area now covered by its MPAs – 1.5% of this biome's total area¹²⁵ – is not enough to assure the conservation of the country's marine biodiversity, in a space subject to so many different interests. Those interests mobilize a variety of stakeholders, whose rationale follows an equally diverse variety of concepts on development, ranging from preservation to exploration and/or exploitation. For governance to help protect marine biodiversity there must be effective participation in the creation and management of MPAs. That participation depends above all on enhancing Brazilian law enforcement for MPAs and on respecting Brazil's international commitments. In addition to creating new MPAs, the management of existing MPAs must improve by implementing their management boards and by drafting and approving their management plans.

124 The marine area corresponds to the territorial sea and the exclusive economic zone and is 3,555,796 km².

125 Cadastro Nacional de Unidades de Conservação/ Ministério do Meio Ambiente (27 October 2014). 'Unidades de Conservação por Bioma'. Available at <http://www.mma.gov.br/images/arquivo/80112/CNUC_Biomas_Out14.pdf> accessed 15 January 2015.

New Zealand: Precautionary principle and endangered species

Trevor Daya-Winterbottom, Gay Morgan, Roshni Bava, Mark Calderwood, Michelle Chen, Natalie Forster, Ben Hansard, Sarah Thomson, and Jaime-Anne Tulloch¹²⁶

New Zealand's economy is export and tourism reliant, and having a pristine ecologically sound physical environment is a major tourism draw. Because this topic is perceived to be and is in fact economically important to New Zealand; it is also sensitive to reputational issues. It would be in this area, if in any areas, that conservation principles would be effectively integrated into natural resource governance. To evaluate this hypothesis the research team examined the integration of the precautionary principle into the legal regime to protect a 'tourist attractive' and critically endangered marine mammal species endemic to New Zealand, the Maui dolphin.

Natural resource governance issue

Maui dolphins are the rarest and smallest cetacean within New Zealand waters, with 15 remaining breeding females over one year of age out of a population of 55. There are two main threats to the survival of Maui dolphins: marine mining and commercial fishing. The most recent International Whaling Commission (IWC) report on Maui's dolphins estimates that 95.5% of the human induced mortality of the dolphins arises as a result of gillnetting and trawling.¹²⁷ Even though fishing methods contribute significantly to the mortality of Maui's, 85% of the habitual range of the species remains unprotected from fishing. The other 4.5% of human induced mortality of the dolphins is caused by: pollution, marine mining, boat strikes, disease and tidal energy production.¹²⁸ The ethics of conservation has recently been brought into the spotlight in New Zealand with the government proposing to open up part of the West Coast North Island Marine Mammal Sanctuary (WCNIMMS) to marine mining exploration. The tension between development and conservation is very real in this instance given the significant economic benefits that exist from such 'dolphin danger activities' in the reserve as well as the real risk of harm that could result to Maui's dolphin along with other marine species.

Specific initiatives to conserve and protect Maui dolphins are a relatively recent phenomenon. In 2008, a Threat Management Plan (TMP) enacted a range of specific regulations that aimed at conserving and assisting the revival of the species. Central to this plan was the WCNIMMS, created under the Marine Mammals Protection Act 1978. Within this sanctuary fishing and mining activities are regulated to a certain degree, however, the sanctuary does not cover the entire range of the dolphin and does not fully prohibit all fishing and mining activities. In short, it provides inadequate protection. Another key element of the statutory framework is the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZA). The EEZA regulates mining in the EEZ and has a specific environmental focus in which the habitat of threatened species, such as Maui's, is considered.¹²⁹

¹²⁶ University of Waikato, New Zealand.

¹²⁷ B. Maas (2015). *Estimated population size and decline of Maui's dolphins*. International Whaling Commission. SC/66a/SM7/21 Rev1.

¹²⁸ R. J. C Curry, L. J. Boren, B. R. Sharp and D. Peterson (2012). *A risk assessment of the threats to Maui's dolphins*. p. 1.

¹²⁹ Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZA), §§ 19, 20, 23, 59.

Regulations promulgated under the EEZA require that those exploring for oil and gas must adhere to the Seismic Code of Conduct which has a number of provisions designed to protect marine mammals such as dolphins.¹³⁰ Finally, the Fisheries Act 1996 is the main legislation regulating fishing activities in New Zealand. A number of issues exist within this legislation given that dolphin by-catch is a significant contributor to Maui mortality. Weak regulation of driftnets and gillnets exists under the Driftnet Prohibition Act 1991 and more could be done in this respect to give effect to the precautionary principle of environmental law.

Legal principle

The precautionary principle recognises that when there are threats of serious or irreversible harm, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.¹³¹ An important element of the precautionary principle is that it shifts the burden of proof onto those carrying out the risk-imposing activity, requiring them to prove that the certain activity will not be detrimental to the environment.¹³² This means that the evidentiary burden lies heaviest on those carrying out the potentially harmful activity, while those advocating for the environment only need to show that environmental harm is plausible.

The precautionary principle has arguably attained a soft form of customary status in international law. The principle was entrenched at the 1992 Earth Summit where it appears in Principle 15 of the Rio Declaration on the Environment and Development. The establishment of the Food and Agriculture Organisation of the United Nations (FAO) saw the creation of the Code of Conduct for responsible fisheries. The Code provides the principle and standards that reflects conservation, management and the development of fisheries.¹³³ Article 6.5 states that:¹³⁴

States and sub-regional and regional fisheries management organizations should apply a precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment.

If the precautionary principle were fully implemented in respect of the protection of marine mammals, the Minister of Fisheries would exercise greater caution when setting fishing regulations, and as a result the area of set-netting bans would be more extensive. The small size of the Maui dolphin's population and the imminence of extinction would be taken into account by the Courts, resulting in a higher level of scientific uncertainty being accepted as persuasive. The evidentiary burden would also be shifted onto the fishing industry and mining industry, who would need to prove not only that their activities were economically beneficial, but that their activities would not have a harmful effect on marine mammals before being given permits or licences.

Evaluation across different levels

For evaluating implementation of the principle, the team used a combination of a literature review and a process of identifying and analysing relevant legislation, case law, and legal writing. Additionally,

¹³⁰ EEZ and Continental Shelf (Environmental Effects – Permitted Activities) Regulations 2013, cl. 7.

¹³¹ *Rio Declaration on Environment and Development* (1992) Principle 15.

¹³² Warwick Gullet (1997). 'Environmental protection and the precautionary principle: a response to scientific uncertainty in environmental management'. *Environmental and Planning Law Journal* 14(1):52-69. p. 59.

¹³³ FAO Code of Conduct for Responsible Fisheries (1995).

¹³⁴ *Ibid.*, Article 6.5.

given the multi-disciplinary nature of environmental law, the team reviewed a selection of scientific writing – as scientific consensus can have a strong direction on public policy, but noting that the scientific literature sometimes reveals conflicting opinions.

Instrumental level

Legislation and regulations that specifically integrate the precautionary principle do exist to protect Maui dolphins. The protective legal umbrella sheltering the dolphins is found in statutes regulating fishing, vessel movements and marine mining, as distinct from but supported by environment-specific law.

The Fisheries Act 1996 is the central piece of legislation that regulates the fisheries industry in New Zealand. The broad purpose of this Act is “to provide for the utilisation of fisheries resources while ensuring sustainability.”¹³⁵ The Act defines ensuring sustainability as:¹³⁶

- (a) Maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and
- (b) Avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment.

The second part of the definition of sustainability is most relevant given that Maui’s dolphins do not form part of New Zealand’s fisheries, yet are part of the aquatic environment. Interestingly, the second part of the definition is written in absolute terms and does not provide discretion to the regulator about their approach to adverse effects of fishing on the aquatic environment. The Supreme Court in *New Zealand Recreational Fishing Council Inc. v Sanford Ltd* found that section 8(1) “expresses a single statutory purpose” in which there is a tension between utilisation and sustainability. Elaborating this, the Court said that the terms in section 8(2) “are to be accommodated as far as is practicable in the administration of fisheries”. Overall, this discussion is relevant to species not included in the fisheries such as Maui’s as “[f]isheries are to be utilised, but sustainability is to be ensured.”¹³⁷

Decision-makers under the Fisheries Act must account for the environmental principles contained in the Act. These principles stipulate that associated or dependent species should be maintained at a level sufficient to ensure their long-term viability, and that the biodiversity of the aquatic environment and habitats of particular significance for fisheries should be protected. Section 10 of the Fisheries Act deals with the degree to which decision-makers must consider information under the Act. Interpreting this section, the Court of Appeal in *Squid Fishery Management Co Ltd v Minister of Fisheries* found that when interpreting information to make a decision that involves a value judgment, a precautionary approach should be taken.¹³⁸ Mallon J in the High Court in a decision related to fishing regulations enacted to protect Maui and Hector dolphins confirmed the precautionary approach.¹³⁹ The precautionary principle is important in the case of Maui dolphin given that the Department of Conservation is unsure about the range of the species and the areas in which there is greater density in their distribution.

¹³⁵ Fisheries Act 1996 § 8.

¹³⁶ *Ibid.*

¹³⁷ Supreme Court of New Zealand. Judgment on NEW ZEALAND RECREATIONAL FISHING COUNCIL INC AND ANOR v SANFORD LIMITED AND ORS SC 40/2008 (28 May 2009). para. 39.

¹³⁸ Court of Appeal of New Zealand. Judgment CA39/04 on SQUID FISHERY MGMNT CO LTD V MINISTER OF FISHERIES And Anor (7 April 2004). para. 79.

¹³⁹ High Court of New Zealand, *New Zealand Federation of Commercial Fishermen Inc. et al. v Minister of Fisheries and Chief Executive of Ministry of Fisheries*. High Court, Wellington (23 February 2010). CIV 2008-485-2016, para. 19.

Another important part of the regulatory framework that was introduced to protect Maui dolphins is set out in the Threat Management Plan (TMP). These regulations are permitted under the Fisheries Act as they seek to remedy, mitigate or avoid the effects of fishing on a protected species.¹⁴⁰ The TMP establishes prohibitions on set nets and commercial trawling in areas where Maui's are found. The Fisheries (Commercial Fishing) Regulations 2001 define set nets as including "a gill net or other sort of net that acts by enmeshing, entrapping, or entangling fish; but does not include a fyke net or hinaki."¹⁴¹ Currently, a commercial and recreational set net ban exists from the mean high water mark out to 7 nautical miles the area from Maunganui Bluff to Pariokariwa Point. From Pariokariwa Point to Hawera the same restriction applies but only to a distance of 2nm. In this area, commercial set net restrictions exist from a distance of 2nm to 7nm with fishing only permissible when an MPI observer is on board the vessel. A variable trawling prohibition is in force offshore to 2nm from Maunganui Bluff to Manukau Harbour, 4nm from Manukau to South Waikato River Mouth and 2nm from this point to Pariokariwa Point. The set net ban extends to the entrances of Kaipara and Raglan harbour as well as Port Waikato. The West Coast North Island Marine Mammal Sanctuary was established in 2008 under the Marine Mammals Protection Act 1978. This sanctuary extends from the mean high-water mark to the 12nm limit and from Maunganui Bluff in the north to Oakura Beach in the south and prohibits both commercial and recreational set netting. The prohibition on set nets has been in place for six years and to date there has been no evidence about the success or otherwise of this sanctuary. Although in light of the precautionary principle, attempts to alter the restrictions without clear evidence to indicate that it will not harm Maui dolphin would be a bold move.

The Resource Management Act 1991 (RMA) regulates activities which occur within the territorial sea; the area between the mean high-water springs and 12nm out to sea. Under the RMA, a coastal permit granted by a regional council is required to carry out restricted activities. The New Zealand Coastal Policy Statement 2010 (NZCPS) is a national policy statement established under the RMA.¹⁴² The purpose of the NZCPS is to state the policies needed to help achieve the purpose of the RMA with regards to the coastal environment of New Zealand. In the preamble, the challenges facing the coastal environment are noted.¹⁴³ There is an acknowledgement of the "continuing decline in species, habitats and ecosystems in the coastal environment under pressures from subdivision and use."¹⁴⁴ There are several objectives that the NZCPS aims to achieve, one of which is to safeguard the integrity and form of the coastal environment and to sustain its ecosystem.¹⁴⁵ Specifically contained in the NZCPS is the acknowledgement of the need for protection of biodiversity or indigenous biological diversity in the coastal environment. There is reference to avoiding adverse effects on indigenous ecosystems that are threatened or are rare.¹⁴⁶ This is of particular relevance to the Maui dolphin. There is further reference to activities that would produce significant adverse effects and the need to avoid, remedy or mitigate those effects where habitats of indigenous species are important for cultural purposes.¹⁴⁷

140 Fisheries Act 1996 § 15

141 Fisheries (Commercial Fishing) Regulations 2001, (SR 2001/253), Regulations, Section 3: 'Interpretation'.

142 New Zealand Coastal Policy Statement 2010 (NZCPS). Available at <<http://doc.govt.nz/about-us/science-publications/conservation-publications/marine-and-coastal/new-zealand-coastal-policy-statement/new-zealand-coastal-policy-statement-2010>>.

143 Such as "poor and declining coastal water quality" or "continuing coastal erosion". *Ibid.*, Preamble.

144 *Ibid.*, Preamble.

145 *Ibid.*, Objective 1.

146 *Ibid.*, Policy 11 (Indigenous Biological Diversity) and 7 (Strategic Planning).

147 *Ibid.*, Preamble and Policy 2 (The Treaty of Waitangi, tangata whenua and Māori heritage).

In the case of *Crest Energy Kaipara Ltd v Northland Regional Council*, the court looked at the issue of adverse effects from the development of turbines in the region on Maui dolphins.¹⁴⁸ The court took a conservative approach to avoid the likely adverse effects on Maui dolphins.¹⁴⁹ The precautionary principle was again explored in the context of environmental policy in *Jackson Bay Mussels Ltd v West Coast Regional Council*.¹⁵⁰ The Court examined the applicability of this principle within the New Zealand framework. In looking at whether the impact of a mussel farm operation would result in adverse effects on the dolphin population that frequent the area, the court concluded that the precautionary principle is not directly assimilated into the NZCPS.

The Marine Mammals Protection Regulations 1992 control how vessels are to operate when proximate to dolphins.¹⁵¹ According to these provisions, vessel operators should not make loud or disturbing noises near to dolphins or travel within 300 meters of a pod of dolphins, where a pod is defined as 3 or more dolphins. Arguably under these regulations, if a single Maui dolphin were encountered there would be nothing to stop a vessel operator coming within 300 meters of the dolphin or operating in a manner that would endanger that dolphin.

While the precautionary principle operates in the Fisheries Act and related legislation to some degree, the recent announcement to open up parts of the West Coast North Island Marine Mammal Sanctuary to oil and gas exploration appears to violate the precautionary principle, as the risk from these activities is uncertain.

The broad regime overseeing mineral extraction in New Zealand is driven by the Crown Minerals Act 1991. Given that the Crown owns a majority of naturally occurring minerals, oil and gas, there is a need for those wishing to explore for and extract these materials to obtain a permit. The most recent round of permits opened for tender, Block Offer 2014, controversially includes part of the West Coast North Island Marine Mammal Sanctuary. Once a permit is acquired, consent to undertake an activity is needed. In this procedure there is a distinction between 'in-shore' and 'off-shore' permitting, which fall under the RMA and the EEZA respectively.

The Marine Mammals Protection (West Coast North Island Sanctuary) Notice 2008 regulates and restricts seismic surveying and mining in the Marine Mammal Sanctuary off the West Coast of the North Island (cls 5 and 6). Seismic surveying cannot occur unless the party intending to conduct the surveying has informed the Department of Conservation and has reported on interactions with cetaceans after the surveying has occurred.¹⁵² During surveying, there must be at least one qualified marine observer on board the vessel and on watch when the acoustic source is operating. During times of poor visibility there is a requirement that the qualified observer conduct passive acoustic monitoring (PAM) given that visual observations may be inadequate. The regulations detail the procedure for starting acoustic surveying and describe what an operator must do if a cetacean comes within a certain range of the vessel. One area of relevance to the recent proposed exploration on the sanctuary is the restriction on mining.

148 Final decision of the Environment Court of New Zealand on *Crest Energy Kaipara Ltd v Northland Regional Council* (March 2011). [2011] NZEnvC 26.

149 *Ibid.*, Paras. 165, 168 and 169.

150 *Jackson Bay Mussel Farms Ltd v West Coast Regional Council* Environmental Court (4 June 2004). Auckland, C77/2004. Para. 129.

151 Marine Mammals Protection Regulations 1992 (SR1992/322). Part 3: 'Behaviour around marine mammals'.

152 Marine Mammals Protection (West Coast North Island Sanctuary) Notice 2008, (SR 2008/328), Chapter 5, Article 1a, b.

The regulations provide that:

No person may carry out mining in the part of the sanctuary created by clause 4(1) described in Schedule 3 unless it is—

- a) Mining for petroleum; or
- b) A minimum impact activity.

These exceptions to the prohibition on mining leave the sanctuary open to exploration and extraction in these two instances. They allow for circumvention of the statutory protection afforded to Maui's to allow for oil and gas exploration to proceed in the area and undermines the precautionary principle's requirement to err on the side of minimising risk.

The EEZA is a recent addition to New Zealand's statutory framework that regulates extractive processes in the EEZ. This means that EEZA has jurisdiction in the area between the territorial sea and the 200nm limit. The EEZA outlines the activities that cannot be undertaken without a consent which include: construction, placement, alteration or extension of a structure on the seabed, removal of non-living material from the seabed, disturbance of the seabed that is likely to have an adverse effect on the seabed and the destruction, damage or disturbance of the seabed that has adverse effects on marine species or their habitat.¹⁵³ Furthermore, if an operation in the marine environment causes vibrations that may be harmful to marine life or causes an explosion then a marine consent is required.

Institutional level

The Environmental Protection Agency (EPA) oversees the marine consent application and decision process.¹⁵⁴ In the case of exploratory or routine operations within the EEZ, the application process is non-notified, which means that the EPA cannot consider public submissions or information in making its decision. Instead, the EEZA requires that those applying for consent provide an environmental impact assessment of the proposed activity as well as any other information the EPA may require. The decision-making body in considering a marine consent must consider a range of factors outlined in the EEZA.¹⁵⁵ What is interesting about these mandatory considerations is that a majority of them relate to the environment and the how the activities may impact the natural environment both now and into the future. They suggest that the underlying thrust of decision-making under the EEZA is pragmatic and environmentally conscious, where economic concerns only comprise a small part of the matrix of considerations. Importantly for threatened species such as Maui dolphin, the protection of habitat is one of the mandatory considerations under the Act.

Notwithstanding significant legislative and regulatory activity in the coastal marine area and the EEZ, this area of New Zealand environmental law (like other aspects of environmental regulation in New Zealand) continues to suffer from a lack of coordination between statutory regimes and inadequate enforcement funding. This undermines effective operation of the precautionary principle where embedded in statute.

The efficacy of the operation of the precautionary principal in the protective legal framework is brought into question by the decisions of regulatory bodies that are responsible under the relevant legislation, and by the failure to include issues of dolphin protection within the regulation of resources on adjacent coastal land. The lack of a comprehensive regulatory framework is further evidenced by the successful

¹⁵³ Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZA) § 20(1).

¹⁵⁴ *Ibid.*, Subpart 2: 'Marine Consents'.

¹⁵⁵ *Ibid.* § 59.

proposal to open up parts of the sanctuary where the dolphins live for marine mineral exploration. This poses both known and unknown risks to the dolphins.

Behavioural level

The precautionary approach should be recognised and adopted in the exercise of power by the appropriate authority. Uncertainty of the information should not be the reason for failing to adopt adequate measures to protect the species. However, under the Fisheries Act 1996, there is a lack of certainty and clarity as to the approach the Minister for Primary Industries should take in decision making. As a result, the fishing industry has been able to exert pressure on the minister through the courts, as proof is not absolute regarding the fishing related risks to Maui dolphins.

The failure to comprehensively respect the precautionary principle is evidenced by the continued permitting of a 'shortened' form of long driftnet fishing in the Maui dolphin sanctuary, despite this being a known cause of Maui dolphin mortality. Further evidence of the inefficacy of the statutory inclusion of the precautionary principle are court and regulatory decisions which hold that tangible economic benefits take precedence over the unquantifiable risks of increased dolphin mortality. Taken together this evidence suggests that while the precautionary principle has to some degree been incorporated into some aspects of New Zealand law, it is not sufficiently comprehensive nor sufficiently specific to adequately protect the critically endangered Maui Dolphin.

Restricted activities are described in regional coastal plans. Under the Waikato Regional Coastal Plan, disturbance of the foreshore or seabed is a discretionary activity that requires resource consent. When determining whether to grant consent there are a number of considerations that are relevant including how the activity will harm neighbouring flora and fauna as well as the cumulative effects on the CMA (coastal marine area). The policy does have shortcomings given that the Waikato Regional Council does not need to give specific consideration to threatened species when making such decisions. It is noted that specific consideration is needed of how an activity may affect Dotterel breeding sites but not for the significantly endangered Maui's.

Outcome level

The precautionary principle is not fully and effectively implemented in law, or through institutions or behaviour of administrative and judicial actors. This renders the law in action ineffective and incapable of delivering appropriate outcomes.

This case study confirms that to objectively evaluate the effectiveness of the implementation of legal principles, the essential consideration is the law in action rather than the law in the books. The effectiveness of the law in action depends not only on adequately supported enforcement but also its 'fit' with other statutory regimes governing the exploitation as well as the protection of the natural resource, and with the economic, normative and cultural concerns of the implementing bodies and those who must cooperatively comply.

Lessons learned

A clearly defined project scope from the outset helps to expedite the evaluation. This evaluation could also have been improved by adding more specific search terms to the case search. The legislation and section terms used in these searches was useful for pinpointing specific cases, but yielded a number of irrelevant results. An improvement in search technique and terms would make the case evaluations

a quicker process. However, if using more specific and narrow search terms a number of cases that could be relevant and important in to the research could be excluded

Recommendations

Several recommendations could improve the effectiveness of the law in protecting Maui dolphins. These include the need for funding for better information, changes in regulation of nets and vessel behaviour, requirements to consider endangered species in planning and permitting, and closing of legislative loopholes that allow mining and other destructive activities that could affect Maui dolphins and their habitat.

Funding better information

Better information to assist in directing conservation regulations for the dolphins is a necessity. One recommendation to assist with acquiring greater information about the species would be for the dolphins to be tagged and tracked. This was trialed in New Zealand in 2005 for the Hector dolphins. The approach provided in-depth information about the range of the species and did not appear adversely affect their health.¹⁵⁶ Tagging dolphins would allow researchers to investigate the range of the species as well as to identify areas of possible concentration where more rigorous regulation is needed. As is noted in the case of the Snubfin in Australia, little is known about the movements of the dolphins and this makes the role of the regulator very difficult. When the TMP was first established by the Hon. Jim Anderton in 2008, he noted that a lack of information about a number of proposed measures meant that he did not feel as though he would be justified in making some of the proposed regulations.¹⁵⁷ This is especially an issue when tighter regulation can harm commercial fishing and reduce revenues for this important industry. Regulation cannot be made on a whim; credible, timely and reliable evidence of Maui dolphin populations would be very useful to better direct regulations to conserve the species, while retaining an appropriate balance with the use of the marine environment.

Greater amounts of information could be used to better target regulations towards Maui. Areas of high concentration of the dolphins could have greater levels of protection. To address differing concentrations of the dolphin, a regulator could impose different zones of regulation within the Marine Mammal Sanctuary off the West Coast of the North Island.

Acting on known risks and known habits of endangered species

The major recommendation in the IWC report on Maui dolphins was to extend the area protected against gillnets and trawling to a contour depth of 100m.¹⁵⁸ This recommendation is supported by the present study, given that Maui's are found at these depths. The current regulations extend protection based upon the distance from the low-water mark to 2nm, 4nm and 7nm which is a slightly artificial and arbitrary method of protecting Maui's. Instead, applying the regulations to a contour depth of 100m will mean in some areas the protection of the species will extend further than its current position.

156 G. Stone, A. Hutt, P. Duignan, J. Teilmann, R. Cooper, K. Geschke, A. Yoshinaga, K. Russell, A. Baker, R. Suisted, S. Baker, J. Brown, G. Jones and D. Higgins (2005). *Hector's Dolphin (Cephalorhynchus hectori hectori) Satellite Tagging, Health and Genetic Assessment*. Department of Conservation.

157 Ministry for Primary Industries (2013). *Review of the Maui's dolphin Threat Management Plan: Final Advice Paper – Fishing-Related Measures*. New Zealand.

158 B. Maas (2014). *Science-based management of New Zealand's Maui's dolphins*. Scientific paper for IWC, SC/65a/SMO6.

The Driftnet Prohibition Act 1991 could be re-drafted to be more effective. The current requirement that a net, or combination of nets, must be 1km or longer in length for the prohibition to become effective is overly permissive. These nets have significant adverse consequences on marine mammals such as Maui dolphins. It is recommended that the length at which the prohibition comes into effect should be shortened to less than 1km. This is a matter that would need to be discussed in consultation with the fishing industry to identify a reduction in length that minimises the harm to the industry while maximising the benefit to Maui's.

Some concern has been raised by the IWC about the presence of Maui dolphins in harbours such as Manukau, Raglan and Kawhia.¹⁵⁹ The regulation of vessel speed in proximity to cetaceans differs greatly from that in Australia. To reduce the risk for Maui's when in these harbours, vessels could be required to reduce their speeds to 6 nautical miles when cetaceans come within 300 metres. If a Maui calf is found within 300 metres, then operators would be required to turn off the vessel. Implicit in such a policy is a need to educate recreational and commercial operators to understand what Maui's look like and how to distinguish an adult from a calf.

Maui dolphins live close to the coast and are particularly vulnerable to ship-strike and to getting snared in nets. The IWC report suggests that the set-net ban from Pariokariwa Point to Hawera, the most recent addition to the sanctuary, be extended from 2nm to 4nm from the low-water mark.¹⁶⁰ Within the area of 4nm and 7nm from the coast, no commercial set nets should be used without an observer on board the vessel. These observers would have the role of looking out for dolphins and informing the captain of the vessel so that they could keep beyond the 300 metre prohibition, or of checking nets to ensure dolphins had not become ensnared. This could be a method of introducing variable zones into New Zealand similar to those operating in Queensland.

Mandatory consideration for endangered species in planning and permitting

The Waikato Regional Council Coastal Plan could include a mandatory relevant consideration of all endangered species, including Maui dolphins, when people are applying for resource consent for an activity in the coastal environment. Currently, the migratory dotterel is a relevant consideration under the Coastal Plan and there are no requirements to provide an explanation of how Maui's will not be adversely affected. This could be extended into the other Regional Plans for regional councils along the West Coast of the North Island. Given that Maui dolphins are significantly endangered this could ensure decision-makers incorporate them into their decisions.

This recommendation is relevant to reform of the EEZA. The EEZA is a good piece of legislation and does provide adequate protection for the environment, as the Trans-Tasman Resources Ltd (TTR) decision shows.¹⁶¹ The current framework could be improved by including the requirement to consider how a proposed activity would affect a threatened species. Currently, the Act requires consideration of how it will affect their habitat, but not how it will affect the species themselves. While this seems

¹⁵⁹ IWC (2015). Scientific Committee Report 66/Rep01(2015)b19/06/2015 p. 76 et seq.

¹⁶⁰ B. Maas (2014). *Science-based management of New Zealand's Maui's dolphins*. Scientific paper for IWC, SC/65a/SMO6.

¹⁶¹ Environmental Protection Authority (2014). Te Mana Rauhi Taiao, *Decision on the TTR marine consent application*: "Trans-Tasman Resources Ltd (TTR) sought a marine consent under the EEZA to undertake iron ore extraction and processing operations consisting in the excavation of about 50 million tonnes per year of seabed material." A Decision-making Committee (DMC) appointed by the Environmental Protection Authority (EPA) decided to refuse the consent.

like a subtle addition to the current framework, it could be important for threatened species as the government seeks to open up more of the EEZ for oil and gas exploration.

Closing legislative loopholes

Legislative loopholes that undermine protection must be closed. The Marine Mammals Protection (West Coast North Island Sanctuary) Notice 2008 should be amended to remove the exception to the restriction on mining (cl 6). Instead, this clause should read: “No person may carry out mining in the part of the sanctuary created by clause 4(1) described in Schedule 3”. This would prevent activities such as the proposed oil and gas exploration from occurring in the area.

Conclusion

More needs to be done for the precautionary principle to be considered effectively implemented in law protecting Maui dolphins. The recommendations made in this report outline how effective implementation of the precautionary principle for endangered species can be achieved.

China: Participation principle and protected areas

Qin Tianbao, Wei Lele, Liu Qing, Duan Weiwei¹⁶²

Protected areas are instruments for safeguarding the integrity of ecosystems and biodiversity. They should also ensure the rights of the local and traditional population previously existing in or nearby the protected areas. The management of protected areas is best handled with the participation of all stakeholders, at the relevant level. Implementing the public participation principle in China's protected areas is challenging but is necessary to help improve protected areas management.

Natural resource governance issue

Covering approximately 9.6 million square kilometres, China's landscape is vast and diverse, ranging from forest steppes and deserts in the arid north, to subtropical forests in the wetter south. As a consequence of its size, varying nature and complex geological history, China has a wide range of habitats and large numbers of animal and plant species. Conservation International (CI) recognizes China as a mega-diverse country because of its rich vertebrate and other zoological wealth. China has seen a rapid increase in both number and square kilometre coverage of protected areas over the past two decades, and improving the success of existing reserves is currently a focus of management. By the end of 2011, China had created a total of 2,640 different types of nature reserves, covering 14.9 percent of the country's land territory.¹⁶³ Based on their relative importance, each type of protected area can be further categorized into three levels; national, provincial and prefectural/country.

Guan Zhong, the Prime Minister of the State of Qin, around the time of Confucius (551- 479 B.C.), placed a great emphasis on the management of mountains, rivers, and forests. He promoted the principle of "prohibition of exploitation at the proper time".¹⁶⁴ Prior to 1979, protected areas were designated centrally with minimum participation from lower-level governments in a straightforward process that aimed to reduce logging and hunting in high-value natural areas. In December 2001, the State Forestry Administration (SFA) implemented the Wildlife Conservation and Nature Reserve Construction Project, which aims to establish 2500 nature reserves covering 172.8 million ha (18% of China's land area) by 2050. The program supports 48 national protected areas and aims to improve their management with 0.15 billion Yuan.

Many protected areas are created in regions that are home to well-established rural communities who depend on the natural resources found in these areas to live. However, China's strict nature reserve regulations greatly limit human activities in protected areas, and thus create direct conflict between the need for conservation and the requirements of the local people. In recognition of these issues and to help mitigate conflicts, the Chinese government mandated that all protected areas should be divided into three zones, a core zone where strict nature conservation is enforced, and buffer and experimental zones where more intensive human presence and activities are allowed. The basic objective of conserving protected areas in China is not only to preserve natural ecosystems and

¹⁶² Wuhan University, China.

¹⁶³ China established more nature reserves in 2011. <http://news.xinhuanet.com/english/china/2012-06/05/c_131632055.htm>.

¹⁶⁴ Zhou, S.X. (2006). *Forestry in China: Historical Transitions and Industry Developments*. Singapore: Thomson Learning.

biodiversity, but also to guarantee the economic development of the surrounding areas.¹⁶⁵ Specifically the aim is to:

- Protect the basic biological processes and ecological systems,
- Conserve genetic diversity, namely by maintaining the biodiversity types of genetic material,
- Ensure the sustainable utilisation of plant and animal species and biological systems, especially fisheries, wildlife, forest and pasture.

Legal principle

‘Public participation’ refers to a variety of participatory mechanisms including

- Innovative deliberative democracy experiments at the local level,¹⁶⁶
- Lawsuits, complaints or petitions, against or to the State, to request information from government agencies,
- Information disclosure regulations,
- Online activism by China’s ‘citizens’,
- Various kinds of protest.¹⁶⁷

This evaluation analysed the following three components of the participation principle: information disclosure, participation in decision-making and access to justice. Access to environmental information is a prerequisite to effective public participation in decision-making and to monitoring governmental and private-sector activities.¹⁶⁸ Participation in decision-making is also important and an area where more attention is needed. Access to justice allows the public to pursue litigation to prevent environmentally harmful activities and to require administrative agencies to take action to safeguard protected areas.

Evaluation across different levels

To evaluate the effectiveness of public participation in protected areas, the team reviewed case law and other documents, and developed a table of laws and regulations on protected areas, highlighting provisions on public participation. The team then conducted field research about information disclosure, participation in decision-making and access to information in protected area management. The research team also considered how public participation should be incorporated into the law and examined case law to investigate the effectiveness of the principle and how existing arrangements are treated within the legal system.

¹⁶⁵ Miao He, An Cliquet (2014). ‘Sustainable development through a rights-based approach to conserve protected areas in China’. *China-EU Law Journal* 3:143-163.

¹⁶⁶ Leib, E. J. & He, B. (Eds.) (2006). *The Search for Deliberative Democracy in China*. New York: Palgrave, Macmillan.

¹⁶⁷ Horsley, J.P. (2009). *Public participation in the People’s Republic: developing a more participatory governance model in China*. Available at <http://www.law.yale.edu/documents/pdf/Intellectual_Life/CL-PP-PP_in_the_PRC_FINAL_91609.pdf> Accessed 27 October 2012.

¹⁶⁸ Anton, D.K., & Shelton, D.L. (2011). *Environmental Protection and Human Rights*. Cambridge University Press, p. 357.

Instrumental level

There are some requirements related to public participation in the *Constitution*, the 2014 *Environmental Protection Law* (EPL) and the 1994 Regulation of the People's Republic of China on Nature Reserves (RPRCNR). These documents form the legal framework for protected areas in China.

The *RPRCNR* plays a fundamental role in governing nature reserves. It establishes the primary regulations for protected areas. There are provisions in the *RPRCNR* on governmental responsibility, nature reserve administrative agencies, the establishment of nature reserves, management of protected areas and legal liability. However, it does not specifically provide for public participation.

The *Constitution* and the *EPL* provide some regulations for public participation in protected areas. Although they outline the procedure for public participation, the provisions are not sufficiently specific to realize public participation in protected areas.

Information disclosure and participation in decision-making

The first official statement on government transparency in China appeared in 1988, when the Secretariat of the CPC (Communist Party of China) Central Committee proposed the disclosure of all administrative regulations, procedures, and decisions in preparation for democracy.¹⁶⁹ More recently, the newly modified *Environmental Protection Law of the People's Republic of China* (2014) provides an independent chapter on information disclosure and public participation. Notably, Article 53 states

Citizens, legal persons and other organizations shall have the right to obtain environmental information, to participate, and to supervise the activities of environment protection in accordance with the law. The competent environmental protection administrations of the people's governments at all levels and other departments with environmental supervision responsibilities shall disclose environmental information pursuant to the law, improve public participation procedures, and facilitate the citizens, legal persons and other organizations to participate in, and supervise, environmental protection work.¹⁷⁰

Among the regulations concerning protected area conservation, only the *Land Management Approach in Nature Reserve* (1995) specifically refers to public information. The People's government approves the establishment of protected areas and determines the scope and boundaries of protected areas (Article 13). The establishment of a protected area and its boundaries should be announced to the public. Any dispute concerning an unclear scope or boundary of a protected area should be resolved by the People's Government (Article 14). The environmental protection authority can cooperate with the department in charge of protected areas and other relevant authorities to submit their advice to the People's government. In addition, Article 7 of the *Regulations on the Adjustment of National Nature Reserves* (1994) indirectly states that the public can access important documents on protected areas, if they are changed or adjusted.

China's laws and regulations do not comprehensively specify the way in which environmental information disclosure is to occur. The *Disclosure of Government Information of the People's Republic of China* (2007) and the *Interim Rules on Disclosure of Environmental Information* are important documents regarding China's laws and regulations on information disclosure. The National People's

169 J. Liu (2005). *The Right to Know and Laws on Information Disclosure*. Beijing: Tsinghua University Press Ltd. p. 246.

170 Unofficial translation of the Environmental Protection Law of the People's Republic of China (published on 24 April 2014), compiled by the EU – China Environmental Governance Programme for the convenience of international observers.

Congress and its Standing Committee did not formulate them, which means that the regulations on information disclosure on protected areas in China cannot fully play their role.

Participation in decision-making

In the laws and regulations concerning protected areas, there are few clear provisions that mention a right to participation. The right to participation is provided in Article 53 of the EPL, as described above. In addition, Article 7 from the *RPRCNR* (1994) states:

People's governments above the country level shall strengthen the power to lead the development of protected areas. Every unit or individual has the obligation to protect the natural environment and natural resources and the right to report or accuse any unit or individual who destroys or encroaches protected areas.

To fulfil this obligation it is necessary to bring environmental democracy into legislation. Since 2010, some improvements have been made in new regulations and policy. For example, Article 13 of the 2010 Measures for the Administration of Special Marine Protected Areas(MASMPA) states that before establishing marine protected areas, the authority shall inform the public and allows the public to provide suggestions and comments.

Access to justice

Article 6 of the EPL (2014) is regarded as the basic provision in the current legal system concerning access to justice in environmental matters. It states that all units and individuals have an obligation to protect the environment and the right to report, or sue units or individuals that cause pollution or damage to the environment. Article 41 says that a unit that has caused an environmental pollution hazard has the obligation to eliminate it and pay compensation. The administration section of the department of environmental protection or another department vested by law with the power to conduct environmental supervision and management must settle the matter. If either party refuses to accept the decision, they may bring a lawsuit in the People's Court.

The party also has the option of bringing the lawsuit directly to the People's Court instead of trying to settle the matter. Article 64 says, "Those who cause damages due to environmental pollution and ecological damage shall bear tort liability in accordance with the *Tort Liability Law of the People's Republic of China*". The *Civil Procedure Law of the People's Republic of China* (2012) states that relevant bodies and organisations prescribed by the law may bring a suit to the People's Court against acts such as environmental pollution, harm of the consumer's legitimate interests and rights and other acts that undermine the social and public interest (Article 55). Going directly to the People's Court may provide a more efficient channel to solve disputes. Vulnerable groups, local people and communities are particularly interested in an easier and more efficient way to solve the conflicts regarding protected areas conservation and protection of their interests.

Litigation is only one of the channels to achieve efficiency in addressing environmental disputes. The *EPL* also provides a procedure for administrative complaints in relation to environmental damage. Article 57 of the *EPL* states that citizens, legal persons and other organizations are entitled to report and complain against entities and individuals that cause environmental pollution and ecological damage. These complaints should be made to the competent departments for environmental protection or other departments with duties for supervision and administration over environmental

protection. Citizens, legal persons and other organizations that discover the failure of the local people's governments, departments for environmental protection, or other responsible departments to perform their environmental supervision and administration duties in accordance with the law may report the situations to the authorities at a higher level or supervisory authorities. The departments receiving the report must keep the information confidential and protect the legitimate rights and interests of those who file reports.

Although, some laws contain provisions on access to justice particularly in relation to public participation in protected areas, these laws are not clear and there is no case law on this topic. In practice access to justice in protected area management appears to be very difficult to achieve. The requirements for plaintiff's standing form an obstacle to access to justice being fully realized through the People's Court. The laws have provided some regulation to protect private interests in protected areas but these are unclear. Cases on private interests in protected areas are also rare which may hinder participation in the management of these areas.

Institutional level

In the Chinese environmental administration system there are several different ministries or administrative departments managing protected areas. In 2008, the State Environmental Protection Administration was upgraded to the Ministry of Environmental Protection (MEP), which emphasises the increased prioritisation of the environment, by the central government. The administration system includes the following ministries and departments:

- China Meteorological Administration;
- State Forestry Administration;
- Ministry of Agriculture;
- Ministry of Housing and Urban-Rural Development;
- Ministry of Land and Resources;
- Ministry of Water Resources;
- Ministry of Science and Technology;
- Ministry of Finance;
- Ministry of Foreign Affairs;
- National Development and Reform Commission;
- China Global Environmental Facility;
- State Oceanic Administration.

These administrative departments bear the burden of conservation work in protected areas. Their responsibilities include disclosing of information, providing the public the opportunity to participate in the decision-making processes and developing plans for conservation in protected areas. In practice, the government agencies distribute a broad range of information about activities they deem to be of particular interest to the public, through a variety of channels including public libraries, government offices and the Internet. Even prior to the *RPSCNR* (1994), government agencies were posting on their websites an increasing amount of information. Many government websites have special OGI columns, leaders' mailboxes and chat-room capabilities. Local governments play an important role in building the foundations of government transparency. Although some information is disclosed on protected areas, there are still barriers that need to be overcome for this process to be more effective.

In spite of the progress on public participation in China, compared to some developed countries, there are still limitations. Firstly, the organizational form of participation is restricted in scale, with public participation in protected areas limited. Chinese environmental protection associations, especially NGOs, have limited impact on governments' decision-making.¹⁷¹ Secondly, participation in decision-making occurs mainly in the final stages, which is not adequate. Thirdly, the topics which public participation covers are limited. Fourthly, the government mainly organizes public participation and the system for public participation remains insufficient.

Behavioural level

There have been several cases on public participation in China, which illustrate implementation of the principle at the behavioural level. These cases show that public participation in China is mainly in the final stages of decision-making, and there is little participation earlier in the process. To a great extent, the main administrative department decides the scope and effect of public participation, and the local people often fail to recognize that it is important that they participate in protected areas conversation.

In 2011, a key event occurred in China concerning the right to information and protected areas.¹⁷² In order to obtain more information about the national protected areas for rare and special fish in the upper reaches of the Yangtze River, "Friends of Nature", a well-known environmental NGO in China, asked the Ministry of Environmental Protection to release some important information. Friends of Nature was of the opinion that according to Article 7 of the Regulations on the Adjustment of Scope and Function Zone and Rename of Nature Reserves at National Level (2002), if the national protected area needed to be changed or adjusted, these important documents should be accessible.¹⁷³ These documents include the application report for the adjustment to the protected area (the reason for the application, the report on the environmental impact assessment), the comprehensive research report on the adjusted part in the protected area, the comments by the Evaluation Committee of the National Nature Reserve in the 2010 annual meeting and the general planning map for adjustment. Only the general planning map for adjustment was available on the website of the Ministry of Environmental Protection. Friends of Nature asked the Ministry of Environmental Protection to provide the missing documents and the 2010 annual meeting report to the public. The Ministry of Environmental Protection adhered to all the requirements.¹⁷⁴

The first public hearing ever convened by the former State Environmental Protection Administration (SEPA) took place in April 2005 in response to a public outcry over a water conservation project in Beijing's historic Yuanmingyuan Park where there was an intention to line lakes with plastic. The project had not obtained the required environmental impact assessment approval. Academics and conservationists argued that if it were to go ahead it would negatively impact Beijing's underground water systems. There were 120 participants in the hearing and different views were highlighted. An assessment was conducted, and the recommendation was that the plastic lining should largely be replaced with clay. The SEPA then issued interim processes that dealt specifically with public participation in environmental

171 Y. Wu & B. Tian. (2012). 'Improvement of public participation system in the East Dongting lake nature reserve'. *Journal of Wuling*. 37(3), p. 12.

172 Liu Shixin (May 13, 2011). 'Environmental NGO faces difficulty in requesting information disclosure'. *China Youth Daily*. <<http://env.people.com.cn/GB/14625045.html>> accessed November 20, 2015.

173 The Regulations have been replaced by the Regulations on the Adjustment of Nature Reserves at National Level (2013); and the relevant requirements are reflected in Article 11 of the new Regulations.

174 Liu Shixin (May 13, 2011). 'Environmental NGO faces difficulty in requesting information disclosure'. *China Youth Daily*. <<http://env.people.com.cn/GB/14625045.html>> accessed November 20, 2015.

impact assessments. These came into force on the on 18th March 2006 in an attempt to ensure greater disclosure of environment-relevant information and provide guidance on mechanisms that should be used to obtain public input into the environmental impact assessment process.

Outcome level

The laws and regulations, institutions and practices surrounding the disclosure of information have made great progress and allow public participation to occur. However, there are still shortcomings that impede fully participatory outcomes. One is that there is no clearly defined scope for information disclosure. The ability for the public to access information is limited. The awareness related to protected areas and availability of the public to participate in protected areas management is weak. This has a negative impact on the rate of public participation in protected areas management, with the level of participation being relatively low. In practice, the government authorities tend to focus only on whether the public participates in the process, and the feedback from that participation is often overlooked. Therefore, public participation is often one-way. The administrative departments often see public participation in the decision-making process as a procedural requirement rather than encouraging genuine participation. This has contributed to a low level of public participation in the context of protected areas.

China's laws provide limited avenues for access to justice when public participation does not occur. The legal restrictions result in only a few cases being filed and fewer cases being successful. The restriction on the plaintiff's standing is an obstacle in cases concerning protected areas conservation.

In general, information about protected areas is disclosed by the administrative agencies of the government and departments for environmental protection, as they have an obligation to do so. Private enterprises and other organizations can also be obligated to disclose environmental information when directed by the government and its competent department, or according to relevant laws and regulations.

The government plays an important role in making information available through government websites, bulletins, press conferences as well as through the media (newspapers, radio, and television). However, these methods are not effective, because if the community is not engaged in the issue, they may ignore information that has been released. The voluntary disclosure of information by private enterprises occurs through the media, Internet and various environmental reports.

Environmental protection departments can determine which institutions are required to disclose environmental information, and the quality of the information required, reflecting their functions, regulations, regulatory and planning documents. The methods through which material is published is not ideal. This is due to a lack of clearly defined laws and regulations on state and commercial secrets and personal privacy issues, which has led to difficulty in determining which information can be published.

In practice, achieving access to justice in protected area conservation is very difficult. The defendant in this kind of case is sometimes unclear because the violators cannot be easily identified. If several authorities issue a decision on a protected area, it is unknown whether the People's Court would accept the case. The court can reject citizens' claims against some activities that would destroy protected areas due to a lack of legal standing. Vulnerable groups such as local people and communities can find it even more difficult to gain legal standing. Collecting evidence to use in the lawsuit is difficult, as the link between behaviour and environmental damage often cannot be easily demonstrated. Finally, environmental litigation is a lengthy process.

Administrative litigation filed to defend rights to participate in environmental decision-making is difficult in practice. There have been cases involving protection of land, but these cases in part have been disrupted while litigation occurs, because of contract disputes with protected areas management agencies.

Lessons learned in evaluation

The team overcame several difficulties in evaluation and makes the following recommendations for future evaluations:

1. To make evaluation accurate and comprehensive, the research team should increase the channels used for data acquisition. If the team can expand data collection channels, their findings will more be comprehensive and accurate.
2. It is important to understand the characteristics of different variables in the evaluation. Better comprehension of the framework and the particular evaluation methods will reduce mistakes.
3. The research team should determine key criteria and elements of the evaluation before they carry out the research. Where the team does not determine the standards and elements of evaluation in advance, there will be lack of guidance in the process, and the evaluation will be less efficient.

Recommendations

To improve public participation in protected areas, China should take action on three components of participation: information disclosure, participation in decision-making and access to justice.

Information disclosure

Institutions do not disclose enough information to allow people to understand and monitor their decision-making processes. An improved information disclosure system would provide better foundations for public participation.¹⁷⁵ Protected areas management institutions bear the burden of the work associated with information disclosure, but they should not be solely responsible. They should cooperate with other departments to undertake the work involved in disclosure of information relating to protected areas.

The language in information that is disclosed should be simple and should avoid very technical terms so that the public can easily understand it. The information should be available in commonly understood languages, including those of aboriginal people. The public should have access to technical assistance to facilitate their understanding of the information.

The scope of information disclosure in protected areas is established in relevant legal documents. This includes information related to the development, retention and management of nature reserves, and the tenure and registration of protected areas. Specific provisions on these issues differ in the different legal documents. This may make it difficult for the government to understand the scope and content of information disclosure laws across China.

Aboriginal communities who live within protected areas find it difficult to access clear and comprehensive information to allow them to participate in management. There are a number of government agencies

¹⁷⁵ H. Wang (2009). 'Public participation in environmental management from the perspective of China'. *Discussion Papers in Social Responsibility*. <www.socialresponsibility.biz>.

that are not clearly required by the laws and regulations to disclose information and often refuse to release information. As the laws and regulations are not clear and comprehensive there is often no recourse if an agency refuses to disclose information. At a national level there is a lack of dedicated legal requirements for information disclosure in protected areas management. The community has been calling for the urgent introduction of a range of legal arrangements at a national level to manage protected areas.¹⁷⁶ The introduction of new legislation on information disclosure in protected areas will play an important role in public participation in protected areas. A feasible approach in the short term is to more clearly define the scope of information disclosure in the existing legislation at the national level on protected areas. If this occurs the development of new legal instruments clarifying the scope of information disclosure in protected areas will be more straightforward. The number of organisations who bear responsibility for information disclosure should be increased so that more departments are required to fulfil this obligation.

Participation in decision-making

The right to information and the right to participate in protected areas management is important for all stakeholders, including NGOs. Public participation should include:

1. Pre-planning participation. The public should have the opportunity to participate in the discussions or negotiations before drafting environmental policy or legislation, or preparing construction projects.
2. Process participation. The public should be able to participate in the process of implementing the environmental law, regulation, policy or programs.
3. Action participation. The public should have an awareness of “protecting environment by ourselves” and put this awareness into action.
4. Final participation. The public should be able to access the legal system and obtain a legal remedy.

Only through these four kinds of participation can the public be deemed to have played a holistic and meaningful part in the participation process to achieve the final environmental goal. Simply, it is better to move from ‘passive participation’ to ‘self-mobilisation participation’ or ‘active participation’. Legislation should have emphasise participation in:

- Designating or amending protected areas;
- Designating management authorities;
- Developing and approving a management plan;
- Designing and implementing a strategy for the protected area system plan;
- Reviewing draft environmental and social impact assessments of the proposed actions of the protected areas agency.

Participatory processes can occur at multiple levels (from small projects to national and international policy) and should not be exclusively led by the government or NGOs. Community-led processes should also be supported and respected. Some NGOs have the capacity to serve as facilitators of

¹⁷⁶ We should accelerate the natural protected areas legislation - Interview Research Associate, Institute of Zoology, Xie Yan, International Wildlife Conservation Society (WCS) China Program Director, “natural protected areas legislation is the best time”, *Beijing Evening News*, March 13, 2013. Available at: <<http://jjsb.cet.com.cn/articleContent2.aspx?articleID=151489>>.

communication and cooperation between governments and local communities, or between local communities or governments and the private sector. The key requirement is to empower local people and communities to enable them to access information, voice their opinion, share their local knowledge and assume a greater role in protected areas conservation. This can lead to improvements in guarantees of their livelihoods and the conservation of protected areas. China should adopt laws to safeguard the Chinese government's positive obligation on protected areas conservation and guarantee peoples' right in protected areas.

A procedure that coordinates public participation should be trialled in protected areas. China's laws allow management departments to set up internal units to manage protected areas. In each organisation, an aboriginal representative should be appointed to obtain a more comprehensive understanding of the issues arising from decision-making about protected areas management. They would be able to provide timely feedback and relevant information to the stakeholders they represent. This way those stakeholders would have a clearer understanding of the policies related to their interest in the protected area. The stakeholders could use this information to safeguard their legitimate rights and interests more effectively.

A key requirement is to enhance the ability of the public, particularly the indigenous, to participate in and increase their voice in terms of decision-making. The public's understanding of their rights can be improved through the distribution of information found in reports, newspapers, published information, internet sites and other media.

When aboriginal people participate in decision-making for protected areas, they can invite experts to support their knowledge and to help safeguard their own interests. Government and other administrative authorities may be more willing to accept the opinion of experts as a basis for decision-making.¹⁷⁷ The impacts on decision-making will be more direct if experts are themselves aboriginal and fully participate in decision-making, as this can influence public opinion of the aboriginal community. A special system could be established to ensure that experts can utilise their knowledge to provide objective scientific evidence to the government and the public. All relevant parties should participate in the decision-making process and take responsibility for implementing decisions.

Access to justice

Currently, the relevant laws and regulations in China outline the principle of access to justice, but the practical implementation of this principle is insufficient. The following recommendations could improve the effectiveness of law in this area:

1. The legal provisions on environmental public interest civil litigation need to be improved to confirm the eligibility of the people or organisations to bring public interest litigation. The subject of this litigation mainly concerns local residents whose livelihoods are closely linked with the region and local environmental NGOs.
2. China needs to improve the procedures for bringing a lawsuit on public participation in protected areas management. The EPL (2014), '*Environmental Impact Assessment Law*', '*Administrative Procedure Law of People's Republic of China*' and other laws will be relevant.
3. Capacity for public participation in protected areas management activities needs to be improved. There needs to be greater information disclosure to the public, and the scientific

¹⁷⁷ Wang Jin (2006). *Comparative Study on Environmental Impact Assessment System – the legal procedure for the environment and development decision-making*. Peking University Press. p. 175.

information disclosed needs to be easily comprehensible. Education will be required to improve public participation in protected areas management activities. This could occur through the wide dissemination of scientific, cultural and legal information.

4. The security system for public participation in protected areas needs to be expanded and improved. This will provide a greater ability for the public to access justice in protected areas management activities.

Conclusion

Most of China's protected areas' community co-management reflects the level of public participation that currently occurs. There is a wide range of ways for the public to participate, such as forest scouts, village meeting and co-management committees. In this way, residents can be directly involved in protected area management activities. Secondly, the public can effectively participate in protected area management. Government departments want to educate and protect the rights of the public. Local residents can participate in the formulation and implementation of development plans of protected areas, such as land or other resource use planning. The status of residents in the protected area management has improved. A series of projects has improved the relationship between the communities living in protected areas and the management departments. In addition, residents of protected areas also receive support (funding, technical assistance) from government agencies, non-governmental organizations, and scientific research institutes to allow them to participate in protected area management.

The realization of public participation in protected areas also has several failings. There is a lack of mechanisms for simple effective public participation and it is difficult to meet the needs of the residents. Targeted measures are needed to improve public participation. These should include improvements in requirements and mechanisms for information disclosure on protected areas, procedures for participation in decision-making, and access to justice in matters related to public participation. There is also a need to measure and analyse public participation in protected area management. This could be the subject of future research.

Australia: Precautionary principle and endangered species

Evan Hamman, Katie Woolaston, Rana Koroglu, Hope Johnson, Bridget Lewis, Brodie Evans, Rowena Maguire¹⁷⁸

Some form of the precautionary principle has been adequately reflected in Australian law. However, full implementation of the principle in respect of endangered species 'on the ground' is somewhat lacking. It seems reasonable to conclude that the mere presence of the precautionary principle in law is not sufficient to halt the continuing decline of many of Australia's most endangered species. While the principle is not entirely 'ineffective', more could be done to embed a precautionary culture of decision-making into institutional and regulatory structures, including non-state actors like corporations and non-government organisations (NGOs). The research presented here evaluates the extent to which the precautionary principle is effective in protecting endangered species, with particular focus on the White Shark and a virtually unknown but highly endangered native plant, *Tylophora Linearis*.

Natural resource governance issue

Endangered species in Australia

Australia is one of only 17 'mega diverse' countries in the world. Together, mega diverse nations represent less than 10 per cent of the earth's surface but account for more than 70% of the world's biodiversity.¹⁷⁹ Australia is home to 65 internationally renowned wetlands (Ramsar wetlands) and an estimated 560,000 species.¹⁸⁰ Almost 10 percent of the world's species occur only in Australia.¹⁸¹ Yet Australia is also an austere, uncompromising and arid landscape. It has the lowest rainfall of all the inhabited continents and the lowest percentage of rainfall as surface water.¹⁸²

Many Australian species have rapidly declined since Europeans arrived in the 1788.¹⁸³ The main threats to species in Australia are (and have been for some time) vegetation clearing, invasive species and pathogens, inappropriate fire regimes, cattle grazing and climate change.¹⁸⁴ Unfortunately, there is limited long-term data on virtually all groups of plants, animals and other organisms. The result is that Australia is not in a position to adequately assess rates and directions of change in species numbers.

¹⁷⁸ Queensland University of Technology, Australia.

¹⁷⁹ Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 3* (2010).

¹⁸⁰ Australian Government, Department of Environment (2014). *Australia's Fifth National Report to the Convention on Biological Diversity*. Canberra: Department of the Environment.

¹⁸¹ *Ibid.*

¹⁸² Ann Young (2000). *Environmental Change in Australia since 1788* (2nd ed). Oxford: Oxford University Press. p. 14.

¹⁸³ State of the Environment 2011 Committee (2011). *Australia State of the Environment 2011*. Independent report to the Australian Government Minister for Sustainability, Environment, Water, Population and Communities. p. 38.

¹⁸⁴ *Ibid.*

Australia's approach to endangered species regulation

Australia is a federal system with three levels of government – Federal, State and Local.¹⁸⁵ All three levels have laws and policies aimed at protecting species and their habitats, many of which overlap, but few of which are delivering the intended outcomes. For example, the koala is offered some level of protection under federal, state and some local laws, yet populations of koalas, particularly in South East Queensland, are rapidly declining.¹⁸⁶

State Governments each have administrative agencies with responsibility for environmental protection. Some are politically independent like the Western Australian Environmental Protection Agency (EPA) but others are directly answerable to a Minister like Queensland's Department of Environment and Heritage Protection (EHP). Each agency generally has a threatened species division tasked with overseeing species management and policy implementation. In some states, species management is part of broader conservation framework that also includes protected areas like national parks.¹⁸⁷ At a national level, the Australian government has a Department of Environment (DoE) that has broad 'additional' responsibility for particular species of national significance such as migratory birds, fish and other mammals and also a variety of threatened ecological communities.¹⁸⁸

A 'one stop shop' for species management in Australia

In 2014 the Australian Government moved to create a 'one stop shop' for all environmental approvals in Australia to reduce 'duplication' and 'red tape'.¹⁸⁹ If the laws were to pass, this will mean State Governments will be able to approve and manage impacts on nationally listed species (as well as other matters of national environmental significance). Depending on the administrative approach, it may have ramifications for Australia's obligations under international law. There is serious doubt about whether State Governments have the expertise and resources to take on this role. It also means an important 'check and balance' and oversight in the system will be removed. Such a move could have significant impact on endangered species governance in Australia. At the time of publication, the proposal had still not yet been passed.

N.B. At the time of writing, the 'one stop shop' proposal had been blocked by political parties in the Australian Senate.

185 There are over 700 local councils in Australia with varying degrees of funding and natural resource governance laws.

186 Australian Government Department of Environment. *Koala populations in Queensland, New South Wales and the Australian Capital Territory and national environment law*. <<http://www.environment.gov.au/biodiversity/threatened/publications/factsheet-koala-populations-queensland-nsw-act-national>> accessed 17 December 2014.

187 See, e.g., Nature Conservation Act 1992 (Qld); National Parks and Wildlife Act 1974 (NSW).

188 These 'matters of national environmental significance' are protected under the Federal Australian Government's Environment Protection and Biodiversity Conservation Act 1999 (Cth). See also Australian Government Department of Environment, 'Threatened species and ecological communities' <<http://www.environment.gov.au/biodiversity/threatened>> accessed 17 December 2014.

189 Chris McGrath (2014). 'One stop shop for environmental approvals a messy backward step for Australia'. *EPLJ* 31:164.

Legal principle

Legal sources of the principle

The precautionary principle first appeared at the international level in 1984 during the negotiations for the *Vienna Convention on the Protection of the Ozone Layer*.¹⁹⁰ The most often cited definition is contained in the 1992 Rio Declaration:

Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.¹⁹¹

The principle has been incorporated into numerous environmental treaties and international instruments.¹⁹² International law scholars have argued that the principle is so widely recognised that it is now part of customary international law,¹⁹³ although this is by no means universally accepted.¹⁹⁴ The IUCN has produced guidelines to assist in implementing the principle.¹⁹⁵

The main international instruments that are relevant to endangered species include:

- the Convention on the Conservation of Migratory Species of Wild Animals ('CMS');¹⁹⁶
- the Convention on the International Trade in Endangered Species ('CITES');¹⁹⁷ and
- the Convention on Biological Diversity ('CBD').¹⁹⁸

CMS, a 1979 instrument, does not expressly incorporate the principle. However, decisions made by the states parties since the introduction of the instrument have incorporated the principle in various forms.¹⁹⁹ A Memorandum of Understanding (MOU) on the Conservation of Migratory Sharks (CMS) does refer to the principle, describing it as a 'fundamental principle' and stating that where scientific certainty is missing, applying the precautionary approach meets the objectives of the MOU.²⁰⁰

190 Vienna Convention on the Protection of the Ozone Layer (adopted 22 March 1985). The preamble provides that the Parties to the Convention are 'Mindful also of the precautionary measures for the protection of the ozone layer which have already been taken at the national and international level'.

191 Rio Declaration on Environment and Development (1992).

192 See, e.g., United Nations Convention on Biological Diversity (adopted 5 June 1992); Montreal Protocol on Substances that Deplete the Ozone Layer (opened for signature 16 September 1987) preamble; OSPAR Convention for Protection of Marine Environment of the North East Atlantic (opened for signature 22 September 1992); and United Nations Framework Convention on Climate Change (concluded 9 May 2009) Art 3(3).

193 Owen McIntyre and Thomas Mosedale (1997). 'The Precautionary Principle as a Norm of Customary International Law'. *JEL* 9:221. p. 223.

194 See e.g. Southern Bluefin Tuna Cases (New Zealand v Japan; Australia v Japan) (Provisional Measures Order of 27 August 1999) (1999) 38 ILM 1624 [79]. Generally speaking, international courts and tribunals have been reluctant to explicitly accept that the principle has customary status. Where it has been applied it seems to have been based on treaty principles, so far there hasn't been much (if any) application of it in a purely customary form.

195 Rosie Cooney (2004). *The Precautionary Principle in Biodiversity Conservation and Natural Resource Management: An issues paper for policy-makers, researchers and practitioners*. Gland, Switzerland: IUCN.

196 Convention on the Conservation of Migratory Species of Wild Animals (opened for signature 23 June 1979).

197 Convention on International Trade in Endangered Species of Wild Fauna and Flora (opened for signature 3 March 1973).

198 United Nations Convention on Biological Diversity (opened for signature 5 June 1992).

199 CMS Resolution 7.5 (18-24 September 2002). 'Wind Turbines and Migratory Species'. Art 1(e).

200 Memorandum of Understanding on the Conservation Status of Migratory Sharks (open for signature on 1 March 2010, entered into force 4 February 2011) Section 3, para 9.

CITES does not expressly address the Precautionary Principle. The strongest representation of the principle is Article 15 which describes the mechanism to be followed by states parties in transferring a species between Appendices. The transfer can only occur if species numbers have recovered, and states must exercise precaution in cases of scientific uncertainty. The implementation of the precautionary principle is left to state parties, who are responsible for making a 'non-detriment' finding based on scientific and other evidence. While the principle is thus espoused in the Convention, the reality of its implementation is left to states that, in some circumstances, may have under-funded or non-existent scientific authorities.²⁰¹

The CBD references the principle in the preamble, which states that 'where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat'.²⁰² In addition, States parties are required to detect those activities which are likely to have a significant adverse impact on conservation and sustainable use of biological diversity and to monitor these impacts.²⁰³ It is important to note though, that the CBD is concerned with 'sustainable development,' meaning that the conservation of species and the environment as a whole, this is not the primary purpose of the Convention. For example, Article 8 requires States parties to promote the sustainable development of areas that are connected to protected areas.²⁰⁴

When analysing the precautionary principle in biodiversity and conservation agreements such as CITES, CMS and the CBD, it is important to note that international law is inherently fragmented. It tends to focus on particular subject matters of the environment as opposed to a comprehensive, overarching approach.

Because of the complex interrelationship between species, their habitats and the health of ecosystems, any multilateral environmental agreement ('MEA') which has a focus on protecting natural resources, mitigating the effects of climate change or reducing pollution more generally may incidentally contribute to the regulation of protection for endangered species. Therefore, there are potentially dozens of MEA's that are potentially relevant.

Fundamental elements of the principle and indicators of its implementation

A review of law and literature reveals common elements of the precautionary principle. These inform a view of how the principle should appear in practice. In general, decisions made in accordance with the precautionary principle should:

1. Be informed by the best available and independent science;²⁰⁵
2. Be made by decision-makers who have the resources and expertise to understand and appreciate ecological risks;²⁰⁶

201 See Margaret A Young (2010). 'Protecting Endangered Marine Species: Collaboration between the Food and Agriculture Organization and the CITES Regime'. *Melb. J. Int. Law* 13.

202 United Nations Convention on Biological Diversity (opened for signature 5 June 1992) Preamble.

203 *Ibid* art 7(c).

204 *Ibid* art 8(e).

205 Scientific rigour and the precautionary principle are inextricably linked and in many ways 'mutually reinforcing'. See Nicolas De Sadeleer (2002). *Environmental Principles*. Oxford: Oxford University Press. p. 174.

206 The precautionary principle is intimately linked to the concept of ecological risk. *Ibid*. pp. 149-150. We would therefore expect to see proper processes and systems for understanding the complexity of that risk.

3. Be reasonable and cost-effective in the circumstances;²⁰⁷
4. Be proportionate to the risk of environmental damage;²⁰⁸
5. Be supported by an effective administrative, institutional and technical framework;²⁰⁹ and
6. Be transparent, inclusive and accountable.²¹⁰

These factors are broadly consistent with the 2007 IUCN guidelines for applying the precautionary principle.²¹¹ They are also consistent with guidelines from a recent analysis of the precautionary principle in natural resource management, which identifies the following indicators:²¹²

- *explicit incorporation of the principle into legislation and policy, and establishment of 'adequately resourced institutions to carry out research into risk and uncertainty in environmental decision making';*
- *recognition that the principle must be balanced against other relevant principles, such as intergenerational equity, and basic human rights;*
- *development of operational measures for specific policy areas that identify concrete actions to be taken in specific contexts but permit flexibility when circumstances change;*
- *a transparent process of assessment, decision making and implementation based on broad public participation and the best available information (scientific and non-scientific);*
- *assessment of threats and environmental, economic and social uncertainties;*
- *identification and assessment of options, including various courses of action and inaction, and their likely consequences (including any potential risks);*
- *allocation of responsibilities for providing information and evidence of threat or safety, usually but not always involving a reversal in the burden of proof;*

207 Implementing the precautionary principle 'word for word' would stifle innovation in many instances or, as De Sadeleer notes: 'applied strictly to the letter it would condemn us to inaction... [we must] preserve the useful effect of the principle, without paralysing inaction.' *Ibid.* p. 173.

208 'Proportionality' in response to the threat has been argued by a number of academics as well as Court decisions, See e.g., the case of *Environment East Gippsland Inv v VicForests* [2010] VSC 335, [188] (Osborn J); Deborah Peterson (2006). 'Precaution: principles and practice in Australian environmental and natural resource management'. 50th Annual Australian Agricultural and Resource Economics Society Conference in Manly, New South Wales, February 2006. p. 30. Available at <http://www.pc.gov.au/__data/assets/pdf_file/0020/9371/precaution.pdf> accessed 17 December 2014.

209 This is particularly true in conservation priority areas which are typically found in developing countries that have serious governance problems – like insufficient resourcing for assessment, monitoring and enforcement, and other deeper institutional challenges like corruption and lack of accountability. See Rosie Cooney (2006). 'A long and winding road? Precaution from principle to practice in biodiversity conservation'. in René Von Schomberg, Elizabeth Fisher and Judith Jones (eds) *Implementing the Precautionary Principle: Perspectives and Prospects*. Edward Elgar Publishing.

210 Deborah Peterson (2006). 'Precaution: principles and practice in Australian environmental and natural resource management'. 50th Annual Australian Agricultural and Resource Economics Society Conference in Manly, New South Wales, February 2006. p. 30. Available at <http://www.pc.gov.au/__data/assets/pdf_file/0020/9371/precaution.pdf> accessed 17 December 2014.

211 IUCN (2007). *Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management*. Gland, Switzerland: IUCN.

212 Deborah Peterson (2006). 'Precaution: principles and practice in Australian environmental and natural resource management'. 50th Annual Australian Agricultural and Resource Economics Society Conference in Manly, New South Wales, February 2006. p. 30. Available at <http://www.pc.gov.au/__data/assets/pdf_file/0020/9371/precaution.pdf> accessed 17 December 2014.

- clear communication of the precautionary measures being taken;
- proportionality, taking into account economic and social costs of measures;
- equity in the distribution of economic and social costs; and
- adaptive management, involving monitoring, research, periodic evaluation and review, and efficient and effective compliance.

Evaluation across different levels

Instrumental level

The precautionary principle is generally well-reflected in Australian law, including through legislation, case law and policy objectives.²¹³ It is recognised as one of the ‘principles of environmental policy’ under the *Inter-Governmental Agreement on the Environment* (IGAE) meaning it should guide environmental decision-making of all levels of government.²¹⁴ Where there are threats of serious or irreversible damage, the principle requires a careful evaluation of any risks to the environment and an analysis of the consequences of taking various options.²¹⁵

Where the principle does appear in law (as opposed to policy), it is generally presented as one of the elements of ecologically sustainable development (ESD).²¹⁶ It is common to talk of the precautionary principle sitting alongside other ‘principles of ESD’.²¹⁷ For instance, under the national *Environment Protection and Biodiversity Conservation Act* 1999 (EPBCA), the precautionary principle is explicitly stated to be an element of ESD.²¹⁸ One of the objects of the EPBCA is to ‘promote ESD’ and therefore take account of the principle where relevant.²¹⁹ The principle is also referred to explicitly at various stages through the EPBCA. For instance, section 391 requires Australia’s environment minister to consider the principle in a number of different decision-making capacities, including decisions about the international movement of wildlife, and whether a specific activity should be approved or not.

Also at a national level, the precautionary principle has been incorporated in fisheries legislation²²⁰ and marine protected areas.²²¹ But while federal legislation incorporates the principle, the States and

213 Anne Weier and Paul Loke (2007). *Precautionary Principle: two Australian case studies*. Productivity Commission Staff Working Paper 1/2007 <<http://www.pc.gov.au/research/completed/precautionary-principle>> accessed 17 December 2014.

214 Intergovernmental agreement on the environment (1992). § 3.5. <www.environment.gov.au/about-us/esd/publications/intergovernmental-agreement> accessed 17 December 2014.

215 *Ibid.* § 3.5.1.

216 This can be confusing as under international environmental law, ‘sustainable development’ is a principle in its own right. See Svitlana Kravchenko, Tareq Chowdhury and Md Jahid Hossain Bhuiyan (2013). ‘Principles of International Environmental Law’. in Shawkat Alam, Md Jahid Hossain Bhuiyan, Tareq Chowdhury and Erika Techera (eds.) *Routledge Handbook of International Environmental Law*. Routledge.

217 See, e.g., Douglas Fisher (2014). *Australian Environmental Law: Norms, Principles & Rules* (3rd ed). Lawbook Co. Australia. See also, Douglas Fisher (2014). ‘The rule of law, the public interest and the management of natural resources in Australia’. *EPLJ* 31(3):151.

218 Environment Protection and Biodiversity Conservation Act 1999 (Cth) § 3A(b).

219 *Ibid.* § 3(1)(b).

220 Fisheries Management Act 1991 (Cth) §§ 3-3A; Fisheries Administration Act 1991 (Cth) §§ 6-6A.

221 Robert Kearney, Colin Buxton and Graham Farebrother (2012). ‘Australia’s no-take marine protected areas: Appropriate conservation or inappropriate management of fishing?’. *Marine Policy* 36:592.

Territories also hold decision-making power and so must incorporate the precautionary principle as well. There are examples of such incorporation in various areas, including:

- Water;²²²
- Vegetation and forestry;²²³
- Biodiversity and protected areas;²²⁴
- Planning and development;²²⁵
- Fisheries;²²⁶ and
- Pollution.²²⁷

Poor application in law: Risky approaches to Protected Plants in Queensland

In Queensland, researchers discover more than 50 new species of plants, algae, lichens and fungi each year.²²⁸ There is much that is unknown about protected plant communities. Yet, under Queensland law, a species can be considered to be of 'least concern' (and offered lower protection) merely because *"there is insufficient information about the wildlife to conclude whether the wildlife is common or abundant or likely to survive in the wild."*²²⁹

The Queensland Government has recently changed its protected plant framework to boost harvesting, trading and development opportunities. Such a strategy is inherently flawed as it depends on having accurate data of endangered, vulnerable and near threatened (EVNT) plants which is not always available. Under the new changes, clearing in any area outside a 'high risk area' doesn't need a clearing permit "unless an EVNT plant is *known to be present*."²³⁰ The approach to protected plant management hinges on the Government's 'trigger maps' but these are based on incorrect, or at least incomplete, data.

This example represents what seems to be a reversal of precautionary decision-making. It shows that where there is a lack of scientific uncertainty about plant communities in Queensland, the need for economic growth and 'streamlining' the law can lead to lesser protection.

222 See, e.g., Water Act 2000 (Qld).

223 Vegetation Management Act 1999 (Qld); Native Vegetation Conservation Act 1997 (NSW); Sustainable Forests (Timber) Act 2004 (Vic); Forest Products Act 2000 (WA).

224 See, e.g., National Parks and Wildlife Act 1974 (NSW).

225 See, e.g., Sustainable Planning Act 2009 (Qld); Coastal Protection and Management Act 1995 (Qld); Environmental Planning and Assessment Act 1971 (NSW), by reference to the Protection of the Environment Administration Act 1991 (NSW); Local Government Act 1993 (NSW); Coastal Protection Act 1979 (NSW).

226 See, e.g., Fisheries Act 1994 (Qld); Fisheries Management Act 1994 (NSW); Aquaculture Act 2001 (SA).

227 See, e.g., Environment Protection Act 1994 (Qld); Contaminated Land Management Act 1997 (NSW); Protection of the Environment Administration Act 1991 (NSW); Environment Protection Act 1993 (SA); Environmental Management and Pollution Control Act 1994 (Tas); Waste Minimisation Act 2001 (ACT); Environment Protection Act 1997 (ACT).

228 Queensland Government. 'Discovering new plants'. <www.qld.gov.au/environment/plants-animals/plants/new-plants/> accessed 17 December 2014.

229 Queensland Department of Environment and Heritage Protection. 'Least Concern'. <https://www.ehp.qld.gov.au/wildlife/threatened-species/least_concern.html> accessed 17 December 2014.

230 Queensland Government. 'Clearing protected plants under the new legislative framework'. <www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/clearing.html> accessed 17 December 2014.

Notwithstanding its presence in legislative instruments, there is some concern that the language used to describe the principle is not strong enough to impact practice at a ground level.²³¹ For example, Cooney states that formulations of the principle in law and policy may simply ‘inspire’ its use, rather than require it.²³² On this basis, it is arguable that the Australian laws do not go far enough.

As discussed above, the EPBCA does make reference to the precautionary principle. It is included in the definition of ESD, which in turn is noted as one of the ‘Objects’ of the Act.²³³ According to Cooney though, this is not enough to espouse the principle as a requirement in decision-making processes.²³⁴ While the principle is further documented throughout the EPBCA, there are provisions where it is missing. For example, Part 10 of the Act deals with ‘Strategic Assessments’, or an ‘adoption or implementation of a policy, plan or program’, and states that any decision to do so must be made by the Environment Minister.²³⁵ The Minister must take into account considerations listed in § 146C, which includes any comments made by other Ministers. The principles of ESD (including the precautionary principle) are also listed, but the Minister is not required to consider them, instead she ‘may’ consider them.

This issue recurs throughout the State legislation. For example, the Environment Protection Act 1970 (Vic) addresses the principle as a separate section of the Act, *prima facie* suggesting that the principle plays a strong role in any decision-making process under the Act.²³⁶ Unfortunately though, the section itself suggests that ‘decision making should be guided by’:²³⁷

- (a) a careful evaluation to avoid serious or irreversible damage to the environment wherever practicable; and
- (b) an assessment of the risk-weighted consequences of various options’.

Again the principle is not promoted as a requirement.

Australian Law and the White Shark

Section 158 of the *EPBC Act* allows the Environment Minister to exempt a person or group from any restrictions in Part 3 of the Act. This includes exemptions from § 18 of the Act, which states that it is an offence to ‘take’ (including kill or injure) a threatened species where the action will have a significant impact on the species.

In granting an exemption under § 158, the Minister must only consider whether the exemption is in the ‘national interest’, a term that is not defined in the *EPBC Act*, but which may include ‘defence or security or a national emergency’.²³⁸

231 Rosie Cooney (2004). *The Precautionary Principle in Biodiversity Conservation and Natural Resource Management: An issues paper for policy-makers, researchers and practitioners*. Gland, Switzerland: IUCN. p. 25.

232 *Ibid.*

233 Environment Protection and Biodiversity Conservation Act 1999 (Cth) § 3.

234 Rosie Cooney (2004). *The Precautionary Principle in Biodiversity Conservation and Natural Resource Management: An issues paper for policy-makers, researchers and practitioners*. Gland, Switzerland: IUCN. (where the principle is only referred to in preambular texts, it is less likely to be implemented).

235 Environment Protection and Biodiversity Conservation Act 1999 (Cth) § 146.

236 Environment Protection Act 1970 (Vic) § 1C.

237 *Ibid.*

238 Environment Protection and Biodiversity Conservation Act 1999 (Cth) § 158(5).

The precautionary principle, or ESD, is not listed as a relevant consideration for exemption decisions, only in the 'Objects' of the *EPBC Act* itself. On 6 January 2014, the Premier of the State of Western Australia sought an exemption under § 158, to set up 72 baited shark drum lines off the State's coast. This was in response to an increase in white shark attacks in the years 2010-2013. On 15 January 2014, the Minister for the Environment issued a 'Statement of reasons for granting an exemption'.²³⁹ At no point in that document did the Minister indicate that he had considered the principle or scientific evidence to any real extent. Instead, he indicated that a loss of 'confidence' in water activities would negatively impact tourism in the area and Australia as a whole, impacting the economy, which was a matter of national significance.²⁴⁰

Significantly, the Minister relied solely on 'anecdotal evidence' that the increase in shark attacks was impacting businesses.²⁴¹ While it is disappointing that the principle was not considered in the decision-making process, this is unsurprising given the lack of a requirement to do so in the relevant sections of the *EPBC Act*.

It has been said that the precautionary principle's central place in Australia's environmental law 'is evident in its widespread adoption in environmental policy instruments and legislation, as well as through the recognition afforded it by the courts'.²⁴² The curial analysis of Preston CJ in *Telstra Corporation Ltd v Hornsby Shire Council*²⁴³ provides the most detailed examination of the precautionary principle in Australia.²⁴⁴ Consistent with Australian legislation, the courts have found the precautionary principle, 'and the concomitant need to take precautionary measures', to be enlivened where two 'conditions precedent' or 'thresholds' are satisfied: first, a threat of serious or irreversible environmental damage and second, a lack of full scientific certainty.²⁴⁵ Unfortunately, the description of these conditions may make the test for satisfying the legal principle more stringent than was anticipated at the international level.

In respect of satisfying the first condition precedent, a threat of serious or irreversible environmental damage, it is unnecessary that there be *actual* environmental damage — a mere *threat* of environmental damage is sufficient. Further, that threat must be a capable of meeting the description of 'serious' or 'irreversible'. Such a threat may be direct, indirect, or cumulative, need not be immediate, and should not be viewed in isolation. It must not be raised on mere hypothetical conjecture or speculation without a scientific basis.²⁴⁶ *Prima facie*, this does seem to accord with the international definition.

239 Minister for the Environment Commonwealth of Australia (2014). Statement of reasons for granting an exemption under section 158 of the Environment Protection and Biodiversity Conservation Act 1999 (Cth). Available at <<http://www.environment.gov.au/epbc/notices/pubs/158-statement-shark-drum-line-deployment.pdf>> accessed 17 December 2014.

240 *Ibid.* para 12.

241 *Ibid.* para 8.

242 Jacqueline Peel (2009). 'Interpretation and Application of the Precautionary Principle: Australia's Contribution'. *RECIEL* 18(1):11.

243 *Telstra Corporation Ltd v Hornsby Shire Council* (2006) 67 NSWLR 256.

244 Justice Stephen Estcourt (2014). 'The Precautionary Principle, the Coast and Temwood Holdings'. *EPLJ* 31:288, p. 290.

245 *Telstra Corporation Ltd v Hornsby Shire Council* (2006) 67 NSWLR 256, 269 [128].

246 *Ibid.* 269 [129, 130, 134, 137], 275 [159].

In respect of satisfying the second condition precedent, ‘a lack of full scientific certainty,’ Australian courts have found that gaps in scientific knowledge regarding the population and habitat of a species,²⁴⁷ as well as conflicting scientific evidence and lack of a clear scientific standard,²⁴⁸ have satisfied the threshold. Where the threshold is not met, the precautionary principle will have no application – where the threatened damage is capable of being quantified or identified with relative certainty the task is not one of precaution, but prevention.²⁴⁹

Finally, and of most concern, there is case law that suggests a third condition precedent may be in effect in Australia. A number of judgments have introduced a ‘proportionality’ test to the principle.²⁵⁰ That is, the precautionary measure may be taken to avert the anticipated risk, but that measure must be *proportionate* to the risk. While this added condition precedent may seem reasonable, it is potentially inconsistent with the definition and implementation of the principle in other jurisdictions internationally.

Overall, there appears to be sufficient evidence that the precautionary principle has been implemented in Australian law.

Institutional level

This section of the report looks at three levels of implementation:

1. Administrative (both state and federal);
2. Industry;
3. Non-Government.

It is based on a general desktop search of policy and strategy documents released online by industry (fishing, dredging, mining, development), administrative agencies and NGOs.

Administrative implementation

It appears, overall, that the precautionary principle is implemented reasonably widely in Australian Government policy processes particularly by the Department of the Environment. Even where it is not explicitly referred to it may still be relevant ‘because its widespread acceptance in the environmental policy context has imbued it with general relevance for environmental decision making.’²⁵¹

Australia’s guiding framework for conserving terrestrial and marine biodiversity is ‘*Australia’s Biodiversity Conservation Strategy 2010-2030*’. A key principle of the strategy is that “knowing that our knowledge is limited, we should apply the precautionary principle while employing adaptive management approaches using new science and practical experience”.²⁵²

247 Leatch v National Parks and Wildlife Services (1993) 81 LGERA 270.

248 Yamauchi v Jondaryan Shire Council (1998) QPELR 452.

249 Telstra Corporation Ltd v Hornsby Shire Council (2006) 67 NSWLR 256, 273 [149].

250 *Ibid.*, [128] (Preston CJ); Environment East Gippsland Inv v VicForests [2010] VSC 335 [188] (Osborn J). See also Deborah Peterson (2006). ‘Precaution: principles and practice in Australian environmental and natural resource management’. 50th Annual Australian Agricultural and Resource Economics Society Conference in Manly, New South Wales, February 2006.

251 Warwick Gullett (2006). ‘The threshold test of the precautionary principle in Australian courts and tribunals: lessons for judicial review’ in René Von Schomberg, Elizabeth Fisher and Judith Jones (eds) *Implementing the Precautionary Principle: Perspectives and Prospects*. Edward Elgar Publishing.

252 Natural Resource Management Ministerial Council (2010). *Australia’s Biodiversity Conservation Strategy 2010-2030*. Commonwealth of Australia (2010). Available at <<http://www.environment.gov.au/system/files/resources/58321950-f8b6-4ef3-bb68-6f892420d601/files/biodiversity-strategy-2010.pdf>> accessed 17 December 2014.

Here are two examples of where the precautionary principle is included within marine/fisheries policy:

- **Marine Reserves** – The Legal Framework for Commonwealth Marine Reserves references the precautionary principle stating ‘A lack of full scientific certainty should not be used as a reason for postponing measures to prevent degradation of the natural and cultural heritage of a reserve or zone where there is a threat of serious or irreversible damage’²⁵³
- **Sustainable Management of Fisheries** – A precautionary approach should be used in all stages of fishery management, from planning through to assessment, enforcement and then re-evaluation.²⁵⁴

In response to the rapid decline in native species since European occupation, the Australian Government has appointed the first Threatened Species Commissioner. The role of the Commissioner is to “address the growing number of native flora and fauna in Australia facing extinction.”²⁵⁵ The move sees a focus on ‘priority national threatened species’ in the wild – a kind of ‘species triage’.²⁵⁶ This seems to accept that a number of species cannot be saved from extinction and that resources and effort will, in the future, be directed towards species of most concern. This administrative action represents an attempt at operationalizing the precautionary principle as resources have been allocated to the issue to better understand the risks and challenges in species decline.

New South Wales Government ‘Saving our Species’ Program

The New South Wales Government has acknowledged the problem with more and more species becoming extinct in recent years. It has provided funding for a program to reintroduce locally extinct mammals. Under the project, mammals currently extinct in the wild will be reintroduced into national parks from caged conservation sanctuaries. This appears to be evidence of implementation of the principle at some level.²⁵⁷

Industry implementation

The research into industry adoption of the principle looked some major policy and assessment documentation of some of Australia’s biggest corporations in the areas of:

1. Mining and Gas;
2. Construction; and
3. Fisheries.

253 Australian Department of Environment (2014). ‘Commonwealth Marine Reserves – Legal Framework’. Commonwealth of Australia. Available at <<http://www.environment.gov.au/topics/marine/marine-reserves/overview/legal-framework>> accessed 17 December 2014.

254 Australian Department of Environment (2014). ‘Guidelines for the Sustainable Management of Fisheries’ Commonwealth of Australia. Available at <<http://www.environment.gov.au/system/files/resources/97ff9461-5ccf-49cb-9368-8bde5f243c0b/files/guidelines.pdf>> accessed 17 December 2014.

255 Australian Minister for the Environment Greg Hunt (2014). ‘Media Release - Threatened Species Protection’. Commonwealth of Australia. Available at <<http://www.environment.gov.au/minister/hunt/2014/pubs/mr20140702.pdf>> accessed 17 December 2014.

256 Margaret O'Neill (19 March 2014). ‘Australia may have to ‘triage’ unique species’. *ABC News Lateline*. <<http://www.abc.net.au/lateline/content/2014/s3967500.htm>> accessed 17 December 2014.

257 New South Wales Department of Environment and Heritage (18 December 2014). ‘Threatened Species’. New South Wales Government. <<http://www.environment.nsw.gov.au/threatenedspecies/>>.

It revealed that the principle was often not adopted, at least in literal terms. However, there was some evidence that comparable concepts like 'careful' or 'risk based management' approaches were adopted. For example, major corporations might commit to goals such as "proactively minimising environmental impacts"²⁵⁸ or in the case of one fisheries company, declaring they are "dedicated to responsible fishing practices that work towards ensuring Australia's fisheries are managed in an ecologically sustainable manner."²⁵⁹ Such results indicated partial adherence to the 'general spirit' of the precautionary principle while not adopting its word-for-word construction.

Non-government implementation

Public interest groups and community members play an important role in environmental decision-making and environmental governance more broadly. Their role increases transparency and gives legitimacy to decisions that affect the environment. They can also improve the level of scientific knowledge decision-makers are alerted to²⁶⁰ and, as the IUCN notes, are an integral part of the implementation of the precautionary principle.²⁶¹

The results of our general desktop search indicated that NGOs either did not mention or did not appear to 'pick up' the language of the principle in any great depth. Like industry, some NGOs supported approaches that were akin to precautionary measures and risk based decision-making, but did not specifically use the language of the principle. For example, one major NGO stated:

wherever human activities have the potential to have a negative impact on wild animals, whether directly or indirectly, we have a duty to ensure that they are conducted in a way that causes as little injury, suffering or distress to animals as possible.²⁶²

In this instance, while the precautionary principle is not directly mentioned, there appear to be similar sentiments. The statement alludes to a duty to prevent harm to wildlife that is vaguely consistent with some of the things we would expect to see if the principle were being implemented (see above at Step 1).

Behavioural level

For evidence of behavioural change in implementing the precautionary principle, investigation should include all major participants in the environmental governance process (particularly decision-makers) including:

1. The Courts (the judiciary);
2. The Government (Administrative Agencies and Ministers);
3. Industry; and
4. Non-Government Organisations (NGOs).

258 Laing O'Rourke (17 December 2014). 'Environment Policy' <www.laingorourke.com/responsibility/environment.aspx>.

259 A Raptis & Sons Pty Ltd (17 December 2014). 'Sustainability'. <www.raptis.com.au/about/sustainability>.

260 Madeleine Figg (2014). 'Protecting third party rights of appeal, protecting the environment: A Tasmanian case study'. *EPLJ* 31:210.

261 IUCN (2007). Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management. Gland, Switzerland: IUCN.

262 Royal Society for the Prevention of Cruelty to Animals (2014). 'RSPCA Policy E01 Wildlife - General principles'. <http://kb.rspca.org.au/RSPCA-Policy-E01-Wildlife-General-principles_421.html>.

The present study was not able to fully assess the behaviour of industry and NGOs, but focused on the behaviour of courts and decision-makers.

Courts

If the principle were being fully implemented, courts would be expected to continue to develop what the principle means and how it should be applied. Evaluation of the behaviour of the courts was based on a brief analysis of the evolving approach of Australian courts to the principle. This evidence included primary material such as case law, but also secondary material such as academic and judicial commentary on the courts' adoption of the principle.²⁶³ The results revealed that the behaviour of the judiciary throughout Australia in respect of the principle is constantly evolving, with each decision identifying and reconstructing aspects of the principle that were not readily apparent. It appears that the Australian courts have come a long way in 'operationalising' the precautionary principle since it was first adopted by the Australian States and Territories in 1992. As one Australian judge pointed out:

...there is no lack of flexibility in Australian courts and tribunals in accommodating scientific uncertainty... [the judiciary are] doing pretty well in this country in rising to the challenge, and ... continue to do so.²⁶⁴

While Justice Preston's 2006 analysis in *the Telstra* case is probably the best in Australia to date, as Supreme Court of Tasmania Justice Estcourt, recently remarked:

If Preston CJ's analysis of the precautionary principle in [the Telstra case] is the best, then the epitome of its elements by Osborn J in *Environment East Gippsland Inc v VicForests* ... is certainly the best practical adumbration of those elements.²⁶⁵

Justice Osborn's judgment has helped to shed a great deal of light on an otherwise vague and nebulous principle. His Honour's 'adumbration' in the case included the following:

- *The precautionary principle permits the taking of preventative measures without having to wait until the reality and seriousness of the threat have been fully known.*
- *The precautionary principle is not directed to the avoidance of all risks.*
- *The degree of precaution appropriate will depend on the combined effect of the seriousness of the threat and the degree of uncertainty.*
- *The margin for error in respect of a particular proposal may be controlled by an adaptive management approach.*
- *The precautionary principle requires a proportionate response. Measures should not go beyond what is appropriate and necessary in order to achieve the objective in question. The principle requires the avoidance of serious or irreversible damage to the environment wherever practicable. It also requires the assessment of the risk-weighted consequences of optional courses of action.*
- *A reasonable balance must be struck between the cost burden of the measures and the benefit derived from them.*

263 See, e.g., Jacqueline Peel (2005). *The Precautionary Principle in Practice: Environmental Decision-making and Scientific Uncertainty*. Federation Press.

264 Justice Stephen Estcourt (2014). 'The Precautionary Principle, the Coast and Temwood Holdings'. *EPLJ* 31:288.

265 *Ibid*.

- *The relevant notion of proportionality is however not readily captured by traditional cost benefit analysis.*
- *The triggering of the precautionary principle does not necessarily preclude the carrying out of a particular land use or development proposal.*
- *The precautionary principle may also require consideration in the context of other principles of environmentally sustainable development.*²⁶⁶

The judiciary continues to enliven aspects of the principle, which were previously non-existent in Australia. This is in line with expectations of what the court's behaviour would look like if the principle were being implemented.

Decision-makers

Implementation of the precautionary principle on the part of government decision-makers would be expected to entail well-reasoned justification when making decisions, which impact on the environment (threatened species). This is because a major aspect of the precautionary principle is informed, rational and justified decision-making. As Fisher and Harding point out:

the precautionary principle regulates the reasons for a decision and the process by which a decision is made as opposed to dictating what the outcomes of that process should be...the principle is concerned with reasons and process [and] requires decision makers to reflect on how they justify their decisions, what factors are relevant to a decision, how that decision should be made, and who should be involved in the decision making process.²⁶⁷

There are special challenges in evaluating the extent to which decision-makers can justify their decisions. In Australia, reasons for decisions are often not automatically published, but through the process of judicial review, can be made public.

The precautionary principle, once activated, shifts the burden of proof to proponents of potentially dangerous activities. Therefore, industry would also be expected to explore risk-reduced approaches to their project and put forward feasible alternatives in their assessment documentation. The present study did not research this issue, due to considerations of time and scope. A survey of major project assessments might be beneficial in this regard.

As the principle is inextricably linked to risk, particularly ecological risk,²⁶⁸ we should also expect institutions, particularly administrative agencies, to develop methods to quantify uncertainty in a given situation. Understanding or, at the very least, appreciating the level of uncertainty is a key part of the application of the principle.²⁶⁹ If the principle was being implemented we might expect that industry (and their consultants) would have specific methods for analysing and advising on ecological risk.²⁷⁰

266 *Environment East Gippsland Inc v VicForests* [2008] VSC 82 at [57].

267 Elizabeth Fisher and Ronnie Harding (2006). 'The precautionary principle and administrative constitutionalism: the development of frameworks for applying the precautionary principle' in Elizabeth Fisher, Judith Jones and Rene von Schomberg (eds). *Implementing the Precautionary Principle: Perspectives and Prospects*. Edward Elgar.

268 See Nicolas De Sadeleer (2002). *Environmental Principles*. Oxford: Oxford University Press. pp. 149-150.

269 Deborah Peterson (2006). 'Precaution: principles and practice in Australian environmental and natural resource management'. 50th Annual Australian Agricultural and Resource Economics Society Conference in Manly, New South Wales, February 2006.

270 Due to time constraints, we were unable to investigate this hypothesis further in this report. It would be worthy of taking a sample of say five or ten Environmental Impact Statements to see whether consultants have been adopting such measures.

Positive attempts to quantify uncertainty

The Western Australian Environmental Protection Agency has adopted a method of accounting for 'predictive uncertainty' including identifying the relationship between environmental values, predictive uncertainty, and the burden of monitoring dredging proposals.²⁷¹ This represents a positive example of an attempt at applying a key aspect of the precautionary principle, a method of understanding risk in a given situation.

There are also possible best practice industry methods of calculating risk to threatened plant populations. For example, botanists are developing ways of determining the likelihood that a particular endangered plant species might be 'on site' from available survey data and desktop analysis.

This represents positive evidence from industry perspective that industry has in some instances developed (or is developing) sophisticated ways of measuring risks to the environment in a given situation.

Outcome level

Finding evidence of the 'outcomes' of implementation was extremely challenging. This was largely because the precautionary principle does not mandate any particular outcome but rather focuses on supporting informed and risk-based decision-making processes.²⁷²

To narrow the scope of the study at this stage, research focused on two case studies: the White Shark and *Tylophora Linearis*. For both case studies, the research team turned to a variety of sources with varying levels of objectivity. These included:

- peer reviewed articles and scholarly publications;
- credible media reports;
- state of the environment reports (federal, state and local);
- published research of the Commonwealth Scientific and Industrial Research Organisation (CSIRO, Australia's national scientific body);
- IUCN Red List and State and Federal Government databases;
- a multi-disciplinary workshop involving scientists, NGOs, academics and lawyers.

Evidence of species decline and implementation of legal principles can be taken from the IUCN Red List. However, the data was not sufficiently recent or specific to evaluate potential impacts of implementation of the principle. The White Shark is listed as 'vulnerable' on the Red List but this assessment is based on the information published in a 2005 shark status survey.²⁷³ Similarly, this data

271 See Environmental Protection Authority (Western Australia) (2011). 'Environmental Assessment Guideline for Marine Dredging Proposals'. <www.epa.wa.gov.au/Policies_guidelines/EAGs/Pages/default.aspx?cat=Environmental%20Assessment%20Guidelines&url=Policies_guidelines/EAGs>.

272 See Elizabeth Fisher and Ronnie Harding (2006). 'The precautionary principle and administrative constitutionalism: the development of frameworks for applying the precautionary principle' in Elizabeth Fisher, Judith Jones and Rene von Schomberg (eds). *Implementing the Precautionary Principle: Perspectives and Prospects*. Edward Elgar. See also IUCN (2007). *Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management*. Gland, Switzerland: IUCN.

273 I. Ferguson, L.J.V Compagno and M. Marks. 'Carcharodon carcharias'. *The IUCN Red List of Threatened Species*. <<http://www.iucnredlist.org/details/3855/0>> accessed 18 December 2014.

gives an average of the white shark populations throughout the world, not just in Australia. *Tylophora Linearis*, has not yet been assessed for the IUCN Red List.²⁷⁴

The Australian Government and State Government databases on threatened species were marginally better. There is an existing 'conservation advice' from the Australian Government for the endangered *Tylophora Linearis*, but it is now over six years old and is based on a 2005 study.²⁷⁵ One of the 'research priorities' from that advice was to 'design and implement a monitoring program or, if appropriate, support and enhance existing programs.' There appears to be no evidence that this has occurred at the Federal level.

Selecting species from databases and making links with the precautionary principle is too difficult. There may be any number of reasons why the species has declined or improved in population.

Media reports could potentially shine light on changes at the outcome level. In Western Australia, there were seven fatal attacks attributed to the White Shark in the last four years. The circumstances surrounding these deaths have been publicised widely in the mainstream media, and have drawn political attention. As a result, there was increased public concern regarding the safety of water-based activities and 'momentum' to continue with the shark cull.

There was a large media and public response to the implementation of the program in early 2014. Over that time the media often referred to the program as controversial and often depicted images of protestors or dead sharks.²⁷⁶ The key themes were whether the culls were an effective strategy to improve public safety, and whether the program posed a danger to shark conservation and the wider environment. There were fewer articles suggesting the shark catching drum line program should continue, and such reports were most often based on anecdotal evidence of 'rogue sharks'.²⁷⁷

In contrast to the shark cull case study, there was very little media attention around the endangered plant *Tylophora Linearis* and whether or not it is on the verge of extinction as a result of human activities. This was expected as many native plants are not as exciting or spectacular as white sharks, despite being highly endangered and providing a valuable role in the ecosystem.

Media is of course unreliable at times and not entirely objective. Nevertheless, it has significant influence on policy and is worthy of consideration when investigating outcomes of implementation.

274 The IUCN Red List of Threatened Species. <<http://www.iucnredlist.org/>>.

275 Department of Environment (2014). 'Tylophora linearis'. *Species Profile and Threats Database, Department of the Environment* <http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=55231>. accessed 18 December 2014.

276 See, e.g., Courtney Bembridge and David Weber (7 May 2014). 'WA shark Cull: 172 caught on drum lines off popular beaches'. *ABC News Australia*. <<http://www.abc.net.au/news/2014-05-07/shark-catch-and-kill-data-released/5435682>>; Australian Associated Press (12 September 2014). 'EPA rejects extending WA shark cull trial'. *Sky News Australia*. <<http://www.skynews.com.au/news/top-stories/2014/09/12/epa-rejects-extending-wa-shark-cull-trial.html>>; Reissa Su (12 September 2014). 'Western Australia's Shark Cull Junked for Questionable Impact to Shark Population'. *International Business Times*. <<http://au.ibtimes.com/articles/566128/20140912/shark-cull-australia-western-sharks.htm#.VCzTZfm1bXt>>.

277 See, e.g., Wayne Murphy (18 September 2014). 'A surfer's perspective on the case for shark culling in WA' *Sydney Morning Herald*. <<http://www.smh.com.au/comment/a-surfers-perspective-on-the-case-for-shark-culling-in-wa-20140918-10ilkj.html>> accessed 18 December 2014.

Lessons learned in evaluation

Objective evaluation of legal principles is not an easy task. While locating principles like the precautionary principle in Australian law (and to a lesser extent Australian policy) was relatively straightforward, the precautionary principle was particularly hard to pin down in a practical sense. Difficulties include:

- Rationalising varying definitions and interpretations of the principle across jurisdictions (State, Federal and Local) and across different subject matters (fisheries, forestry, mining, urban development etc).
- Defining what it means to observe the principle in practice. For instance, does the principle imply positive obligations to actively address species decline and, if so, obligations on whom and to what degree? Does it shift the burden of proof for addressing uncertainty and, if so, how?
- Finding evidence of non-action in fulfilment of the principle. If the principle triggers both positive and negative obligations on decision-makers what constitutes evidence of 'not doing something' as opposed to 'doing something'?
- Uncovering the extent to which the precautionary principle was given weight over competing issues like economic growth and other political decisions.
- Agreeing on the objectivity of data, particularly in politically contested subject areas like development, mining, agriculture, forestry and fisheries. For example, is an environmental impact statement (EIS) for a large project prepared by a third party employed by the developer considered objective data?

The need for multi-disciplinary perspectives

All members of the team conducting this research were legally trained, and able to apply legal approaches to problem solving and research. However, finding and interpreting 'on the ground' evidence in relation to species management and threats was difficult. Differing terminology, data and research methods all provided obstacles. Scientists provide a different perspective on how to assess data and measure the ecological risks to species and their habitat.

For this reason the research team organized a multidisciplinary workshop to facilitate a better understanding of the issues. Attending the workshop were lawyers, academics, policy makers, scientists and NGO representatives.

Evaluating legal principles which are vague and ambiguous

Legal principles like the precautionary principle are often negotiated under complicated circumstances. Therefore, they can be drafted in a way that is deliberately broad or even 'politically convenient'. This is not necessarily a bad thing. As Professor De Sadeleer reminds us:

The salient characteristic of a legal principle is precisely that it may be applied in a variety of situations.²⁷⁸

The nature of a legal principle is precisely not to be the subject of a complete and exhaustive definition.²⁷⁹

Loose drafting allows flexibility on the part of decisions-makers. In the case of the precautionary principle, it allows them to consider the bigger picture and be responsive to the ever-changing world.

²⁷⁸ Nicolas De Sadeleer (2002). *Environmental Principles*. Oxford: Oxford University Press. p. 226.

²⁷⁹ *Ibid*, p. 173.

Nevertheless, the task of evaluating the effectiveness of a principle demands that key elements be clearly identified, preferably from a single authoritative source like the Australian Government (for an analysis within Australia), or the IUCN (for an international analysis). If these cannot be readily identified and agreed upon, legal principles risk being little more than a reference point for unfettered and discretionary decision-making.

Legal principles like the precautionary principle can (and must) represent something more than simply applying a common sense approach to environmental risks.²⁸⁰ The judiciary in Australia have acknowledged this, and have gone some way in specifying the core aspects of the principle to take understanding of it to a far more insightful level.²⁸¹ It might be the case that principles like the precautionary principle, if they are to be drafted broadly, need to be accompanied by clear guidelines that set out, at the very least, the key elements and purposes of the principle so that they can be understood and pursued by all relevant stakeholders.²⁸²

Examining the conduct or behaviour of key institutions

Objective evidence of outcomes is difficult to find. Principles like the precautionary principle do not specify measured outcomes, but rather, they encourage better decision-making processes around environmental risks. Observing change (or a lack thereof) in the behaviour and conduct of institutions involved in implementing the principle may provide an easier route to effective evaluation.

Key governance institutions include both state and non-state actors such as the judiciary, administrative agencies, corporations and NGOs.²⁸³ Observing and evaluating their conduct in relation to the implementation of the principle may prove beneficial for a good analysis.

Recommendations

There are several things that could be done to improve the effectiveness of the law and the culture of decision-making in Australia. Some of these relate to funding and resources, while others involve cultural and educational changes affecting agency decision-making more generally.

Mandating the application of the principle

Although Australian laws and policy documents appear to reflect the principle on paper, when on ground decisions are made, there appears to be a lack of implementation. In relation to endangered species more generally, the clearest evidence of this is that many of Australia's most endangered species continue to decline. One possible reason for this is the absence of a legal requirement that the principle be strictly applied by decision-makers. Instead, the legislation tends to focus on the principle as an additional factor that may be considered.

280 Leatch v National Parks and Wildlife Services (1993) 81 LGERA 270 (Stein J).

281 Justice Stephen Estcourt (2014). 'The Precautionary Principle, the Coast and Temwood Holdings'. *EPLJ* 31:288.

282 To a certain extent this has occurred in Australia with the signing of the Intergovernmental Agreement on the Environment (1992). <www.environment.gov.au/about-us/esd/publications/intergovernmental-agreement> accessed 17 December 2014. However, detailed methods of accountability and oversight of the terms of that agreement do not exist.

283 Peter Grabosky (2013). 'Beyond Responsive Regulation: The Expanding Role of Non-State Actors in the Regulatory Process'. *Regulation & Governance* 7(1):114–123.

While regulation always involves some discretion (even in ‘command and control’ frameworks), too much discretion can downgrade the importance of the principle *vis-à-vis* other considerations and thus allow decision-makers to avoid its meaningful application. Key biodiversity laws, such as the EPBC Act, should make the principle a primary consideration under decision-making provisions, such as sections 146C and 158. It may be that the principle cannot work alongside conflicting considerations like economic growth and (in the case of the EPBC Act shark cull), concepts like the ‘national interest’. The result should be that, where triggered in situations of serious or irreversible environmental harm (as opposed to merely trivial harm), the precautionary principle must be strictly applied unless extraordinary circumstances exist which warrant its rejection.

Guidelines to accompany the principle

IUCN released guidelines in 2007 on the precautionary principle which are intended to aid decision-makers in understanding the application of the principle. It is unclear whether decision-makers refer to such detail when making decisions which could impact on the environment. The research into the *Tylophora Linearis* case study and the Maules Creek Mine revealed that the Environment Minister, his Department (and indeed the Federal Court) took the view that, even though significant impacts were considered possible the principle would be appropriately applied if a very broad condition was added to an approval for a coal mine:

[Condition 32]: In the event that any additional matters of national environmental significance are recorded within the project area and a significant impact on the matter/s is likely, the department must be notified in writing within 14 days of the matter/s being recorded. In accordance with condition 37, the Minister may request that the person taking the action revise any relevant plans to ensure better protection of the relevant matter/s.²⁸⁴

From reading the detail of the 2007 IUCN implementation guidelines, it would have been difficult to come to this conclusion. The principle would have required explicit action to address the uncertainty with respect to *Tylophora Linearis*, not a broad condition to take action if it did arise in the future.²⁸⁵

Loose understandings of what implementation of the principle actually entails invite varying interpretations and the potential for misapplication. This could be remedied in Australia if the principle was complemented by a set of detailed guidelines for decision-makers (modelled on the 2007 IUCN guidelines) addressing:

1. The best way to assess the level of risk involved;
2. How to address the uncertainty around that risk;
3. When to address the uncertainty; and
4. How to make a ‘proportionate’ management decision to the risk posed.

Such guidelines could be drawn up as ‘best practice decision-making in the face of environmental risk. They could include guidance for decision-makers with respect to complementary principles of environmental law such as the principle of public participation and the principle of intergenerational equity.

²⁸⁴ Northern Inland Council for the Environment Inc. v Minister for the Environment [2013] FCA 1419.

²⁸⁵ IUCN (2007). *Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management*. Gland, Switzerland: IUCN. pp. 9-12.

Agreeing on key elements of the principle

There are varying definitions of the principle within Australian law and policy. This adds unnecessary confusion and inconsistencies across Australia in its application. The definition found in the Intergovernmental Agreement on the Environment (IGAE) is similar to the definition of the principle at an international level. Definitions used elsewhere, for instance in relation to Marine Protected Areas, can vary significantly.²⁸⁶ While principles are by their nature deliberately broad, Courts in Australia have tried to come to a better understanding of what they mean. A single definition (coupled with guidelines) could improve the effectiveness of the law in this regard.

Embedding a culture of precaution in administrative agencies

Alongside the guidelines suggestion above, the effectiveness of the law could be increased by improving the culture of decision-making in government agencies and industry. The 'adaptive management' framework that underpins much of Australia's natural resource decision-making appears to run counter to the precautionary principle. It fosters a culture of 'approve but add conditions', rather than, 'do not approve, and wait until the science is settled before we go any further'. In Queensland for instance, since the year 2000, there have been over 50 Coordinated Projects (some of the biggest projects in Australia). Only two have been refused on the basis of scientific uncertainty. A culture of precaution that develops from a unique understanding of what the principle might look like in practice must be embedded in all agencies tasked with assessing potentially risky projects.

A good culture of precautionary decision-making

Section 38 *Environmental Protection Act 1986* (WA) 'the *EP Act*', states that any person can refer a government proposal to the Environmental Protection Authority (EPA), and the EPA may assess that proposal.

On 7 April 2014, the Department of Premier and Cabinet referred the proposal to extend the drum-line program until 2017 to the EPA to assess. Section 44 of the *EP Act* requires the EPA to report to the Minister for Environment on any assessment. A report was provided in September 2014.²⁸⁷ Section 44 requires the report to set out the 'key environmental factors identified in the course of the assessment', as well as the EPA's recommendations. The *EP Act* does not require an analysis of the precautionary principle, which is listed as an object of the Act under section 4A. Notwithstanding, it is the EPA's practice to have regard to the objects set out in section 4A, and so the precautionary principle was considered by the EPA in their assessment.

286 Robert Kearney, Colin Buxton and Graham Farebrother (2012). 'Australia's no-take marine protected areas: Appropriate conservation or inappropriate management of fishing?'. *Marine Policy* 36:592–597, p. 593.

287 Environmental Protection Authority (Western Australia) (2014). *Western Australian Shark Hazard Mitigation Drum Line Program 2014-2017: Report and Recommendations*. Report 1527. Available at <<http://edit.epa.wa.gov.au/EPADocLib/Rep%201527%20Shark%20Drumline%20PER%20110914.pdf>>.

After reviewing public submissions and a peer review report from CSIRO,²⁸⁸ the EPA found that there remained a high degree of scientific uncertainty as to whether the proposal met the EPA objective to maintain the viability of fauna at a population level, and that if the proposal was implemented, it might compromise the viability of white sharks at the population level.²⁸⁹ Accordingly, they refused the proposal stating:

“At this stage, the available information and evidence does not provide the EPA with a high level of confidence. In view of these uncertainties, the EPA has adopted a cautious approach by recommending against the proposal”²⁹⁰

This appears to reflect a good culture of precautionary decision-making and an effective implementation of the principle, despite the fact that the law did not specifically require it.

Educating ‘non-environmental’ agencies about precaution

Government agencies that are not responsible for environmental protection, but that are charged with managing potentially conflicting issues such as state development, economic growth, major infrastructure, mining and land tenure appear to have a strongly embedded culture supporting economic growth. In a climate of uncertain economic conditions, and even moral panic (in the case of the shark cull), precautionary approaches tend to take a back seat. Independent specialist statutory bodies which are not subject to Ministerial oversight (such as the Environmental Protection Agency in Western Australia), could help ameliorate this – as the EPA’s stopping of the WA shark cull revealed. A better solution is to drive a change in decision-making cultures within departments so they are not at cross-purposes on environmentally risky projects.

How economic considerations can override the precautionary principle

In Queensland, the Coordinator General, an unelected public servant, is tasked with overseeing the assessment and approval of many of Australia’s largest coal mines, infrastructure and developments. While these projects still require environmental approval from Queensland’s Department of Environment and Heritage Protection (DEHP) all decisions (and conditions) imposed by the Coordinator General cannot be overridden by DEHP. The problem is that the Coordinator General is under no obligation to consider the precautionary principle or any principles of ecologically sustainable development for that matter and hence the entire principle can be totally overridden in the pursuit of economic gain.

288 CSIRO (2014). *Western Australian Shark Hazard Mitigation Drum Line Program 2014-2017: Peer Review Report*. Available at <<http://www.epa.wa.gov.au/EIA/EPAReports/Documents/1527/6.6%20CSIRO%20Peer%20Review%20Report%20July%202014.pdf>>.

289 Environmental Protection Authority (Western Australia) (2014). *Western Australian Shark Hazard Mitigation Drum Line Program 2014-2017: Report and Recommendations*. Report 1527. p. 16. Available at <<http://edit.epa.wa.gov.au/EPADocLib/Rep%201527%20Shark%20Drumline%20PER%20110914.pdf>>.

290 Stephanie Dalzell (12 September 2014). ‘WA shark cull: Drum lines dumped after EPA recommendations’. *ABC News Australia*. <www.abc.net.au/news/2014-09-11/wa-dumps-shark-drum-lines-after-epa-review/5737526> accessed 18 December 2014.

Improving the implementation of complementary principles

In Australia, legal principles of environmental law like the precautionary principle rarely operate in a vacuum. The principle is often coupled in the law with other principles of ecologically sustainable development (ESD) such as inter-generational equity and conservation of biological diversity. Australia's approach seems to be that those three principles together (ESD) are the goal for decision-makers, not the precautionary principle in isolation. The principles are interrelated. Respect for precautionary measures is aligned with the rights of future generations (when the science might be more settled) and conservation of biological diversity.

Further, there is evidence that Australia can vastly improve its biodiversity management approach by improving its stakeholder engagement processes.²⁹¹ Poor stakeholder engagement processes generally seem to be consistent with the analysis of the application of the precautionary principle in key policy and strategy documents. While administrative agencies seemed to understand or at least mention the principle in key policy documents, industry and NGOs often did not do so. This indicates that the principle, and perhaps even ESD in general, has not filtered through to other key stakeholders.

Improving community engagement processes

The need to improve the community engagement process was identified in the case study of *Tylophora Linearis*. A community group challenging a mine failed to persuade the mining company, the Minister, his Department and, in the end, the Federal Court of the presence of an endangered species on the site. This was despite the government acknowledging they knew very little about the ecology behind the plant. The Court rejected the group's arguments as they failed to produce sufficient evidence at the Court hearing.²⁹²

The onus fell on the community group to prove to the Court that the plant was on the mine site. The only option for the group was judicial review, a costly challenge to the legalities behind the decision, rather than to the substantive question of whether the Minister effectively managed the risk of *Tylophora Linearis*. This appears to be a failure of the participation processes (including access to justice) more than anything else. In particular, it shows a lack of implementation of the principle, which, according to IUCN, entails:

*"assuming the burden of responsibility for our actions, and therefore the need to justify our activities in the light of ethical principles, public accountability, and available knowledge, and not leave this task to others."*²⁹³

Improving stakeholder engagement processes would improve understanding of the available science for decision-makers and thus implementation of the principle.

291 State of the Environment 2011 Committee (2011). *Australia State of the Environment 2011*. Independent report to the Australian Government Minister for Sustainability, Environment, Water, Population and Communities. p. 37.

292 New South Wales Nature Conservation Council (15 November 2013). 'Retrospective changes to federal law threaten community court challenge'. <www.nature.org.au/news/2013/11/retrospective-changes-to-federal-law-threaten-community-court-challenge/>. *Northern Inland Council for the Environment v Minister for Environment & anor* [2013] FCA 1419.

293 IUCN (2007). *Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management*. Gland, Switzerland: IUCN. p. 5.

Conclusion

The preservation of endangered species is an important natural resource issue in Australia. Firm conclusions on the implementation of the precautionary principle were difficult to reach. There was some evidence of the implementation of the principle in respect of the drum line program for managing White Sharks in Western Australia, but little evidence of its use in relation to the lesser-known endangered plant species, *Tylophora Linearis*, in the example of the Maules Creek mine in New South Wales which we looked at. Better definition of the principle and encouraging a culture of precaution could contribute to improving the effectiveness of the principle in the Australian context.

South Africa: Participation principle and protected areas

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In commemorating this historic day, we do not forget those who had to surrender their local land to make it possible, often through forcible removal, nor those who for generations were denied access to their heritage except as poorly rewarded labour. We recall these threads in our history not to decry the foresight of those who established the park, nor to diminish our enjoyment of it. We do so rather to reaffirm our commitment that the rural communities in and around our parks should also benefit from our natural heritage, and find in it an opportunity for their development.²⁹⁴

The Kruger National Park (KNP) is a national park in the north of South Africa. KNP was proclaimed in 1898 and has expanded over the years by incorporating surrounding land into the park. In this process many communities were evicted from the land that they had been living on and excluded from using the natural resources they relied upon.

A restitution program was created to address the past inequalities and the forcible removals. This enabled certain communities to claim back the land that they were evicted from. Some communities got their land returned on the condition that it will be used for conservation purposes. Communities that did not lodge a claim, or did not comply with the requirements of restitution, still live on the periphery of the park to which they were moved. These communities often live in extreme poverty and off government grants.

In terms of the environmental protection afforded by the South African Constitution, there should be legislative and other measures in place to ensure “secure and ecologically sustainable development and use of natural resources while promoting justifiable economic and social development”.²⁹⁵ The focus of this study is whether the public participation principle has been effectively implemented in the management of the Kruger National Park conservation area to include the peripheral communities, and to promote justifiable economic and social development.

The analysis undertaken in this research shows that some of the legislated measures are followed. However the measures do not necessarily involve the whole community or provide for meaningful participation. The experience varies for different communities. Land reform and traditional leadership institutions add complexities to the situation.

²⁹⁴ Address by President Nelson Mandela at the launch of the Kruger National Park centenary celebrations, Skukuza (26 March 1998). Available at <http://mandela.gov.za/mandela_speeches/1998/980326_krugerpark.htm>.

²⁹⁵ Constitution of The Republic of South Africa (8 May 1996). Chapter Two, *Bill of Rights*, Article 24b (III).

Natural resource governance issue

IUCN defines a protected area as:

“A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values.”²⁹⁶

Protected areas include national parks, wilderness areas, community conserved areas and nature reserves. They are regarded as core for biodiversity conservation while contributing to people's livelihoods, especially at the local level. They provide an important means to conserve nature and the resources it provides, including food, water, medicine and protection from the impacts of natural disasters.²⁹⁷

Kruger National Park (KNP) is a protected area that covers around 20 000km² of land in the north of South Africa, bordering Mozambique and Zimbabwe. Many communities live in communal areas that border the park, alongside luxury private game reserves.²⁹⁸

Proclaimed in 1898 as the Sabie Game Reserve by the President of the Transvaal Republic, Paul Kruger, the proposed need for the park was to protect the animals of the Lowveld.²⁹⁹ The KNP consists of six ecosystems that are home to 517 bird species, 1982 plants and 147 mammals, many endemic to KNP or endangered. Its cultural heritage includes bushman rock painting and archaeological sites located within the park.³⁰⁰ While only KNP staff living inside the park, there are more than 2 million people living on the periphery. Most of the people on the boundary live in poverty and are heavily dependent on natural resources (such as wood), which are increasingly exhausted outside the park.³⁰¹

During the establishment of KNP and thereafter, various indigenous communities were removed from the land to make way for conservation activities. It was proclaimed a National Park in 1926 under the National Parks Act, and started operating as a National Park in 1927. The eviction of communities from the land led to the restriction of access to KNP and its resources. The livelihood of the communities was now fenced off inside the park.³⁰²

The relocation of these communities to the periphery of KNP led to certain problems. The problems mentioned by communities include the loss of livestock to lions that stray from the park or cattle that wander into KNP are killed. The restriction of access to KNP also means that the community cannot access fish or Mopani worms to eat, timber and grass to build houses, or rare medicinal plants located inside the park. Community members often complain that when they fish illegally in the park, they are imprisoned or fined.

296 N. Dudley (2013). *Guidelines for Applying Protected Area Management Categories*. IUCN Best Practices Protected Area Guidelines Series No. 21. Gland, Switzerland: IUCN.

297 IUCN 'What is a protected area?' <http://www.iucn.org/about/work/programmes/gpap_home/pas_gpap/> accessed 1 December 2014.

298 David Mabunda, Danie J Pienaar and Johan Verhoef (2003). 'The Kruger National Park: A Century of Management and Research'. in Johan T du Toit, Harry C Biggs and Kevin H Rogers (eds.) *The Kruger Experience: Ecology and Management of Savanna Heterogeneity*. Island Press. p. 16.

299 SANParks. 'Did you know?' <<http://www.sanparks.co.za/parks/kruger/tourism/history.php>> accessed 1 December 2014.

300 R Tanner. 'Legitimacy and the use of natural resources in Kruger National Park South Africa'. PhD thesis. University of Montana. p. 12.

301 *Ibid*.

302 M. Mkhacani (2005). 'An analysis of the livelihoods of the Muyexe community located along the Kruger National Park in Limpopo province'. MPhil dissertation. University of Johannesburg. p. 29.

South Africa National Parks (SANParks) concerns include the poaching of small animals by some community members, the collection of firewood and the indiscriminate fishing in the river that threatens endangered species. They acknowledge the challenges with regard to wildlife and domestic animal interaction.³⁰³

The land reform program in South Africa intensifies these management challenges. About 45% of the KNP is subject to land restitution claims, instituted by communities who lost a right in the land after 1913 due to racially discriminatory laws or practices.³⁰⁴ In many instances the State is only willing to restore the land to the communities if they engage with SAN Parks in drawing up co-management plans and promise to use the land for conservation. While many communities do not seem to take issue with this, the question of how conservation can be achieved while drawing benefits from the natural resources and alleviating poverty often arises.³⁰⁵ To ensure that this process is successful, participation from communities in the management of the park is crucial.

In 1994 the National Parks Board established the Social Ecology Unity, as a belated acknowledgement that the South African communities are the custodians of national parks, and that successful nature conservation can only be achieved if local communities have access to parks and are fully involved in the decision-making process.

Legislation was promulgated a few years later to give effect to co-management of parks. The National Environment Management: Protected Areas Act No 57 of 2003 (NEM: PAA) requires SANParks to draw up management plans for all national parks after consulting stakeholders. The management plans must inform management at all levels, streamline procedures, provide guidance for budget expenditure, build accountability into the management of the parks and provide for capacity building and future thinking.³⁰⁶ The drawing up of a conservation plan should be consultative, and should adhere to the principles of good governance identified at the 5th World Park Congress. These principles include legitimacy and voice (participation), direction (human development and taking into account historical, cultural and social complexities) and accountability (to the public and institutional stakeholders).³⁰⁷

SANParks core mandate is the conservation and management of biodiversity through National Parks. It proposes to do so through a people centered approach that includes a focus on cultural heritage and the promotion of nature-based tourism, as well as socio-economic development programs. It recognizes its duty to engage stakeholders in the decision-making process, and proposes to do so in line with legislation and guiding principles. The policy also recognizes that this is an ongoing process.

303 *Ibid.* p. 40.

304 FJ Venter, RJ Naiman, HC Biggs and DJ Pienaar (2008). 'The evolution of conservation management philosophy: Science, environmental change and social adjustments in Kruger National Park'. *Ecosystems* 11(2):173. p. 175.

305 *Ibid.* The Makuleke Community Property Association jointly manages the Makuleke camp in the Kruger National Park for ecotourism.

306 SANParks (2006). *Management Plan Policy Framework*. Available at <<http://www.sanparks.org/docs/conservation/cpfjanuary2010.pdf>>

307 *Ibid.* p. 5.

Legal principle

Public participation can be defined as the effective and full involvement of all social actors in socio-political decision-making processes that potentially affect the communities in which they live and work.³⁰⁸ Public participation may be manifested in a number of ways such as democratic accountability, direct participation and the availability of judicial review. Access to information is necessary to assert *inter alia* a person's right to live in an environment that is adequate to human health and well-being.³⁰⁹ Public participation is divided between capacity building, and the process of participation. Under capacity building the focus is on environmental education and on raising awareness. The participation process itself is required to be transparent, and consultative, and to provide an opportunity to express views and an assurance the comments are taken into account.

Public participation in sustainable tourism has also been coined 'local control'. Local control in this context means "to engage and empower local communities in planning and decision making about the management and future development of tourism in their area, in consultation with other stakeholders."³¹⁰

The Declaration of the United Nations Conference for Development and Environment of 1992 (Earth Summit) in Principle 10 declares:³¹¹

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Guidance for the implementation of this principle is found in the Bali Guidelines.³¹² These were established to help with the development of national legislation regarding access to information, public participation and access to justice. The guidelines are divided into three sections: access to information, public participation and access to justice.

The 'access to information' guidelines make it clear that people are entitled to affordable, effective and timely access to environmental information without having to prove a legal or other interest. The guidelines detail specific requirements for the content of this information, and States are encouraged to provide means for and encourage effective capacity building to facilitate access to environmental information.³¹³

The State should ensure early and effective public participation where members of the public are informed of their opportunities to participate early on in the decision-making process. Participation must be in a transparent and consultative manner, where members of the public are given adequate

308 Romina Picolotti and Jorge Daniel Taillant (2003). *Linking human rights and the environment*. University of Arizona Press. p. 50.

309 J. Ebbesson (2007). 'Public Participation'. in D. Bodansky, J. Brunnée and E. Hey (eds.) *The Oxford Handbook of International Environmental Law*. Oxford: Oxford University Press.

310 UNEP, World Tourism Organization (2005). *Making Tourism More Sustainable: A Guide for Policy Makers*. Paris: UNEP and Madrid: World Tourism Organization. p. 31.

311 *Rio Declaration on Environment and Development* (1992) Principle 10.

312 UNEP (26 February 2010). *Guidelines for the development of national legislation on access to information, public participation and access to justice in environmental matters*. UNEP Decision SS.XI15, Bali, Indonesia.

313 *Ibid.* Guidelines 1-2, 7.

opportunity to express their views. The information must be relevant for decision-making, objective, understandable and timely. Comments from the public must be taken into account and when policy is formulated or legally binding rules developed, the public must have an opportunity to participate. For the public to participate meaningfully, capacity building through environmental education and awareness is needed.³¹⁴

With regards to access to justice, States should ensure that when access to information is refused there is recourse to the law. The public should be able to challenge substantive or procedural issues with regard to a decision, act or omission relating to public participation in the decision-making process. This access to justice should not be prohibitively expensive, with the State providing a proper framework for adequate and effective remedies that include compensation and restitution. States should also encourage the development of alternative dispute resolution mechanisms where appropriate.³¹⁵

On the African continent, the African Commission on Human and People's Rights reiterated that the right to participation requires *effective* participation.³¹⁶ Mere notice of an impending project as a *fait accompli* will not be regarded as effective participation, as the affected community did not have the opportunity to influence the outcome.³¹⁷ The Commission notes that an equal bargaining position is a requirement of effective participation, and adequate literacy skills and understanding of the project at hand is key. The Commission provides further important guidance to be taken into account in applying the principle of public participation explaining that:³¹⁸

[t]his duty requires the State to both accept and disseminate information, and entails *constant communication* between the parties. These consultations must be in good faith, through *culturally appropriate procedures* and with the *objective of reaching an agreement*. [emphasis added]

In South Africa, the right to public participation has a clear element of participatory democracy in that people must be involved in the creation of legislation and policy. This entails more than merely allowing people to participate. It requires the State to facilitate public participation by undertaking “road shows, regional workshops, radio programs and publications aimed at educating and informing the public about ways to influence Parliament”.³¹⁹

The South African Constitution proclaims that South Africa is a democratic state with a “multi-party system of democratic government, to ensure accountability, responsiveness and openness”.³²⁰ The Constitution also contains various mechanisms to allow the National and Provincial government to enable citizens to participate in law making. Linked to this are general outreach programs that seek to educate and mobilise rural people to take part in the legislative process.

314 *Ibid.* Guidelines 9-13.

315 *Ibid.* Guidelines 15, 16, 20, 21, 26.

316 Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council v Kenya (4 February 2010). African Commission on Human and People's Rights. para. 281.

317 When the Endorois community was deprived of their ancestral land to make way for a game reserve and ruby mining, they objected. One of the grounds of their objection was the fact that they did not have a right to participate in the management of their ancestral land.

318 Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council v Kenya (4 February 2010). African Commission on Human and People's Rights. para. 289.

319 Doctors for Life International v Speaker of the National Assembly 2006 (12) BCLR 1399 (CC).

320 Constitution of The Republic of South Africa (8 May 1996). Chapter 1.

Based on the general introduction to the principle of public participation one can expect the public participation principle to:

1. Enhance access to the information that is necessary for effective participation. Law and policy makers have a duty to provide information that is accessible and understandable, to enable the community to participate in decision-making. Information should be available in a timely manner, objective, up to date and in a language that is accessible to all community members and levels of governance. It should include local knowledge, for example on topics such as weather patterns or plant use.
2. Facilitate early and effective participation by all people who are affected by the decisions. The community must be able to participate in management of the resources and be consulted when decisions are made. Disempowered people and marginalised communities should be included in planning and decision-making, which enable them to share the benefits arising from conservation.
3. Include effective access to justice and administrative proceedings. States have a duty to ensure that when access to information is refused, communities have recourse to law. This access is either through the court system or independent bodies.

Evaluation across different levels

The research team conducted a desktop study to evaluate implementation of the participation principle, making use of existing literature and studies on the topic as well as policy documents, treaties and management plans.

Instrumental level

At an instrumental level, the public participation principle is provided for in various legislation, most notably the National Environmental Management Act 1998³²¹ (NEMA) and the National Environmental Management: Protected Area Act 2003³²² (NEM:PAA). NEMA provides the general principles to be followed in environmental management in South Africa and NEM:PAA outlines some of the mechanisms for achieving good environmental management.

Various legislative measures capture the principle of public participation. NEMA states that Act's purpose is to provide the overarching framework for environmental management in South Africa and that the "participation of all interested and affected parties in environmental governance must be promoted."³²³ This includes the opportunity to develop an understanding and acquire the skills and capacity "for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured".³²⁴ Section 2(4)(g) of NEMA makes specific reference to the inclusion of traditional knowledge.³²⁵

Legislation also recognises that biodiversity governance is not restricted to the sustainable use of the biological diversity, but also includes fair and equitable sharing of benefits that arise from the conservation and utilisation of these resources. With this in mind, co-management and sharing

321 National Environmental Management Act 107 of 1998 (NEMA).

322 National Environment Management: Protected Areas Act 57 of 2003 (NEM: PAA).

323 National Environmental Management Act 107 of 1998 (NEMA) § 2(4)(f).

324 *Ibid.*

325 *Ibid.* § 2(4)(g).

of benefits derived from biological diversity becomes important. Communities must be given the opportunity to participate in the management of biological diversity, with a specific focus on empowering the relatively disempowered.³²⁶

Access to justice in South Africa is very expensive. Communities that want to enforce their rights through the courts must approach public interest law clinics such as the Legal Resources Centre. A recent case in South Africa opened the door for communities to request access to information (especially held by companies) about environmental matters that affect the community.³²⁷ This can be done in terms of the Promotion of Access to Information Act and NEMA.³²⁸

Institutional level

Multiple agencies are involved in the management of parks: international agencies, national government, the Department of Environmental Affairs, SANParks and communities. There is no independent body to resolve the issue of a lack of public participation in conservation matters. The local population, landowners and the wider community are the main stakeholders. These communities are complex entities, with different agencies and stakeholders that are constantly changing.³²⁹

SANParks has a stakeholder participation scheme when developing park management plans. The stakeholders include local communities, non-governmental organisations, special interest groups, business partners, private landowners and local government representatives. Additionally, community leaders that are not involved in the Park Forum can take part in the planning workshops.

For stakeholders to take part in management decision they must register and attend workshops and meetings. Since the 1st June 2012, SANParks has collected a 1% community levy on all reservations. Although hailed as a great initiative, a local municipal councillor claims there has been very little participatory involvement from the communities in determining how this money will be spent.³³⁰

Behavioural level

On the peripheral land of the park, tenure is mostly based on communal tenure (boundaries inherited from the apartheid homelands), where traditional leaders are still responsible for allocating land to the members of the community. In this sense they wield authority. Some of the reports note that there are a few traditional leaders that strictly control the collection of firewood and carefully allocate the grazing rights of cattle owners, something that has an obvious positive impact on biodiversity governance. People at a community level have more faith in traditional leaders to manage biodiversity in a sustainable manner, than politically elected officials.³³¹ This research focuses on the experiences of two communities that are well known in the region: the Makuleke and the Mnisi populations.

The Makuleke, were awarded their land by the land restitution process inside the park, in an area known as the Pafuri triangle. The land in the Pafuri triangle is important for conservation purposes: 75% of the KNP's biodiversity is found on this land, and it lies in the centre of the transfrontier conservation area

326 This is contained in various legislation, especially NEM:PAA § 42.

327 Company Secretary of ArcelorMittal South Africa v. Vaal Environmental Justice Alliance [2014] ZASCA 184.

328 Promotion of Access to Information Act 2 of 2000; National Environmental Management Act 107 of 1998.

329 Fikret Berkes (2009). 'Evolution of co-management: Role of knowledge generation, bridging organizations and social learning'. *Journal of Environmental Management* 1692, p. 1698.

330 Suzie Malan (2015). 'Improved decision-making processes for the transfrontier conservation areas of South Africa'. PhD thesis. University of British Columbia 2015. p. 65.

331 *Ibid.* p. 62.

between Zimbabwe, Mozambique and South Africa.³³² The community was forcibly removed from the land in 1969, and the land was incorporated into the park. The Makuleke won their restitution case on the basis of an agreement that the land will be transferred to their Communal Property Association (CPA) and used for eco-tourism. The community will not live on the land (although they are now the owners) and instead will remain in the area to which they were relocated in 1969.³³³ The conditions attached to the restitution of the land means that the Makuleke community can only use the land for conservation purposes for the next ninety-nine years. The community also entered into a contractual agreement with SANParks which provides for the land to be managed by a Joint Management Board consisting of three community representatives and three SANParks representatives.³³⁴

The Mnisi population is a good example of the complexity found within communities as far as management of land is concerned. The Mnisi Tribal Authority is situated at the Manyeleti Game Reserve that borders the KNP. The Tribal Authority signed an agreement that the communities will form part of the ecotourism management initiative and will thus directly benefit from the commercialisation of the game reserve.³³⁵ Many of the communities that fall under the Mnisi Tribal Authority see the game reserve area as potential grazing, cultivating and wood collection area. They see limited uses for the wildlife, which are often in conflict with their domestic animals.³³⁶ The Dixie community instituted a land claim on land adjacent to the Manyeleti reserve. The Dixie community claims that they do not fall under the Mnisi Tribal Authority and do not recognise the local chief Mnisi as their chief.³³⁷ The Tribal Authority thinks otherwise. Despite this controversy, Chief Mnisi negotiated deals with investors in anticipation of the restitution award. This has complex consequences for public participation by the communities.

The Makuya Nature Reserve, bordering the northern part of the Kruger close to the Makuleke community, was 'donated' to the Venda government (a homeland during apartheid) in 1987. The fence between the reserve and the KNP was removed. Three communities live on the border of the reserve.³³⁸ Before the land was donated to be a nature reserve, it was used for grazing, collecting thatching grass and medicinal plants, hunting and fishing.³³⁹ The reserve is managed by a forum, which consists of provincial government officials, the KNP (informally), a commercial division of the provincial tourism and parks department and three communities. The communities can each send 10 members to the Forum. The election of these 10 members is left to the communities.³⁴⁰

332 Conrad Steenkamp (2008). *The Makuleke land claim: power relations and community-based natural resource management*. Discussion Paper no 18. IIED. p. 2.

333 Aninka Claassens and Moray Hathorn (2008). 'Stealing restitution and selling land allocations: Dixie, Mayaeyane and Makuleke'. in Aninka Claassens and Ben Cousins (ed.) *Land, Power and Custom*. UCT Press. p. 334.

334 Marja Spierenburg, Conrad Steenkamp and Harry Wels (2006). 'Resistance of local communities against marginalization in the Great Limpopo Transfrontier Conservation Area'. *Focaal – European Journal of Anthropology* 18:24.

335 Mamolotje Charles Eric Mametja (2006). 'Local community participation in tourism in the case of the Manyeleti Game Reserve, Limpopo Province and South Africa'. M. Inst. Agrar. Dissertation. University of Pretoria. p. 43.

336 *Ibid.* p. 67.

337 Aninka Claassens and Moray Hathorn (2008). 'Stealing restitution and selling land allocations: Dixie, Mayaeyane and Makuleke'. in Aninka Claassens and Ben Cousins (ed.) *Land, Power and Custom*. UCT Press. p. 320. This history is fairly complex, and the chapter in this book lays it in detail.

338 J. Medvey (2010). 'Benefits or burden? Community participation in natural resource management in the greater Kruger Park area'. MSc. Environment and Resource Management. IVM, Vrije Universiteit Amsterdam. p. 25.

339 *Ibid.*

340 *Ibid.*

Outcome level

At the outcome level, the evaluation revealed problems in terms of both access to information and public participation. When information is made available, it is not always objective, and communities may lack sufficient environmental education to enable meaningful participation.

Access to information

Availability: In general, when a community wishes to run a business on or co-manage the land that has being restored to them, the regional land claims commissioner that deals with the claim will inform them of their options. There seems to be a lack of feasibility studies and management plans to help the communities make informed decisions about the best option for using the land that will be returned.³⁴¹

The Welverdiend community that lives in the vicinity of the Mnisi tribal authority area received advice from the Wits Rural Facility (A facility of the Witwatersrand University) and the Southern Africa Wildlife College. Some of the Welverdiend community members attend the South African Wildlife College, studying courses in community-based ecotourism, conservation management, environmental education and tour guiding.³⁴²

Objective: Since it is often the regional land claims commissioner that advises a community on the possibilities of the land, the perception is that communities do not receive objective information for effective participation. The commissioners are often biased and may gloss over the challenges of business ventures proposed by the communities.³⁴³

When the Makuleke community land was restored they were given the right to make sustainable use of the land, including hunting. The community received exclusive commercial rights to the land, independent from SANParks. SANParks was only able to object to use based on environmental concerns. The community subsequently established a luxury lodge and a profitable hunting camp on the land. In 2009 the community signed an unfavourable agreement with another safari operator. This contract is binding for 45 years and seems to be drafted to be particularly favourable to the safari operator in that the operator need not maintain certain profit levels. There is also no exit clause for the community. A representative of the community is quoted as saying “[the companies] have been in business for a long-time, they are negotiating with communities who have very little experience”.³⁴⁴ This seems to indicate that the communities do not have access to objective information to participate meaningfully, leaving them vulnerable.

Up-to-date: In general little was mentioned about whether information was up to date. There is evidence that the Makuya Park Forum gathers on a regular basis to discuss management issues. Guest lecturers are invited to give presentations on specific topics with the aim of strengthening

341 M.A.I. De Koning (2010). ‘Analysis of a model designed for land restitution in protected areas in South Africa’. PhD Thesis. UNISA. p. 25.

342 Mamolotje Charles Eric Mametja (2006). ‘Local community participation in tourism in the case of the Manyeleti Game Reserve, Limpopo Province and South Africa’. M. Inst. Agrar. Dissertation. University of Pretoria. p. 71.

343 M.A.I. De Koning (2010). ‘Analysis of a model designed for land restitution in protected areas in South Africa’. PhD Thesis. UNISA. p. 25.

344 Marja Spierenburg, Conrad Steenkamp and Harry Wels (2006). ‘Resistance of local communities against marginalization in the Great Limpopo Transfrontier Conservation Area’. *Focaal – European Journal of Anthropology* 18:24.

the involvement of the community in co-management of the park by giving them information on the environmental importance of the protected areas.³⁴⁵

Timely: Little evidence was found on whether the information provided was timely or not. A field study, which specifically addresses this issue, would be useful.

Effective: As mentioned above the Makuya Park Forum conducts meetings with representatives. The community representatives are tasked with sharing the information they obtain at these forums with their fellow community members, including information on possible employment opportunities. This information is not often shared and many community members are not aware of the existence of the Forum. Those who do know about its existence seem disillusioned by the process because the information gained is not shared and the benefits are not tangible.³⁴⁶

Public participation

Capacity building

In some communities, attempts are being made to improve environmental education. In the early 1990s the Department of Land Affairs and a German development agency, Deutsche Gesellschaft für Zusammenarbeit (GtZ) introduced the Transform (Training and Support for Resource Management) Project. This project aimed to inform and support the Mukulele community in launching an ecotourism project. While this was a positive move, SANParks later became part of the steering committee of Transform, which enabled SANParks to gain control over projects that affect them.³⁴⁷

In addition to attending the Southern Africa Wildlife College, some members of the Welverdiend community also attended two international conferences on tourism and parks.³⁴⁸ The KNP hosts events during school holidays to educate the children about nature conservation issues. The park also hosts 'clean up' days to educate the children on pollution and the effect of pollution on the environment.³⁴⁹

Awareness raising

While many traditional leaders are invited to attend conferences on transfrontier parks and management of protected areas, the communities see no evidence of the benefit of sharing natural resources. In general it remains unclear how conservation impacts the local community.³⁵⁰ One study shows that only 19% of certain frontline communities are aware of community-based tourism meetings or

345 J. Medvey (2010). 'Benefits or burden? Community participation in natural resource management in the greater Kruger Park area'. MSc. Environment and Resource Management. IVM, Vrije Universiteit Amsterdam. p. 26.

346 *Ibid.* p. 30, based on an interview with a community member.

347 Marja Spierenburg, Conrad Steenkamp and Harry Wels (2006). 'Resistance of local communities against marginalization in the Great Limpopo Transfrontier Conservation Area'. *Focaal – European Journal of Anthropology* 18:24, pp. 53 – 72.

348 Mamolotje Charles Eric Mametja (2006). 'Local community participation in tourism in the case of the Manyeleti Game Reserve, Limpopo Province and South Africa'. M. Inst. Agrar. Dissertation. University of Pretoria. p. 71.

349 SANParks. 'Projects'. <<http://www.sanparks.co.za/conservation/people/projects/default.php>> accessed 1 December 2014.

350 Steven Robins and Kees van der Waal (2008). "'Model Tribes" and iconic conservationists? The Makuleke restitution case in Kruger National Park'. *Development and Change* 39(1):53, p. 68.

conferences.³⁵¹ These communities are not encouraged to participate by the provincial government, and some of the tourism stakeholders in government admitted that they did not even know who the frontline communities were.³⁵²

There are many NGOs and other donors who, in the case of the Makuleke, provide training on local governance procedures especially about the legislation to ensure democratic decision-making and the inclusion of women occurs. There are also NGOs, donors and government agencies that undertake capacity building exercises with the local population to ensure that the money generated from the operations on the land is used to build roads, schools, clinics and agricultural irrigation projects in the community.³⁵³

Transparency

During negotiations about the possible uses for the land restored to the Makulele community, the GtZ-transform held secret meetings with SANParks on how to resolve the land claim. This eventually led to a break down in the Makulele's trust in GtZ, leading them to exclude GtZ from the land claim process.³⁵⁴ The Makulele community also felt that SANParks influenced commercial decisions regarding the park without their knowledge.³⁵⁵ When commercial deals involve private companies there appears to be less transparency.

Consultation

From a public participation point of view uncertainty about who wields authority in traditional communities makes consulting through a particular representative problematic. Under the Traditional Leadership and Governance Framework Act the traditional leaders who were recognised before apartheid remain traditional leaders until otherwise decided.³⁵⁶ This has resulted in many chiefs appointed by the apartheid government, who were accountable to the government and not the people, remaining chiefs. This is despite the fact that the person might not be accepted as a leader in terms of customary law. This often results in communities not regarding themselves as part of the dominant community (the Makulele and the Dixie, for instance), but as a separate community that has separate autonomy over the resources. When consulting communities, organisations often only approach the dominant community's leader, which does not necessarily represent the view of the larger community.³⁵⁷

During a workshop in 2005 on the management of the area as part of the Greater Limpopo Transfrontier Conservation Area (GLTCA), a representative from the Makulele community expressed concern that the communities are merely regarded as subjects. He expressed concerns that merely placing

351 Mamolotje Charles Eric Mametja (2006). 'Local community participation in tourism in the case of the Manyeleti Game Reserve, Limpopo Province and South Africa'. M. Inst. Agrar. Dissertation. University of Pretoria. p. 87.

352 *Ibid.*

353 Steven Robins and Kees van der Waal (2008). "'Model Tribes' and iconic conservationists? The Makulele restitution case in Kruger National Park'. *Development and Change* 39(1):53, p. 69.

354 Marja Spierenburg, Conrad Steenkamp and Harry Wels (2006). 'Resistance of local communities against marginalization in the Great Limpopo Transfrontier Conservation Area'. *Focaal – European Journal of Anthropology* 18:23.

355 Steven Robins and Kees van der Waal (2008). "'Model Tribes' and iconic conservationists? The Makulele restitution case in Kruger National Park'. *Development and Change* 39(1):53.

356 Traditional Leadership and Governance Framework Act 41 of 2003.

357 For a discussion on this in the context of the Makulele see Steven Robins and Kees van der Waal (2008). "'Model Tribes' and iconic conservationists? The Makulele restitution case in Kruger National Park'. *Development and Change* 39(1):53.

a representative on the joint management board of the GLTFCA, does not amount to community representation as it can lead to elite dominance.³⁵⁸ A similar situation happened in the Bennde Mutale community, where a discussion with the chiefs was regarded as being adequate consultation, while the community felt that it should have been consulted separately.³⁵⁹

Opportunity to express views

The Dixie community is formally placed under the Mnisi Traditional Authority. However, the Dixie community has no traditional relationship with the chief nor do they regard themselves as part of the Mnisi Traditional Authority. Without consulting the community, chief Mnisi signed away development rights over a part of the land to private developers.³⁶⁰ The Mnisi Traditional Authority then executed a contract with a private company for the development of a luxury lodge, which saw the Dixie community lose some of their grazing land and access to the river.³⁶¹ When discussions were held about the development of the lodge, the leader of the Dixie community requested to speak. When he spoke out against the lodge, he was arrested and detained by members of the South African Police Services, who attended the meeting on invitation from the provincial government.³⁶² When members of the Dixie community tried to speak to Mnisi community members to inform them what was going on, the tribal authority applied for an interdict to prevent them from 'telling lies' and to stop members from meeting with communities. The perception is that the tribal authority receives government support in its endeavours.³⁶³ It therefore seems that some members of the community get an adequate opportunity to express their views, but this might not be applicable to all the members of the community.

Comments taken into account

As far as the Makuleke community is concerned, it appears that community comments are not always taken into account. The situation where SANParks became part of the Transform steering committee, alluded to above, is evidence of this. When SANParks came on board, the GTZ's funding shifted from eco-tourism to other development projects, with a strong emphasis on developing a buffer zone on the Makuleke land. A buffer zone limits the Makuleke community using the land. Despite the community rejecting the idea of a buffer zone, it was approved.³⁶⁴

358 Marja Spierenburg, Conrad Steenkamp and Harry Wels (2006). 'Resistance of local communities against marginalization in the Great Limpopo Transfrontier Conservation Area'. *Focaal – European Journal of Anthropology* 18:24, p. 25.

359 Webster Whande (2007). *Trans-boundary natural resource management in southern Africa: Local historical and livelihood realities within the Great Limpopo Trans-frontier Conservation Area*. Programme for Land and Agrarian Studies Research Report 25. University of the Western Cape. p. 41.

360 Mamolotje Charles Eric Mametja (2006). 'Local community participation in tourism in the case of the Manyeleti Game Reserve, Limpopo Province and South Africa'. M. Inst. Agrar. Dissertation. University of Pretoria. p. 68.

361 *Ibid.*, p. 69.

362 Aninka Claassens and Moray Hathorn (2008). 'Stealing restitution and selling land allocations: Dixie, Mayaeyane and Makuleke'. in Aninka Claassens and Ben Cousins (ed.) *Land, Power and Custom*. UCT Press. p. 322. The community thereafter contacted the Legal Resources Centre, a public interest law clinic that provides free legal services, to help. Through the lawyers they learned that an agreement was signed with a private company. The deal collapsed with the investors suing the Mnisi Tribal Authority for damages arising from the breach of agreement.

363 *Ibid.*, p. 327.

364 Marja Spierenburg, Conrad Steenkamp and Harry Wels (2006). 'Resistance of local communities against marginalization in the Great Limpopo Transfrontier Conservation Area'. *Focaal – European Journal of Anthropology* 18:24, p. 23.

This constant sidestepping frustrates the members of the Makuleke leadership, and places the community under the impression that they are not treated as landlords, but rather as a neighbouring community. Public participation is therefore mostly regarded as rhetoric.³⁶⁵

Lessons learned in evaluation

Due to time and institutional constraints it was not possible for the team to conduct research beyond a desk study. The research team encountered several challenges in applying the evaluation framework through a desktop study, including the following:

- It was difficult to get a real sense of the communities' perceptions. The team was reliant on the interpretations of other researchers who conducted the interviews and field studies. The focus of their investigations might have been different.
- The literature is distributed among many disciplines, each with its own jargon that must be understood before the content of the document can be fully comprehended.
- The studies on the benefits for the community mostly focus on protection by eco-tourism. There seems to be a lack of studies on other land uses and public participation. Integrated studies on human-livestock-wildlife interactions are needed.
- The empirical research conducted by Suzi Malan was very useful. Her unpublished PhD focused on governance, and not on public participation specifically, but from the interviews conducted and the comments of officials and people around the park, it was possible to get an idea of the main issues that the communities and park officials are faced with. The data was qualitative.
- Due to time and institutional constraints it was not possible to develop the evaluation further. In the future it would be useful to do a qualitative study (interviews with community leaders and members, as well as park and government officials) on their view of public participation in these areas.

Recommendations

With the restitution process opened again, and many of the claims on the KNP not settled, the issue of community participation in conservation of the KNP area will be under the spotlight. The focus of the People and Parks programme of SANParks is on co-management, access, benefit sharing and the community public-private partnership (cPPP) model. The cPPP aims to balance biodiversity conservation in the KNP, with increased local economic development and poverty alleviation. When communities become owners of the land through restitution, their participation in conservation activities becomes essential.³⁶⁶

For environmental governance in the area to be successful, extensive socio-economic surveys are needed before community conservation projects are embarked on, excellent leadership combined with well-established institutions are needed and education and capacity building will lead to more success. The failures of environmental governance relevant to the public participation principle

365 Steven Robins and Kees van der Waal (2008). "Model Tribes" and iconic conservationists? The Makuleke restitution case in Kruger National Park'. *Development and Change* 39(1):53, p. 67.

366 M.A.I. De Koning (2010). 'Analysis of a model designed for land restitution in protected areas in South Africa'. PhD Thesis. UNISA. p. 2.

include the limited capacity of the government, leading to instability and weak governance; intra-community and inter-community conflicts and distrust; and the assumption that economic benefits will necessarily translate into improved wildlife management and that everyone in the community wants market based development.³⁶⁷

In many communities, individuals play a key role that can lead to successful ventures, or to failures because of personal interests. In many successful ventures facilitators drive the processes by arranging and facilitating workshops and participatory meetings that lead to the community developing a positive attitude to the project. The more that people are involved in the decision-making processes (either facilitated by NGOs or government), the better. If the community's wellbeing is looked after, the ecosystem is likely to be healthier.³⁶⁸

Effective decision-making will allow for broad participation of stakeholders, including local communities, to harmonise the differences and to understand the different perceptions concerning biodiversity management.³⁶⁹ The focus of engagement should not only be on decisions for monetary gain. Biodiversity governance also largely revolves around ethical questions. In South Africa a specific focus on equity to ensure that communities that were previously excluded from formal conservation be formally included is required. In the context of transfrontier conservation areas specifically, where regional and global players seem to clinch the deals, focus on the local population should not be lost.

Management by participation is best when authority is distributed across multiple institutions and not concentrated in one. The management of the KNP and surrounding areas is a complex system that needs a management style that mimics its complexity. Adaptive co-management, where management takes place on a trial and error basis is an example. Horizontal management of communities in different situations but facing the same governance issue and vertical management from the state to the community could also be utilised. Ideally such a process should start at the community, with as much community participation as possible and with only as much government regulation as necessary (the subsidiarity principle). Through trial and error the management system will evolve and errors will be fed back into the system to support improvement.³⁷⁰

Conclusion

When information is made available to communities (especially during the restitution process when the Land Claims Commissioners and lawyers are still involved), it is not always objective. Communities lack sufficient environmental education to enable them to participate meaningfully. More can also be done to raise awareness. The public participation process is often transparent when public bodies are involved, but less so when private companies are involved. While the process is consultative to some extent, some community members expressed concerns that only the elite or a certain portion of the community are consulted. This is problematic, especially in light of the intra-community conflicts over who wields authority. Attention should be paid to the broader traditional leadership disputes happening in South Africa. Some communities feel that they are not taken seriously as owners of the land, and that consultation with them might be more of a *fait accompli* than anything else. Laws that

367 Suzie Malan (2015). 'Improved decision-making processes for the transfrontier conservation areas of South Africa'. PhD thesis. University of British Columbia 2015. p. 51.

368 *Ibid.*

369 *Ibid.*, p. 111.

370 Fikret Berkes (2003). 'Rethinking community based conservation'. *Conservation Biology* 621, p. 624.

lay down specific guidelines on how the communities should be consulted, and who the authoritative person is (and how this person is elected) would help. It would be useful to refer to other legislation that deals with this, such as the Traditional Leadership and Governance Framework Act or the rules of the Communal Property Associations.

Analysis: Achieving systematic improvement in environmental law

Paul Martin and Ben Boer

The trial uses of the evaluation framework provided useful intelligence about the effectiveness of two legal principles of natural resource governance, and about application of the evaluation framework. The framework enabled disciplined assessment of legal principles in different governance contexts. A common structure supported comparison across jurisdictions. The principles that the teams evaluated both deal with complicated issues. The precautionary principle uses the law to manage complex scientific issues; and the principle of participation uses the law to help manage socio-political trade-offs. The research teams were able to use the evaluation framework to provide new insights into these legal norms, despite constrained circumstances.

The teams identified areas for improvement in the law through the evaluations. The case studies demonstrate not only that legal effectiveness requires conceptually sound laws, but also that 'non-doctrinal' elements of legal governance must perform well. The cases show that norms for protecting and restoring the environment compete with norms that encourage its exploitation. This highlights the need to focus on the balance between harm-doing and protection in legal arrangements for natural resource governance, rather than focusing only the protective aspects of governance.

Governance instruments (whether legal or otherwise) are essential but are only part of what is needed. They will not work well if conditions are hostile, or if implementation resources are not available to those responsible for implementation or people 'at the front line'. This suggests the need for more attention to economic and political feasibility issues, affecting those governing and for those being governed, in implementing legal governance.

The case studies highlight that legal natural resource governance is a systems management problem, requiring far more than good legal instruments and judicial decisions. Effectiveness is likely with an alignment of political purpose, social and political context and adequate resources, and a governance strategy that is energetically and competently implemented. These conditions are often not present. Regulation is only part of the network of legal rules that need to work together for an effective governance system. Civil and administrative laws, and contract and property interests are also important parts of a total system that is environmental law. Law itself is only a component (though a pivotal one) of the larger system of resource governance that includes economic and social initiatives.

The case studies indicate four areas for particular attention. These are: (1) improving the process of translating broad principles into specific legal obligations, (2) aligning law with socio-economic and governance contexts, (3) tackling the practical constraint of resourcing and (4) paying more attention to institutions to ensure the integrity of implementation. These are preliminary views, as the case studies considered a limited range of regulatory instruments under constrained conditions. There are many other aspects of legal arrangements such as national sovereignty or property rights, or civil liability for environmental harms where careful evaluation is likely to yield further insights. Drawing conclusions on limited evidence is risky, but in this instance the tentative findings highlight the potential of the evaluation framework to provide sound empirical intelligence about how to improve the 'real-world' effectiveness of law in the context of natural resource governance.

Issue 1: Translating broad principles into legal obligations

The evaluations identified a problem in translating broad legal principles into regulated norms. This is a form of ‘imprecision in practice’ in conveying the meaning and appropriate application of environmental law norms. This interpretative uncertainty can reduce the effectiveness of legal principles.

Environmental laws are the products of political processes. Political negotiation of potential norms is conducted in ways that typically leave implementation ambiguities unresolved. This allows political consensus while avoiding detailed debate about what principles might mean for different interests when they are implemented, and without detailed implementation plans. The political advocates of a norm may not be clear about implementation, trusting bureaucrats and legal draftsmen or later judicial review to clarify these. The principle may be applied in diverse situations, requiring flexibility and local adaptation. These political and operational features can result in statements of principles that need ‘refinement’ while being translated into local law and administration. Implementation may also require scientific data or methods (e.g. for the precautionary principle), or social data and methods (e.g. for principles of participation) that are under-developed. This opens the door for political and legal uncertainties, or conflicts that authorities responsible for the local law may not be willing to risk. These considerations make it attractive to use a malleable institutional structure such as an administrative guideline for the exercise of Ministerial discretion, as has been the case with both of the principles evaluated. This creates opportunities for compromised implementation.

With regards to the participatory processes that were evaluated, insufficiently directive legal requirements in local law produced varying outcomes. The examples differ in:

- the degree to which citizens, particularly less advantaged citizens, were informed about issues and their implications;
- the ability of citizens to influence decisions;
- whether the needs and interests of citizens were ‘heard’, understood and taken into account;
- whether citizens had genuine power to shape decisions; and
- the options available if citizens were dissatisfied with proposals or decisions, or with the way they were treated.

If jurisdictions mandate ‘flexible’ participative requirements, those with a stake in the outcomes, or managing the process, may design implementation to reduce expected difficulties. In particular they may resist the transfer of power that is implicit in more communitarian approaches to participatory processes.³⁷¹ It is laudable when agencies go beyond minimal engagement (e.g. with the South Australian marine parks consultation), or when governments (e.g. South Africa or Brazil) create legal participatory rights for citizens. Regardless of the law, the journey towards fully participative processes is difficult (e.g. China). The evaluations illustrate that the gap between a formal legal requirement and realised outcomes can be large even when there are clear national objectives. They indicate that problems partly arise from a lack of specificity in the objectives and process standards of legal requirements to ensure citizen participation.

With regards to the precautionary principle, the evaluations illustrate the potential for the principle to lose potency because of ambiguity embedded in legislation (or a failure to remove imprecision in restatements of the principle). The examples highlight that implementation through advisory or

371 A. Fung (2006). ‘Varieties of participation in complex governance.’ *Public Administration Review* 66 (SUPPL. 1):66–75. <<http://doi.org/10.1111/j.1540-6210.2006.00667.x>>.

administrative approaches rather than directive legal mechanisms can limit the principle's effectiveness. In both jurisdictions, implementation of the precautionary principle requires a trade-off between environmental, economic and social interests. These are not directly interchangeable interests, and the approach requires consideration of complex risk issues and scientific, economic and other values. This creates opportunities for compromised implementation. A lack of technical skills or data also impedes implementation. The courts provide a safeguard, but their ability to review administrative trade-offs is constrained by their limited review roles and by their limited scientific resources.

While all the evaluations were constrained by time, resources and limited experience with the framework, they suggest a hypothesis that implementation of environmental law principles is often impeded by insufficient attention at the design stage to specifying the tangible purpose and operation of a norm, and how it should be implemented through law. If this hypothesis is correct, more effective legal governance requires deeper understanding of how legal principles should be implemented, and even more specific guidance to local legislatures and legal drafters. While implementation guidelines exist for participation and the precautionary principle, and are referred to in the evaluation summaries, in practice these have not proven sufficient. This may be due to political factors or a lack of engagement between the international bodies that developed these principles and the officials responsible for local laws.

Issue 2: Fit with socio-economic and governance context

The evaluations suggest that the outcomes of legal arrangements are determined largely by the 'fit' between laws and the conditions under which they are implemented.³⁷² Issues of alignment with context arise at three levels:

1. the biophysical context that forms the natural resource governance challenge;
2. the social-economic, cultural and political context, forming the human dimension of the challenge; and
3. the operation of the total system of natural resource governance, of which law is a part.

The governance system includes non-regulatory legal mechanisms such as property rights, administrative rules, other rule frameworks such as industry standards and social rules, and market and civil mechanisms that support the protection and restoration of the environment. It also includes mechanisms that have the counter effect, promoting exploitation of the natural world.

The case studies describe different biophysical and social and governance contexts within which environmental law principles have been applied. These are only a small part of the varied environmental challenges with which environmental law needs to cope. The need to respond precisely to different social and environmental issues, in diverse circumstances, partly explains why environmental law can be hard to comprehend, why it is 'exploding' and why it is perceived as (and is) inefficient. Meeting the challenge of 'streamlining' law without undermining legal protections deserves careful attention.

Political variables shape implementation, and interest-holders lobbying for approaches that suit their interests play a key role. These factors partly account for compromised implementation. Another aspect of the political context is how concerns for popularity with voters influence elected or appointed

³⁷² The outcomes of all types of governance instrument vary with context. See Stavins, R. N. (2001). *Experience with Market-Based Environmental Policy Instruments*. Discussion Paper (Vol. 01–58). Washington: Resources for the Future. Retrieved from <<http://www.rff.org/Documents/RFF-DP-01-58.pdf>>.

officials. Most of the evaluations involved stakeholders with diverse roles. These can have competing interests and differences in power and the political and legal tactics they use. This can be seen, for example, in how the precautionary principle has been affected by public pressure in the case of white sharks in Australia, in the politics of participative management of national parks in South Africa, or in the compromised protection of the Maui Dolphin in New Zealand.

Clearly implementation is far more likely when a legal norm has political support than when it is opposed. The China evaluation reflects the wisdom of the Aarhus Convention in highlighting that laws to embed effective participatory processes must do more than require civil engagement – they are more likely to work when governments enable citizens to take legal action if participatory processes are not well implemented. Where there is widespread support for environmental protection, natural resource laws are more likely to be effective. However if public governance systems are weak or contaminated by corruption (not explored in these case studies) private interests can override public environment protection.³⁷³ The link between good public governance and the effectiveness of environmental law is well demonstrated. Environmental protection law is a specialist aspect of public law. Its effectiveness depends to a large degree upon the integrity of public governance.

The evaluations demonstrate the significance of economic variables and competing interests to the implementation of the precautionary principle and participatory processes. The evaluations of the participatory process and the precautionary principle both show the importance of interest competition. Competition and resources affect the power dynamics of implementation and the capacity of stakeholders and agency staff to work with the legal regime.

An example of the social complexity with which law has to cope is the competing views of legitimacy identified in the South African evaluation of community consultation. Contestation over who is ‘the community’ for the purpose of consultation can involve historical, economic, political and interpersonal issues with which the law struggles. The example indicates that it is not only legal arrangements or the willingness to implement them that determines effective participatory process. The skills with which the work is conducted, and the strength of arrangements to ensure quality and integrity, are both likely to shape the performance of the principle.

The case studies demonstrate, for example, that environmental regulation is interdependent with the broader legal structure within a jurisdiction. Constitutional law was identified as relevant in the case studies from Brazil, China and South Africa; property regimes and fishery rights were relevant to the evaluations from South Africa and New Zealand, and cultural or civil rights were identified as relevant for the evaluations in China and South Africa. Administrative law is important to implementation of the precautionary principle and the participation principle. While the evaluations did not explore the role of civil rights law to exploit or protect environmental values, this is also an aspect of effective legal governance that deserves more careful attention.

The case studies suggest that competing natural resource governance interests such as economic development of resources, or legal protection of existing uses, influence whether protective arrangements can work. Particularly with the precautionary principle, implementation is affected by the need to balance interests and thus the integrity of public governance is critical to whether the law will work or not. Coordinated interventions that take into account the interaction between law and other mechanisms, including market instruments or social action (e.g. voluntary responsible

373 Transparency International. (2011). *National Integrity System background rationale and methodology*. Retrieved from <http://www.transparency.org/files/content/nis/NIS_Background_Methodology_EN.pdf>.

consumption or land-stewardship, or political activism) might achieve better outcomes than legal arrangements alone.

Issue 3: Resources and implementation feasibility

Theories of evolution and of economics both highlight the fundamental proposition that the availability and the pursuit of resources shape society. Control of resources is interwoven with power. The evaluations indicate that power dynamics affected the implementation of both the precautionary principle and participatory processes in different cases. In natural resource governance, resourcing issues are critical in many ways. One issue is the inability to implement any governance approach if resources are absent. Apart from funds, the necessary resources include skills (e.g. to lead public participation), knowledge, data (e.g. species vulnerability data), relationships (e.g. with vulnerable communities), and systems. Weaknesses in the resource 'platform' of government agencies will limit their ability to lead implementation of legal principles. A third aspect of resourcing and effectiveness, which is not often considered, is the ability of those being governed to do what is required. If those being governed do not have the capacity to do what is required of them, it is unlikely that any instrument will be effective.

A couple of instances illustrate how central resourcing issues are to effectiveness. With participatory principles a lack of seemingly minor resources (from the perspective of those who are privileged) can be a major impediment. The South Africa evaluation highlighted the practical importance of the educational capacity of indigenous people to understand complex information, and of limits to the ability of public agencies to bridge this literacy and communication gap. In the South Australian instance 'minor' logistics issues, such as childcare, public transport and access for disabled people, were identified by citizens as potential impediments to their participation. For people in China (as in all jurisdictions) legal rights of appeal or civil action require knowledge and economic resources to be effective. This report clearly illustrates that the effectiveness of legal principles is typically constrained by the weakest link in the chain of implementation, and practical details that are rarely considered in creating laws do make a real difference to their effectiveness.

Participatory process can serve many needs, and in particular may help shift power. The methods that should be used differ significantly depending upon the objectives. In the instances evaluated the specific aims of participatory processes (particularly the degree of intended power transfer) were not well specified in law. This is coupled with an apparent lack of accepted and tested consultative methods that should be used for legally required engagement. There do not seem to be 'best management' standards for legally required engagement against which implementation can be evaluated for integrity and quality. This is notwithstanding a great deal of engagement theory and many participation exercises. A well-tested and principles-based body of legal standards for participative processes would seem to be desirable.

With regard to implementing the precautionary principle, the resource gap in New Zealand and Australia was scientific data and knowledge. The type of data, its precision, and the evidentiary form required for legal purposes can be different from that needed for purely scientific purposes. This suggests that a program to ensure the availability of legally appropriate scientific evidence to implement legal requirements of the precautionary principle could contribute to greater effectiveness of this principle.

The case studies illustrate that within a capitalist economic system (and probably in any other type of socio-economic system) the weight of resources for or against environmental values will substantially

shape governance outcomes. The evaluations indicate that the development of environmental instruments should systematically target ‘tilting’ the weight of economic and social resources towards supporting sustainability. They also suggest that more attention needs to be paid to fiscal and other resourcing issues in implementation of legal governance.

Issue 4: Disciplined and effective implementation

Environmental law has a practical purpose: to help shift human behaviour into sustainable patterns. The effectiveness of strategies (whether military, political, commercial or governance) depends upon the interaction between objectives, context, resources and implementation actions. A seemingly small failure in any of these aspects can frustrate effectiveness: strategies are only as strong as their weakest element allows.

It is worthwhile re-stating some of the implementation issues already identified. Discussion of the translation of principles into local laws highlighted substantial difficulties in creating specific legal instruments to give effect to broadly stated governance principles. The challenges include politics and the limited capacity of governments to create or implement suitable laws. The discussion of context highlighted that effective implementation of environmental law requires a ‘fit’ between the law and the socio-economic context, and with the total governance system. The evaluations identified examples of the ‘misfit’ that can prevent full implementation: political or economic disempowerment, competing economic interests, political processes, the limits of science, even physical disabilities. The discussion of implementation resources highlighted the need to address the limits of ‘hard’ economic and the ‘soft’ human resources. Different resource constraints have been identified by the evaluations for government, bureaucracies, key stakeholders and intermediaries and those whose actions are being governed.

Taken together the evaluations suggest the need to address the question: ‘who is supervising the environmental governance system?’ In no jurisdiction did the evaluation team obtain evidence of effectiveness from an authoritative agency that was supervising how well environmental instruments are working within that jurisdiction. All teams reported that evidence of the implementation of the precautionary principle or of participatory requirements was difficult to assemble.

There are limited sources of intelligence about the overall performance of environmental governance in different jurisdictions, and about results. Australia, China, South Africa and New Zealand have ‘state of the environment’ reports, but there are limits to their usefulness for evaluating the natural resource governance activities.

The value of independent oversight of implementation of laws and policies (particularly international scrutiny) is demonstrated. The Aarhus Convention Compliance Committee and judiciable citizen rights provide implementation safeguards for its participation principles, applied in 47 subscribing jurisdictions. While it is not a state-based ‘legal’ authority, Transparency International provides an influential governance integrity check, focused on reducing corruption.³⁷⁴ The IUCN Red List tracks ecological outcomes, but does not explore the links between governance strategies and these results. There are other instruments and programs that could contribute to ongoing independent scrutiny of the effectiveness of legal (and other) governance instruments.³⁷⁵

374 Transparency International. (2011). National Integrity System background rationale, and methodology. The Assessment toolkit is available at <<http://archive.transparency.org/content/download/49651/794092/NIS+toolkit.pdf>>.

375 See Additional Resources.

The reliability of legal and other governance arrangements could be improved through evaluation mechanisms within jurisdictions. Possible approaches include independent reviews of the implementation and outcomes in individual environmental laws or strong citizen rights of review or standing to oblige performance of legal obligations. Another approach would be institutionalised independent review of the environmental governance system within jurisdictions. International oversight is also possible, as occurs under the Aarhus convention or through Transparency International.

Lessons learned in applying the framework

The evaluation framework focuses on key aspects of effectiveness: how well legal principles are adopted into domestic (or international) law; whether formal adoption is supported by institutional arrangements; behavioural responses to the law; and the outcomes of implementation. The case studies demonstrate that the goals of the framework were met. With further experience, methodologies for implementing the framework can be refined, supported by a community of practitioners and researchers in disciplined evaluation of environmental law. The framework could be applied (in a modified form) to international arrangements or to non-law approaches including market-based mechanisms or social programs.

The evaluation reports provide a transparent basis for considering improvements in legal doctrine, institutional arrangements, administration and implementation. They clearly show the links between governance interventions, the human dimensions of natural resource management, and environmental outcomes. Notwithstanding limits of time, resources and technical capabilities the teams also report that the framework enriched their analysis and led to new insights. A lack of specialist training did not prevent teams from carrying out their investigations, but naturally the more sophisticated, well-resourced and time-rich a team is, the more sophisticated an evaluation is likely to be.

The framework provided a viable structure for a multi-disciplinary approach to legal effectiveness. Collaboration with non-law social and technical experts can improve empirical work and support interpretation of technical literature and data. In particular the use of the framework highlighted opportunities to focus on the behavioural performance of law through the social sciences and for investigation of the links between law and environmental and social outcomes.

Different methods can be used within the framework, as evidenced by the varied approaches adopted by the teams undertaking the case studies. The teams developed research instruments and used various matrices to facilitate analysis. As well as providing rich details of the implementation effectiveness of environmental law principles they provide lessons learned from implementing the framework.

That environmental law principles exist is widely accepted.³⁷⁶ However most teams found it difficult to 'objectify' the selected legal principle precisely enough for empirical measurement. To distil principles typically involves consideration of many documents, because principles may be ambiguously stated or inconsistently specified. In no instance did the team identify a document that provided performance metrics for the principle. This hints at the complex jurisprudential issues that are embedded within the seemingly straightforward idea of environmental law principles. It also reflects the problems in translating politically developed statements of principle into detailed law, which was discussed earlier in this chapter. Empirical evaluation of implementation of principles and developments in environmental law jurisprudence should eventually lead to more precise specification, but this may take time.

³⁷⁶ See for example World Commission on Environment and Development (1987). *Our Common Future*. Annex 1: Summary of Proposed Legal Principles for Environmental Protection and Sustainable Development.

This issue is linked to the difficulty of finding precise performance criteria for legal matters. The many interconnected variables, and their complexity and complicatedness, confounds simple analysis. It is difficult to make a problem tractable for empirical analysis while still ensuring that what is being assessed reflects 'real world' effectiveness where objective and subjective matters are interwoven. Reducing the problem by the use of simplifying assumptions, or by considering only part of the complex reality, may make analysis more precise but less realistic and less useful.

It is thus not surprising that the teams found it difficult to specify evidence that was feasible to evaluate. Generally this did not prevent them conducting transparent and objective analysis. A particular difficulty was in finding evidence where the desired effect of a law was 'non-action' such as exercising restraint or non-approval, where no evidence of the implementation of the principle would result. It might be possible to address this through behaviour or attitude indicators such as surveys of acceptability of potential harm-doing, or overall outcomes of governance. It also proved difficult to rapidly assess the reliability of intelligence, such as environmental impact statements, government reports or academic studies. It was also not simple to provide objective assessment when the principle requires subjective judgement (e.g. the precautionary principle, or intergenerational equity). Such judgments are legitimately influenced by their context and so assessment is complicated. Over time many of these evidentiary difficulties should reduce, as teams experiment with approaches and establish precedents for objective evidence gathering and assessment.

Evaluation of law for sustainability: Next steps

The work described here is a first step towards achieving tangible improvement in the effectiveness of the legal aspects of natural resource governance. Over the coming years more objective evaluation of legal governance for the environment should ensure that the fundamentals of legal governance are understood, leading to targeted improvement. IUCN has created an online platform for this work: www.lawforsustainability.org.

Future evaluations may address a broader set of performance dimensions. In this work the focus was 'effectiveness' – did the legal arrangement achieve the biophysical or social goals that underpin the environmental law principles. Future approaches could also consider whether the legal arrangements are 'efficient' (viz. achieving the outcome with the least expenditure or cost) and 'fair' (viz. allocating the costs and benefits equitably). At the present time, regulatory impact assessment focuses on a narrow version of efficiency, and generally fails to take proper account of distributional effects. Efficiency and fairness criteria pose different methodological complexities to evaluation of effectiveness, but these can be overcome.³⁷⁷

Another matter for further development is to broaden the focus to other rules that affect natural resource governance. The law affecting natural resource governance includes environmental conventions, regulations, administrative, property, human rights and many other rule sets. Customary law and other non-government sources of norms have a strong governance role. Hybrid arrangements with industry or civil society, and government or other policies are also relevant.³⁷⁸

377 Canvassed in P. Martin, R. Bartel, J. Sinden, N. Gunningham and I. Hannam (2007). *Developing a Good Regulatory Practice Model for Environmental Regulations Impacting on Farmers*. Australian Farm Institute and Land and Water Australia.

378 Holmes, S. (1997). *Some Lessons From The Use of Environmental Quasi-Regulation in North America*. Productivity Commission, Australian Government. Retrieved from <<http://www.pc.gov.au/research/completed/environmental-quasi-regulation/quasireg.pdf>>.

The eco-social challenges that legal governance addresses are varied. New challenges will arise with the use of the evaluation framework to address other issues than those already examined. The diversity of issues will necessitate diverse and flexible approaches building on the framework. Through experience, diverse precedents and a community of practice can develop. Better law can lead to more accountable and responsible behaviour, which in turn can lead to improved environmental and social outcomes. Objective evaluation is a key plank in the legal platform for better environmental governance.

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Online indicators

World Bank Worldwide Governance Indicators

<<http://info.worldbank.org/governance/wgi/index.aspx#faq>>

UNDP Governance Assessment Portal

<<http://www.gaportal.org/areas-of-governance>>

Transparency International Corruption Perception Index

<<http://www.transparency.org/research/cpi/overview>>

CBD Biodiversity Indicators Partnership

<<http://www.bipindicators.net/>>

Yale Environmental Performance Index

<<http://www.epi.yale.edu/>>

International Property Rights Index

<<http://internationalpropertyrightsindex.org/>>

World Bank Indicators

<<http://data.worldbank.org/indicator/all>>

Global Integrity Index data

<<https://www.globalintegrity.org/downloads/>>

THE CIA World Factbook

<<https://www.cia.gov/library/publications/the-world-factbook/rankorder/rankorderguide.html>>

World commodity indexes

<<http://www.indexmundi.com/commodities>>

CIA World Factbook

<<https://www.cia.gov/library/publications/the-world-factbook/rankorder/rankorderguide.html>>

Inclusive Wealth report

<<http://www.ihdp.unu.edu/article/iwr>>

World Bank Country Datasets

<<http://data.worldbank.org/country>>

Country property rights index

<<http://www.internationalpropertyrightsindex.org/ranking>>

Index Mundi – Gini Coefficient by country

<<http://www.indexmundi.com/facts/indicators/SI.POV.GINI/compare?country=au#country=dz:ar:au:bb:bz:s3>>

FAO Statistics – by country

<http://faostat3.fao.org/faostat-gateway/go/to/browse/I/*E>

Global Development information site

<<http://www.eldis.org/>>

UN Public Administration portal – country profiles

<[http://www.unpan.org/DPADM/ProductsServices/ThematicPortals/
PublicAdministrationCountryProfiles/tabid/677/Default.aspx](http://www.unpan.org/DPADM/ProductsServices/ThematicPortals/PublicAdministrationCountryProfiles/tabid/677/Default.aspx)>

Worldwide Governance Indicators

<<http://info.worldbank.org/governance/wgi/index.aspx#home>>

Index of Economic Freedom

<<http://www.heritage.org/index/explore?view=by-variables>>



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