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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This is a preliminary report on development and application of a method for assessing and improving legal aspects of governance. The final report and accompanying case studies will be published at the end of 2015. Case studies can be found online at www.lawforsustainability.org.
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Preface
Paul Martin, Lydia Slobodian and Thomas Greiber

Achieving a sustainable future is one of the most urgent challenges of our time. With fundamental shifts in how we govern and manage our ecosystems and natural resources, we can loosen the grip of inequity, poverty, and conflict and 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. Weak or inappropriate natural resource governance contributes to a wide range of problems that deplete ecosystems of their diversity, abundance, productivity, and resilience.

In response to these challenges, IUCN initiated development of a Natural Resource Governance Framework (NRGF) to assess the status of governance in specific situations and identify approaches and processes to improve governance outcomes for natural resources management. NRGF aims to provide a robust, credible approach to assessing and strengthening natural resource governance at multiple levels in diverse contexts. NRGF is a knowledge basket, comprising different standards, processes, relationships, capacity-building and tools. The development of NRGF is led by the IUCN Commission on Environmental Economic and Social Policy (CEESP).

A core component of this initiative is finding ways to assess and improve legal aspects of natural resources governance. This report presents a first step in this process: a framework for objective evaluation of the implementation of legal principles for sustainable natural resource governance. The framework provides a disciplined basis to evaluate how legal instruments are performing, enabling constructive dialogue, innovation and reform. It is intended that this part of the NRGF toolkit will be the skeleton of a body of intelligence and practice leading to improvement of legal aspects of natural resource governance. IUCN has created an online platform for supporting this work: www.lawforsustainability.org.

The project to develop this legal evaluation framework was jointly 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. That meeting primarily brought together legal specialists with some CEESP experts, to bring a sharper focus to legal governance effectiveness. Over the next couple of months, a draft evaluation methodology was developed and refined. The methodology was drafted by Paul Martin, Thomas Greiber, Ben Boer and Nick Bryner.

It was decided that to achieve the objectives it was necessary that the framework be tested. This was in order to verify whether it could meet the requirements, and to refine the methodology based upon experience. A call for teams to participate in a trial use of the framework was sent to a
selection of institutions that are members of the IUCN Academy of Environmental Law in March 2014. 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 the legal principle in managing the governance issue; and (2) the usefulness and ease of use of the evaluation framework.

This was an experimental use of a ‘beta’ version of the framework, partly designed to see if the framework was useful under less than ideal conditions. The teams had varying backgrounds, and spanned undergraduate and postgraduate levels of experience. In some cases they secured the support of non-law experts. 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. As a result of feedback, modifications were made to the method, to improve precision. Reports were finalized at the end of 2014.

The following teams were involved in the development of these case studies:

- 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, Marcia Fajardo, Mauricio Duarte, and Patricia Borba (Mackenzie Presbyterian University, Brazil);
- Trevor Daya-Winterbottom, Gay Morgan, Roshni Bava, Mark Calderwood, Michelle Chen, Natalie Forster, Ben Hansard, Sarah Thomson, and Jaime-Anne Tulloch (University of Waikato, New Zealand);
- Qin Tianbao, Wei Lele, Liu Qing, Duan Weiwei (Wuhan University, China);
- Karen Bubna-Litic, Emma Goreham, Taylor Pope, Kvitka Becker and Alex Craig (University of South Australia, Australia);
- Elmien Du Plessis, Amanda Mugadza, Niel Lubbe Jean-Claude Ashukem (North West University), Suzi Malan (University of British Columbia), Marie Parramon-Gurney (Southern Africa Representative IUCN), Clara Bocchino (University of Pretoria).

The teams were coordinated and guided by Paul Martin.

The project has been managed by Thomas Greiber and Lydia Slobodian (ELC Legal Officers), supported by Li Ning (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 contributed to editing of this report, and Miriam Verbeek provided copy-editing. Special thanks to Jennifer Mohamed-Katerere and Gretchen Walters for providing the support of the NRGF Initiative.

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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 (World Wildlife Fund 2014).

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: citizens and industry, those being governed and those who are affected by governance. As well as pursuing sustainability, natural resource governance can involve aims that are inconsistent with this objective, such as harmful economic exploitation 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 or supply chain codes; or with traditional and indigenous norms and methods 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 commonly seen as the essence of the 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
Concepts and terms. These terms should be interpreted as follows.

**Governance:** A system for governing behaviour that involves (i) *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:** 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, or religious decisions or texts. The focus of this evaluation framework is state-endorsed rules.

**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 including:

- 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;
- 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.

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.¹

Relevant legal principles, rules and implementation arrangements can come from any or all of the following.

a. State-created rules, including constitutions, statutes, regulations, and administrative rules and plans. Even apparently non-regulatory interventions such as incentive schemes, state mandated or supported voluntary schemes, and many non-governmental programmes depend partly upon government based upon laws, including permits or recognition and enforcement of contracts.

b. State-based judicial rules, which include judgments of courts and tribunals, and legally binding rulings of other authorities or agents of government.

¹ There are complex challenges in specifying legal principles from non-documentated traditional rules. The IUCN CEESP is focusing upon these issues in developing the NRGF.
c. State-supported private (broadly consensual) rules. The legal bases include contract law, civil and property rights. Even market-based approaches depend on legal rules and institutional arrangements. Industry co-regulatory arrangements, or private codes or standards, involve norms supported by the state such as rules against deception of consumers.

d. International, bilateral, or multilateral agreements. The rules of international bodies are largely consensual because of traditions of sovereignty, but even then have significant normative status and often prescribe important principles. International arrangements involve different degrees of formal acceptance by nation states and communities. State-endorsed international legal and administrative arrangements can include “hard law” (formally ratified into national law) and “soft law” (norms not ratified, not yet widely ratified, or not of a binding nature). Soft law principles are often inferred and the legal status of many suggested soft law norms can be contested.

e. General legal principles. State and international law contains norms are ‘self-evident’ principles of law within a jurisdiction or in international jurisprudence, such as the principle of the rule of law. The judgments of international and national courts and tribunals bring institutional strength and clarification to these general legal principles.

f. Rules emerging from communities, particularly indigenous communities, which are sometimes referred to as ‘customary law’. In many jurisdictions, customary law is important in natural resource governance. A growing number of nation-states recognise customary law 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, legal arrangements for natural resource governance consist of far more than the rules. 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 jurisdictions legal rules concerning the environment were mainly focused upon exploitation issues, generally protecting the interests of the elite. From the mid 1800’s there was a growth in public environmental law, and from the mid-1970’s here was an explosion of legal and other instruments at both the state and international level. Today, there is no lack of legal and other instruments for natural resource governance. There are literally 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

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2 For details see Ecolex database [http://www.ecolex.org](http://www.ecolex.org) . see also the International Environmental Agreements Database Project [http://iea.uoregon.edu](http://iea.uoregon.edu)
taxes, fees and charges; tradable permits; deposit-refund systems; environmental subsidies; and many voluntary schemes. To this can be added industry codes and standards and marketplace environmental brands, and various tariff and subsidy arrangements (many of which promote resource extraction rather than discourage resource consumption in the jurisdiction).

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 documented (IUCN Red List of Threatened Species). 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”.

There is growing recognition that implementation of legal rules of natural resource governance needs significant improvement (see Rio+20 outcome document “The Future We Want”; and UNEP’s “Environmental Governance sub-programme”. There is a growing concern for the effectiveness of the systems of governance within which legal and other instruments operate.

This focus on more effective law and governance is a major challenge that will require ways to objectively evaluate the performance of the legal aspects of environmental governance, as a basis for tackling the systemic causes of under-performance. A broad and multidisciplinary approach will be essential to achieving the marked improvement that is clearly needed.

The report outlines a framework for evaluation of the legal aspects of natural resource governance that can support more informed and transparent dialogue about that performance. The approach encourages an objective appraisal of the effectiveness of widely accepted environmental law.

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3 Illustrated by the OECD Environmental Policy Instruments database. For details by country, [http://www2.oecd.org/ecoinst/queries/All_Information.aspx](http://www2.oecd.org/ecoinst/queries/All_Information.aspx)

4 For brands see Ecolabel Index [www.ecolabelindex.com/](http://www.ecolabelindex.com/) Also relevant are the ISO environmental management system, chain of responsibility and life cycle assessment methods [http://www.iucnredlist.org](http://www.iucnredlist.org)

5 [http://www.iucnredlist.org](http://www.iucnredlist.org)

6 Secretariat of the Convention on Biological Diversity 2010


8 ‘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.’ [http://www.unep.org/pdf/brochures/EnvironmentalGovernance.pdf](http://www.unep.org/pdf/brochures/EnvironmentalGovernance.pdf)
principles, with a view to implementation reforms which will improve the real-world performance of environmental law.

**Evaluation Challenges and Considerations**

At the heart of any approach to continuous improvement lies the need for good empirical intelligence. Evaluation provides this basis. Contemporary evaluation methods apply a rigorous empirical discipline to ensure that conclusions are based upon deduction rather than inference, which might be unreliable because of the effect of subjective judgements. There are many documented methodologies, applied in different fields, but objective evaluation in environmental law is underdeveloped both in theory and in practice. 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 methods for evaluation.

Governance of the environment occurs at intersection of biophysical and social systems. The human behaviours and the ecosystems that they affect are very complex and understanding them is very complicated. While it is possible to place a boundary around the topic being evaluated, this involves a simplification of reality. This introduces risks. 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.

Legal governance of the environment involves many instruments, often reflecting competing purposes such as seeking to protect the environment at the same time as maximising wealth production 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 frequently impossible and always complicated.

Best practice evaluation relies on objective facts, rather than subjective information. However legal aspects of governance do involve subjective values. Concepts like ‘justice’ and ‘fairness’ cannot be excluded 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, and costly and difficult to obtain. As illustrated by the evaluations reported in this volume, tasks such as identifying the purpose of a law, the content of a legal principle, and evaluating the behavioural or biophysical outcomes all deal with the combination of objective data, subjective values and politically contested interests. While it is possible assume such complications away, if an evaluation is to do more than merely describing what has happened, to develop realistic proposals to make environmental law more effective, it must accommodate both the objective and the subjective realities of applied law. 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 methods.
Use of the Evaluation Framework

The evaluation framework is designed for use by people with diverse interests, resources and capabilities. The approach was designed to not require the specialist skills of environmental lawyers or indeed any other type of specialist. It was intended to be useful for a small community group concerned with a particular issue, or for a government in exploring how to systematically improve its own natural resource management.

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 essential. It should be able to encompass evaluation of the legal governance of marine, desert, or urban contexts with issues spanning all taxa, and many social system dynamics.

To cope with the fact that competing values are often embedded within environmental law, the methodology was designed with an emphasis on transparency, aiming for comprehensive analysis and for open disclosure of the evidence and reasoning supporting conclusions.

Case Studies

The case studies described in this report demonstrate the potential of the framework to be used effectively in different contexts by teams with varying composition and expertise. Teams from universities in Australia, China, Brazil, New Zealand and South Africa used the methodology to examine implementation of two accepted principles of environmental law and six natural resource governance challenges. They demonstrated that the approach does indeed enable well-structured analyses supporting comprehensive reforms that should improve the effectiveness of environmental law principles, and that the framework can be used without substantial specialized training.

The method has enabled a disciplined and transparent evaluation of the effectiveness of the legal aspects of natural resource governance. The teams have been able to identify specific areas for improvement and have provided objective evidence to support their recommendations. Their recommendations span the important doctrinal, administrative and implementation aspects of successful environmental law, and the evidence and the conclusions they present are amenable to critical review and 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 for action. In summary, the work did show the practicality and usefulness of applying a well-structured empirical approach to understanding the effectiveness of environmental law effective in different contexts. Overall it suggests that environmental law effectiveness is likely where high quality doctrine is combined with implementation planning that deals 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 ‘experimental’ evaluations show the need to graft onto our emphasis on legal governance instruments an informed
approach to improving the effectiveness of the other components of the legal governance system that needed to make instruments effective.

Effectiveness of the evaluation framework should not be measured by whether it creates a simple, neat, assessment. It should be judged by whether the evaluation provides a careful and comprehensive analysis of the performance of legal arrangements, providing reasonably objective intelligence which can be interrogated and contested, and whether it leads to clear recommendations on ways to improve the effectiveness of legal arrangements. This framework provides a structure upon which improved evaluation methods and useful evaluations can be built and a catalyst for researchers and practitioners to build a community of practice that can support systematic improvement in the effectiveness of the legal aspects of natural resource governance.
Methodology
Paul Martin, Ben Boer, Thomas Greiber, Lydia Slobodian and Nick Bryner

Governance relies on many mechanisms to shape human behaviour, particularly in the context of natural resources. These mechanisms include regulation, markets and social interventions. For effective governance the actions of citizens, civil society and business are no less important than those of governments. Each of these aspects 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. 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 a number of possible entry points for legal evaluation. This method is based on evaluation of the effectiveness of legal principles relevant to natural resources governance.

Legal principles prescribe what should be contained within laws and their associated administrative and implementation arrangements. An example is the precautionary principle. Legal principles can be inferred, *inter alia*, from international instruments, national legislation, judicial decisions or custom. The reason for the focus upon evaluating implementation of principles rather than detailed legal rules is because different legal instruments will contain different rules, worded differently. In contrast, legal principles can be traced across instruments at different levels. A focus on principles can help avoid becoming mired in the details of particular legal instruments.

The method involves evaluating implementation of the principle across four levels, comparing what is found in practice to what would be expected with full implementation. These levels are (1) the translation of the principle into laws of the state; (2) the creation of necessary institutional and administrative arrangements; (3) appropriate behaviour by people and organisations; and (4) social and ecological outcomes.

The approach can be applied across a whole country, or regions within a country. It can be used to evaluate rules and institutions in many jurisdictions, to stimulate critical debate about the effectiveness and fairness of natural resources law. 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 an objective evaluation to enable constructive dialogue about improving the outcomes of natural resources governance.

Structure of the Method
The method involves a process of analysis and evidence-gathering at multiple levels. Following an initial scoping of the natural resource governance issue, the evaluator identifies and describes a relevant legal principle and identifies conditions at four levels that they would expect to see if the principle was being effectively implemented. The evaluator then obtains and analyses objective evidence to see if the indicator expectations are being met and examine why those indicators are or
are not being met, at each of the four levels. Based on this, the evaluator can state a judgement about the implementation and effectiveness of the principle.

The four levels of the evaluation are:

- **Instrumental:** The extent to which the legal principle is embodied in legal instruments such as legislation, regulation, judgements 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 necessary.

- **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 method is summarised in the diagram below.

<table>
<thead>
<tr>
<th>Conduct initial scoping of natural resource governance issue</th>
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</thead>
<tbody>
<tr>
<td>1. The state of natural resources for the targeted ecosystem, area, country, or region.</td>
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<tr>
<td>2. Issues of social inclusion or exclusion in natural resource governance.</td>
</tr>
<tr>
<td>3. Human interests and political positions involved.</td>
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<tr>
<td>4. Legal and governance arrangements that relate to key issues of concern.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Identify and describe the principle for purposes of evaluation:</th>
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<tbody>
<tr>
<td>1. Identify what principle exists, and its legal sources.</td>
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<tr>
<td>2. Specify the fundamental elements of the principle.</td>
</tr>
<tr>
<td>3. Identify measurable indicators of implementation a. Legal b. Institutional c. Behavioural d. Outcome</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instrumental Level</th>
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<tbody>
<tr>
<td>Has the principle been adequately reflected in formal legal arrangements?</td>
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<tr>
<td>1. Formal ratification of rules and administration.</td>
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<tr>
<td>2. Adopted laws (statutes, regulations) for implementation</td>
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<tr>
<td>3. Allocation of responsibility and accountability.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Institutional Level</th>
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</thead>
<tbody>
<tr>
<td>Have sufficient institutional and organization structures been put in place to implement the principle?</td>
</tr>
<tr>
<td>1. Allocations of responsibilities and resources.</td>
</tr>
<tr>
<td>2. Administrative arrangements.</td>
</tr>
<tr>
<td>3. Implementation and effectiveness accountability.</td>
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<table>
<thead>
<tr>
<th>Behavioural Level</th>
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<tbody>
<tr>
<td>Have the implementation actions resulted in patterns of behaviour consistent with the governance aims of the principle?</td>
</tr>
<tr>
<td>1. Actions taken by those with implementation roles?</td>
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<tr>
<td>2. Effective action taken by those with complementary or support roles?</td>
</tr>
<tr>
<td>3. Desired patterns of behaviour by the targets of implementation actions?</td>
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</table>

<table>
<thead>
<tr>
<th>Outcome Level</th>
</tr>
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<tbody>
<tr>
<td>Do the biophysical and social outcomes demonstrate implementation and achievement of the purposes of the principle?</td>
</tr>
<tr>
<td>1. Purposeful implementation.</td>
</tr>
<tr>
<td>2. Integrity of implementation.</td>
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<tr>
<td>3. Objective performance measures.</td>
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</tbody>
</table>
It is not necessary that the steps take place in the order set out above. Often the process will be iterative rather than linear. However, the experience to date suggests that following the process as closely as possible does assist in ensuring an objective and comprehensive evaluation.

**Initial scoping of natural resource governance issue**

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. 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.

The scoping study should provide an objective idea of:

a. The state of natural resources for the targeted ecosystem, area, country, or region and the key 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.

It is important to also use the scoping work to identify potential research questions, sources of data and 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, and could involve experts in natural resources law and governance working with representatives of groups that are affected by natural resource governance. Ideally, any scoping should ensure that diverse (including competing) perspectives are heard and understood.

**Identify and describe the legal principle**

Under the method, legal principles that can contribute to improved governance outcomes should be identified and summarised.

**Identify what principle exists, and its legal sources**

A starting point to identify legal principles is instruments such as international treaties, statutes, and regulations, as well as court judgments, government policies and agreements. Formal instruments from authoritative sources confirm that a principle has legal status, and can help to distil and explain the principle. Private and administrative norms, including customary law, are also important. However evaluation of the implementation of proposed legal principles that are not supported by authoritative documents poses additional challenges.

Legal principles should be distinguished from principles for the design of legal governance systems, which prescribe an overall ‘architecture’ of that system. Examples of these system design principles include ‘smart regulation’ or ‘hybrid governance’ approaches. It is also possible to identify general principles of good governance such as following the rule of law, and the need for strong
parliamentary oversight and judicial independence for implementation. This method focuses on legal principles, though architectural and implementation principles may be relevant to the findings of an evaluation about implementation of legal principles.

Following is an example of how a specific statement of a principle might be found and refined 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 legal obligation, for example, to consider the interests of indigenous peoples. A principle of ‘indigenous social justice’ and of ‘intergenerational equity’ might be distilled from this (or may be explicitly stated)

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.

A similar process of identification and clarification of principles could be used drawing on other legal sources, including international law, to give more precise definition to the principle and its indicators. This may also be supported by authoritative statements from scholarly works or judicial statements, or perhaps by authoritative international organisations such as the IUCN or UNEP. One risk to the integrity of evaluations of environmental law is elevating statements of aspiration or political positions that have not been received into law as if they were legally authoritative. The legal sources upon should be identified to ensure transparency and to enable debate about the principles. Transparency reduces the risk of political manipulation or unfair criticism.

Specify the fundamental elements of the principle
Principles of environmental law are rarely specified in sufficient detail to allow precise analysis of their implementation. The method set out here requires that the evaluators not only identify the legal principle, but that they specify what objective criteria (at four levels) they will use to test its implementation. If their understanding of the principle is not clear, or not stated in ways that others can understand, then the evaluators are likely to have trouble in specifying what they would expect to find if the principle was being implemented.
Identify measurable indicators of implementation

The summary should specify the indicators that they are intended to measure, to demonstrate the degree of effective implementation at each of the four levels noted 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.

Challenges and considerations in identifying legal principles

There is ongoing debate over what are, or should be, the core principles of environmental law. This creates two difficulties in identifying and describing a ‘principle of environmental law’ 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\(^9\), others are emergent, and some apply in some jurisdictions but not in others. There is a distinction between process and outcome-based principles, with the former concerning matters like the precautionary principle (which inform the process of decision-making) and the latter concerning anticipated results, like the polluter-pays principle where it should be easier to judge its application by looking at the pattern of decision outcomes. 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 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 contestation of the evaluation including the choices and interpretation of possible principles. This should contribute to rather than detract from the purposes of the framework.

In conducting an evaluation of the implementation of legal principles, focusing too closely on the details may lead to confusion, rather than supporting the evaluation. However, it is important that the principles being evaluated are found in specific legal instruments, rather than grounded only in political aspirations. The method 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 implementation in laws and legal institutions, and so neither is there likely to be useful evidence of behavioural or outcome achievements arising from the principle is also unlikely. Investigation of proposals for laws that are not yet ratified by governments or courts would require a different method than the one outlined here.

Evaluate implementation of the principle across four levels

Once the principle has been identified and described, evaluators must gather evidence related to its implementation and effectiveness, with regards to the specified indicators. This is likely to involve a

process akin 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 objectivity, political credibility and its value in proving a causal relationship between implementation of the principle and social, environmental and economic outcomes.

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 focus also on behavioural observations, changes to practice, and outcomes (environmental, social, economic, and cultural). Identification of the best measures, and the methods of analysis and data gathering for each, is important. The levels are increasingly difficult from a data and analysis point of view, and in the complexity of the causal relationships that need to be considered.

Evaluation of principles against all of the selected indicators require different forms of technical capacity or information. It may involve evaluation of matters such as program management, public policy, organisational or individual behaviour, social change and impacts, and environmental matters. 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. Teams should consider carefully how they will obtain the skills and information sources that they will need, and the methods that they intend to use. Experience with use of the framework suggests that effort invested in planning these aspects while scoping out the evaluation will pay dividends.

**Has the principle been adequately reflected in formal legal arrangements?**

Having identified the principle being evaluated, and specified its meaning in practice with indicators at the four levels, the first evaluation is whether the principle has been converted into relevant law, based upon whether the laws in the jurisdiction satisfy the instrumental indicators established by the team.

Bearing in mind the broad scope of the 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.

What specific legal instruments are likely to be relevant will, of course, depend upon the principle, the legal architecture of the jurisdiction and the nature of the issues to which it is being applied.

This step may involve the same legal documents used in identifying the legal principle, described above. Where the same documents are used for both purposes there will be some circularity in the analysis, though 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 any circularity should not reduce the integrity of the evaluation.

Has sufficient administrative and other government action been taken to implement the principle?
Implementation of environmental laws depends upon many institutional arrangements. Typically, it is necessary that responsibility for the required actions is allocated to a responsible 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 are also required of those being governed, who may have to reallocate resources or put in place management arrangements. There may also be organisational matters required of intermediaries and other stakeholders.

Evidence to evaluate institutional indicators for government agencies will typically consist of bureaucratic evidence of arrangements to support implementation 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 such information. Freedom of information rules can facilitate this type of evidence gathering. For non-government stakeholders, documented evidence of preparedness to implement is likely to be more difficult. The evaluation summaries in the following chapter show that direct enquiry is the most likely approach to applying these indicators to non-government bodies.

Have the implementation actions resulted in patterns of behaviour consistent with the governance aims of the principle?
The ultimate purpose of law is to change human behavior, to achieve specific outcomes. This describes not only behavior of regulated entities, but also of government actors and other involved or affected individuals and communities.

Evaluating behavioral change is likely to involve evidence drawn from observations, interviews and surveys concerning the degree to which legal rules and institutional arrangements are being faithfully implemented. A variety of actors and thus forms of evidence may be relevant. What evidence is needed depends upon the evaluators’ decisions about the behaviours of which actors are judged to be 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 indicating the behaviour of other actors in the governance system, including the legal profession, judiciary, policing and administrative agencies, seeking indications of whether these behaviours are consistent with implementing the principle.
- Indications whether the behaviour of the ‘target’ communities is consistent with effective implementation. These communities may those targeted for control (e.g. industrial polluters,
wildlife smugglers, illegal occupiers) or for 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 examples that follow in the next chapter show the use of a number of methods to test the behavioural effects of laws to implement natural resource governance principles. It is clear that there are many opportunities for innovative methods to provide greater insights into this dimension of effectiveness.

**Do the biophysical and social outcomes demonstrate implementation and achievement of the purposes of the principle?**

Evaluation of social, ecological or economic performance should be based on objective (insofar as that is possible) social and biophysical evidence of the outcomes being achieved compared with the indicators. This might be 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 use of resources.

While there are many difficulties in obtaining good evidence of outcomes from the implementation of environmental law, there is a vast repository 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 evidence 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 level of the method the most difficult to evaluate. This was to a large degree due to limited time and a lack of technical skills, needed to obtain stronger primary or secondary evidence of outcomes. It is expected that problems of complex causes and uncertain effects will be an issue when the framework is applied without the constraints that affected these initial trials. New methods are likely to develop to overcome these problems, and in doing so are likely to contribute to improving the effectiveness of environmental law as a component of natural resource governance.

**Considerations in implementing the method**

The method described above has been used by six teams from various countries to evaluate two specific legal principles – the precautionary principle, and the principle of participation. These case studies are summarized in the next chapter. The experience of the teams applying the method provide lessons and best practices, which are described in the final chapter. Some preliminary considerations in implementing the method are detailed below.
Evaluation technique
Evaluation is a discipline and profession in its own right. There is an extensive literature, and many practice guides are available, as detailed in the resources section at the end of this volume. Evaluation methods are well developed in public health and education. They are however uncommon in the law, though there are useful examples and guidelines. The absence of objective information about the performance of legal instruments and institutions impedes a scientific approach to improved effectiveness.

Formal evaluation methods aim for high levels of scientific objectivity. They often involve sophisticated methods and specialized training. However the method described here is designed to be useful for people with different levels of sophistication and resources in a variety of situations. Therefore it takes a broad, simple approach, within which different data gathering and analysis methods may be used depending on resources, capacity, and context.

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’ things 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 significant aspects of sustainability). Trade-offs between competing values are not amenable to precise scientific methods, though scientific techniques can make trade-offs more transparent. Credible conclusions about the effects of legal interventions are therefore likely to depend on a process of ‘triangulation’, using different types of evidence to support evaluative judgments. Consideration of the balance of evidence (including objective and subjective data) is likely to be more feasible than pure deduction, though objective data about aspects of legal governance should always be sought. Particular caution is needed with opinions, data or examples from biased sources, though this evidence may be easy to obtain. It is vital that evidence is as objective and unbiased as possible and that the evaluation is transparent, allowing for criticism, disagreement and correction.

To the maximum degree, conclusions should be based upon the data, the data should be as objective as possible, and the process and the data should be objectively presented and transparent. Factors that might undermine the reliability of the evaluation should be openly discussed.

Gathering evidence
It is important to develop a plan to efficiently obtain evidence at each of the four levels. The evaluator should emphasise scoping the issues and developing efficient methods and instruments for evidence gathering as an integral part of the evaluation.

Evidence-gathering may include:

- Searching the relevant literatures, 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 secondary evidence can improve evaluations, but to do this well requires time, and often specialised expertise to interpret technical literatures.

- 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 more specialist skills and more time to properly carry out.
- Primary investigations 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 basic principles for good evaluation, 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, for whom it was carried out and by whom it was conducted.
- Explanation of the method, including a description of the analysis, the data, and the reasons why that particular approach was chosen. To assist future evaluations of environmental law 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 under examination, with a specific statement of its content and meaning, and the sources from which it was derived.
- An explanation of the indicators of effective implementation that were selected, including why they were chosen and the evidence that was used for the purpose of evaluation.
- A statement of the findings of the evaluation about implementation and effectiveness based upon the evidence. The statement should be specific about both positive and negative conclusions, and where possible provide an explanation as to possible causes. Limits to the reliability of the conclusions should also be revealed.
- Recommendations to improve the implementation and effectiveness of the selected principle. Where this is not clear from the preceding information, the rationale for the recommendations should be provided.

**Future development of the method**

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 help to gradually build a body of knowledge and practice. As expertise and data are developed, new methods will be developed, and the quality of interpretation of evaluations, causes and effects will improve.

Debate about the effectiveness of the law that is informed by objective data and analysis is needed to drive improvement. Over time and through use, a shared knowledge base and norms should evolve around how to properly evaluate the effectiveness of legal arrangements. The approach described here will be refined as better methods emerge.
Case Studies

The evaluation method has been applied in case studies by university teams around the world. The following section summarizes six case studies undertaken by research teams in Australia, Brazil, China, New Zealand and South Africa. The case studies focus on evaluation of two principles -- the precautionary principle and the participation principle -- in the context of endangered species or protected areas, including marine protected areas. These case studies shed light not only on the implementation and effectiveness of law in different countries, but also on the application of the methodology in practice.

Australia: Precautionary principle and endangered species

The evaluation team chose endangered species as its ‘resource governance issue’ and the precautionary principle as the ‘legal principle’ to evaluate. Overall, the team’s research indicates that a form of the precautionary principle has, more or less, been adequately incorporated into Australian law. However, the implementation of the principle in respect of endangered species ‘on the ground’ was found to be somewhat lacking. The team concludes that the mere presence of the precautionary principle in law is not sufficient to halt the continuing decline of many of Australia’s endangered species. While the team found that the principle was not entirely ineffective, more could be done to embed a precautionary culture into institutional and regulatory structures, including non-state actors, such as corporations and non-government organisations (NGOs).

Natural Resource Governance Issue

Australia is one of only 17 ‘mega diverse’ countries in the world. Australia is home to 65 internationally renowned wetlands (Ramsar wetlands) and an estimated 560,000 species. Almost 10 percent of the world’s species occur only in Australia. 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.

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10 Evan Hamman, Katie Woolaston, Rana Koroglu, Hope Johnson, Bridget Lewis, Brodie Evans and Rowena Maguire (Queensland University of Technology (QUT))


12 Ibid.

13 Ibid.

14 Ann Young, Environmental Change in Australia since 1788 (2nd edn, Oxford University Press 2000) 14.
Many components of Australian species have rapidly declined since Europeans arrived in the 1788. 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.

Three species were initially chosen for detailed evaluation: the koala, the White Shark and a virtually unknown but highly endangered native plant, Tylophora Linearis. The latter two were examined in detail.

**Legal Principle**

The team evaluated the precautionary principle, as identified in international instruments, and described in IUCN guidelines. The team also described how the principle should look in practice, based on legal and academic sources. They concluded that decisions made in accordance with the precautionary principle should:

1. be informed by the best available and independent science;
2. be made by decision-makers who have the resources and expertise to understand and appreciate ecological risks;
3. be reasonable and cost-effective in the circumstances;
4. be proportionate to the risk of environmental damage;
5. be supported by an effective administrative, institutional and technical framework; and
6. be transparent, inclusive and accountable.

They emphasize that the result of a precautionary approach should be one of the following:


16 Ibid.

17 Scientific rigour and the precautionary principle are inextricably linked and in many ways ‘mutually reinforcing’. See Nicolas De Sadeleer *Environmental Principles* (Oxford University Press, 2002) 174.

18 The precautionary principle is intimately linked to the concept of ecological risk. See N. De Sadeleer, ‘Environmental Principles’ (Oxford University Press, 2002) 149-150. We would therefore expect to see proper processes and systems for understanding the complexity of that risk.


20 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, ‘A long and winding road? Precaution from principle to practice in biodiversity conservation’ in René Von Schomberg, Elizabeth Fisher and Judith Jones (eds)
precautionary principle requires reasonable and proportionate responses to ascertainable threats, not the creation of an entirely risk free environment for human activity. They point out the need for positive steps to address uncertainty.

**Evaluation across different levels**

Following the evaluation method, the team examined four levels of evidence.

**Instrumental level**

For evidence that the principle had been translated into law, the team looked at Australian federal and state legislation and case law. That evidence revealed discrepancies in the interpretation of the principle and the points at which decision makers were required to apply it.

**Institutional level**

For evidence that the principle had moved ‘off the page’ and into governance processes, the team searched policy and strategy documents from industry (fishing, dredging, mining, development), administrative agencies and NGOs. This revealed that the principle was often not adopted, at least in literal terms, regarding endangered species. There was evidence that concepts such as ‘careful’ or ‘risk based management,’ were being adopted.

**Behavioural level**

For evidence that institutions had made behavioural changes in respect of the principle, the team undertook a brief desktop analysis of recent decisions of Australian courts.\(^{22}\) This evidence included primary material, such as case law, but also secondary material, such as academic and judicial commentary.\(^ {23}\)

**Outcome level**

The team looked for evidence of the outcomes of implementation of the principle. This was challenging. The precautionary principle does not mandate any measurable outcome, but focuses on

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\(^{22}\) The third level indicator, behavioural impact of the law was added later in the project, so time to obtain behavioural evidence was limited.

\(^{23}\) For the principle in Australia, see Jacqueline Peel, The precautionary principle in practice: Environmental decision-making and scientific uncertainty (Federation Press, 2005).
improving decision-making processes. The team sought evidence that the patterns of decisions correlated with what could be expected if the principle was being implemented. The team focussed on two case studies: the White Shark and an endangered plant, *Tylophora Linearis*. The team examined the following evidence:

- Peer-reviewed articles and scholarly publications;
- ‘Credible’ media reports (mostly mainstream media, no blog sites etc.);
- 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 related IUCN publications; and

The team also convened a multi-disciplinary workshop involving scientists, NGOs, academics and lawyers.

The team found that firm conclusions about outcome effectiveness were difficult to draw. There was evidence of outcomes from application of the principle in respect of White Sharks, but little to no evidence in relation to the lesser-known endangered plant species, *Tylophora Linearis*. The team found outcome effectiveness the most difficult, due to the limited availability of objective evidence of cause and effect.

**Lessons learned in evaluation**

The team reported that objective evaluation of legal principles was not easy, but that the approach was useable and beneficial. While locating principles like the precautionary principle in Australian law and policy was relatively straightforward the team found the precautionary principle particularly hard to ‘pin down’ in a practical sense. Difficulties included:

- Varying definitions and interpretations across jurisdictions (state, federal and local) and across different subject matters (fisheries, forestry, mining, urban development etc.).
- Agreeing on tangible indicators of the performance of the principle in practice. For instance, does the principle imply positive obligations to actively address species decline and, if so, on whom and to what degree? Does it shift the burden of proof for addressing uncertainty and, if so, how?

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24 Elizabeth Fisher and Ronnie Harding, ‘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, 2006); and also IUCN90 ‘Guidelines for applying the precautionary principle to biodiversity conservation and natural resource management’ (2007).

25 For the things the QUT team were looking for at this stage, see: ‘What should the principle look like in practice (non-legal analysis)’ later on in this report.
• If the principle triggers both positive and negative obligations on decision-makers (which the team concluded it should) how can evidence of ‘not doing something’ compared to ‘doing something’ be found?
• Uncovering the extent to which the precautionary principle was given weight over competing issues, such as economic growth and other political decisions.
• Judging the objectivity of data, particularly in politically contested areas like development, mining, agriculture, forestry and fisheries. For example, is an environmental impact statement (EIS) prepared by a third party employed by the developer objective data?

Principles like the precautionary principle do not set clear outcomes but, rather, they encourage better decision-making processes around environmental risks. As such, observing changes (or a lack thereof) in the behaviour and conduct of key institutions involved in implementing the principle may provide an easier route to effective evaluation.26

**Recommendations**
The team identified that loose drafting of statutory documents allows flexibility for decision-makers. In the case of the precautionary principle, it allows them to consider the bigger picture and be responsive to the ever-changing world. However if the specific content of a legal principle is not authoritatively confirmed, legal ‘principles’ may become little more than a reference point for unfettered discretionary decision-making.

The QUT team concluded that legal principles like the precautionary principle must represent more than applying a common sense27 approach to environmental risks. The judiciary in Australia has gone some way to specifying core aspects of the principle.28 The team suggests that principles like the precautionary principle, if they are to be drafted broadly, may need to be supported by specific guidelines to the key elements and purposes of the principle to improve the understanding of relevant stakeholders.29

26 The method was adapted to reflect this, during the project.


29 There are various guides and texts around the world. In Australia some guidance is provided by the *Intergovernmental Agreement on the Environment* (1992) <www.environment.gov.au/about-us/esd/publications/intergovernmental-agreement> accessed 17 December 2014. However, specific oversight of implementation of that agreement is not available.
**Brazil: Participation principle and marine protected areas**

Marine protected areas (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 nearby 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 thus a key not only to acceptance of their establishment but also to their administrative success. The research team’s objective was to evaluate the effectiveness of the participation principle in implementing MPAs in Brazil, particularly in the State of São Paulo. The team concluded that Brazilian law does recognise 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, the introduction of exotic species and the 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.

**Legal Principle**

The research team identified that participation can be seen as either a procedural or a substantive norm. In law, various terms may be used for the participation principle, including public participation such as: citizens’ participation in the administration of public affairs, community participation, social participation, consultation and others. No matter which term is used, the general goals are to advance participatory democracy, legitimise decisions made by governments, and reduce conflicts. The team notes that there is no participation without information. Access to information – a keystone in any democracy – is intrinsically linked to the effectiveness of the participation principle.

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30 Solange Teles da Silva, Carolina Dutra, Fernanda Salgueiro Borges, Marcia Fajardo, Mauricio Duarte, and Patricia Borba (Mackenzie Presbyterian University, Brazil)

31 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, *Guidelines for Establishing Marine Protected Areas. A Marine Conservation and Development Report* (IUCN, 1992) 13.


33 CDB Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) - Recommendation VIII/3.
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 different levels. 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 neighboring 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. All the guidelines, norms and procedures for creating and managing conservation units under the National System of Conservation Units (SNUC, established by Law 9985/2000) and its implementing decree (n. 4340/2002), along with Normative Instructions published by the ICMBio 34, also invoke the participation principle. 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 team surveyed Brazilian higher court decisions relating to “conservation units” and “public consultation”. The majority of the higher-court verdicts confirmed the need for public consultations to create protected areas, but found 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 some additional channel to make their voices heard.

In procedural terms, participatory concepts embodied in the law reveal precise rules prescribing procedures that assure the effectiveness of the participation principle in the creation of protected areas, as well as in the establishment and operations of management boards. The same cannot be said, however, for the drafting and approval of management plans. In terms of substance, to make the participation principle truly effective, much more information must be made available in objective and comprehensible language, and mechanisms must be created to assure the

34 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.
diversification of participation and training for board members, particularly from traditional populations.

**Institutional level**
The team identified a progressive application of the participation principle in the field of MPAs. The legal requirements for studies and consultations prior to the creation of marine protected areas, as well as the establishment of consulting and decision-making boards to assure the people’s participation in managing this areas, have both been respected, although they fall short of benchmarks set by the SNUC. In December, 2014, of the 63 federal MPAs, just over 79% have established management boards and approximately 40% have management plans. In São Paulo, while 100% of the MPAs have management boards, 0% (none) have management plans. The boards’ operations also lack transparency: they either have no web sites or do not post the minutes of the management boards’ meetings on the internet, often simply for the lack of employees, computers or any other means to assure the prompt dissemination of information.

**Behavioural level**
The research team found that despite efforts put into creating MPAs and their management boards and into formulating and adopting management plans, there was a shortage of basic information (and what information was available was often disorganised) as well as a shortage of field personnel for effective management in both Federal and State protected areas. Joint ICMBio/WWF-Brazil studies on the effectiveness of management of federal conservation units showed a drop in transparency of decision-making (down from 80% to 69.1%), as well as in effective social participation in management (from 74.3% to 50.9%) for MPAs between 2005-06 and 2010.

The team found a mismatch of public policies, which caused fragmentation in the administration of marine biodiversity and undermined the institutional role of management boards. 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 later by the environmental authority. The fishermen only found out about the latter decision when they were caught by inspectors. The community then rose up

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35 Cf. How effective is the law.

36 “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 and al., ‘Marine Protected Dramas: The Flaws of the Brazilian National System of Marine Protected Areas’ (2011) 47 Environmental Management 630.

37 WWF-Brasil ICMBio, 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 (2012)

38 Gerhardinger and al.
against the board, which had lost its credibility as an institution, and the situation took months to be resolved.

**Outcome level**

The team found problems at the outcome level in terms of access to information and participation in decision-making. The team evaluated information provided by the National Registry of Conservation Units (CNUC), and found that in some cases it was incomplete or outdated. For common, citizens, the presentation of information was confusing and may be misleading.

The team found that many marine protected areas at the federal and state levels had failed to establish management boards and adopt management plans. Of 63 federal MPAs, 50 had established their respective management boards and 25 had adopted management plans. In the State of São Paulo, all seven marine and coastal/marine MPAs, had established their management boards, but none of them had management plans.

In field visits to nine federal and state MPAs in São Paulo, the team found that authorities did comply with the legal requirement for an official public call for society to participate in management boards and in drafting management plans. However, management board representatives from civil society often ended up representing government interests. Interviews with the chairpersons of management boards also raised the issue of the legitimacy of civil-society representatives, particularly those from fishing associations, and mentioned conflicts that arise when the MPA is not effectively managed at all.

**Lessons learned in evaluation**

The team faced several challenges in applying the method, ranging from difficulties in defining a legal principle to lack of information about implementation to challenges in conducting and interpreting interviews. The team recommends an initial, exploratory study to help choose the field area to be analyzed, as well as a bibliographic and documentary survey, prior to beginning field work. They also recognize the need for a multidisciplinary approach to interviews, which can require reaching out to experts from other fields of knowledge such as sociology, economics, political science or others.

**Recommendations**

The research team made 7 specific recommendations to improve the effectiveness of the law incorporating the participation principle in MPAs in Brazil:

1. Dissemination of precise, complete and up-to-date information
2. Diversification of information channels
3. Capacity building
4. Changes to institutional structures and decision-making, considering actual conditions
5. Adoption of Strategic Planning
6. Coordination of MPA participatory management with other decision-making bodies

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39 Cf. Annex IV – Chart 3 Marine Protected Areas in São Paulo State (Brazil).
New Zealand: Precautionary principle and endangered species

The research team evaluated the effectiveness of the integration of the precautionary principle into the legal regime intended to protect endangered species. New Zealand’s economy is export and tourism reliant, and having a pristine ecologically sound physical environment is a major tourism draw. The thinking was that 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 the team would find effective integration of conservation principles into natural resource governance. To evaluate this hypothesis an examination of the legal regime to protect a ‘tourist attractive’ and critically endangered species marine mammal species endemic to New Zealand was undertaken.

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. Even though fishing methods contribute significantly to the mortality of Maui’s, 85% of the habitual range of the species remains unprotected to 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. 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 dangers activities’ in the reserve as well as the real risk of harm that could result to Maui’s dolphin along with other marine species.

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.

40 Trevor Daya-Winterbottom, Gay Morgan, Roshni Bava, Mark Calderwood, Michelle Chen, Natalie Forster, Ben Hansard, Sarah Thomson, and Jaime-Anne Tulloch (University of Waikato)

41 B Maas Science-based management of New Zealand’s Maui’s dolphins, above n 3, at 1.

to prevent environmental degradation.\textsuperscript{43} 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.\textsuperscript{44} 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.

**Evaluation across different levels**

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

The research team found that legislation and regulations that specifically integrates the precautionary principle does exist to protect the 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. Decision-makers under the Fisheries Act must account for the environmental principles contained in the Act. These principles require associated or dependent species to be maintained at a level to ensure their long-term viability, maintain the biodiversity of the aquatic environment and habitats of particular significance for fisheries should be protected.

The efficacy of the operation of the precautionary principal in the protective statutory framework, however, 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 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.

**Institutional level**

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 overall coordination between statutory regimes and

\textsuperscript{43} Rio Declaration, article 15.

inadequate enforcement funding, which undermines effective operation of the precautionary principle where embedded in statute

**Behavioural Level**
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 inefficacity 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.

**Outcome Level**
The research team found however that the precautionary principle is not fully and effectively implemented in law, or through institutions or behaviour of administrative and judicial actors. The team therefore judges the law in action to be ineffective and incapable of delivering appropriate outcomes.

The case study confirmed 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 in evaluation**
The research team recommends a more clearly defined scope from the outset to expedite the process. They also describe the need to use sufficiently specific search terms, without excluding potentially relevant cases in conducting case law surveys.

**Recommendations**
The research team made several recommendations. It is a necessity that information to assist in directing conservation regulations for the dolphins is available. One recommendation to assist with acquiring greater information about the species would be for the dolphins to be tagged and tracked. One way in which greater amounts of information could be used to better target regulations towards Maui’s would be for areas of high concentration of the dolphins to receive greater levels of protection and vice versa. 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. As such, if greater concentrations of Maui dolphins are found in certain areas, then the regulator could impose stricter controls and vice versa in areas of lesser concentration.

The Driftnet Prohibition Act 1991 is a piece of legislation that could be re-drafted to be more effective. The current requirement that a net, or combination of nets, is 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 be shortened to a distance smaller 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.

Another recommendation that could be implemented into the Waikato Regional Council Coastal Plan is to include a mandatory relevant consideration of all endangered species, including Maui dolphins, when people are applying for a resource consent for an activity in the coastal environment. This recommendation is also relevant to some reform of the EEZA. The EEZA is a good piece of legislation and does provide adequate protection for the environment as the TTR decision shows. However, one area in which the current framework could be improved would be by including the need to consider how a proposed activity would affect a threatened species.

Finally, closing legislative loopholes that undermine protection is required. In relation to marine mining, some amendment to the Marine Mammals Protection (West Coast North Island Sanctuary) Notice 2008 is also recommended. Specifically, it is recommended that the exception to the restriction on mining in cl 6 of the regulations be removed.

**China: Participation principle and protected areas**

The purpose of the research undertaken by the team was to evaluate the effectiveness of public participation for the management of protected areas in China. Protected areas, as instruments for safeguarding the integrity of ecosystems and biodiversity, also ensure the right of the local and traditional population previously existing in or nearby the protected areas. 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 kilometers China’s landscape is vast and diverse, ranging from forest steppes, 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. China is recognised by Conservation International (CI) 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 kilometer coverage of protected areas over the past couple of 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. Based on their relative

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45 Qin Tianbao, Wei Lele, Liu Qing, Duan Weiwei (Wuhan University)

importance, each type of protected area can be further categorised into three levels; national, provincial and prefectural.

**Legal Principle**  
The management of protected areas is best handled with the participation of all stakeholders, at the relevant level. Based on the research team’s definition of the public participation, this evaluation analysed the following three components: information disclosure, participation in decision-making and access to justice.

**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.

**Instrumental level**  
The research team found that there are some requirements related to public participation in the Constitution and other laws, but there are few specific provisions on public participation in the main protected areas legislation. However, there are provisions that mention information disclosure or participation in decision-making concerning protected areas. Although some laws contain provisions on access to justice in protected areas they are not clear and there is no case law on this topic.

**Institutional Level**  
In the Chinese environmental administration system there are 10 different ministries or administrative departments managing protected areas and they bear the burden of conservation work in protected areas. Their responsibilities with regard to protected areas include the disclosure 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 governments 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 releasing and posting on their websites an ever-increasing amount of information. The research team found that currently many government websites have special OGI columns, leaders’ mailboxes and chat-room capabilities. Additionally, local governments have played (and are still playing) an important role in building the foundations of government transparency. Although some information has been disclosed on protected areas, there are still some barriers that need to be overcome for this process to be more effective.

**Behavioural Level**  
Within the available evidence the research team found that there is a range of ways for the public to participate in protected area management, such as forest scouts, village meetings and co-management committees. The team found that residents can be directly involved in protected area
management activities; 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; and residents of protected areas receive support (funding, technical assistance) from government agencies, NGOs, and scientific research institutes to allow them to participate in protected area management.

**Outcome Level**

Despite significant advances, effective public participation in protected areas in China still faces implementation challenges. These include a lack of mechanisms for simple effective public participation to enable residents to satisfy their interests and needs. Information about protected areas, the way in which participation in decision-making occurs and access to justice for public participation were also assessed as being relatively poor. The research team concluded that further targeted measures are needed to improve public participation in protected area management.

**Lessons learned in evaluation**

The team faced several difficulties in evaluation, including getting first-hand information. They recommend increasing channels used for data collection, fully understanding the various variables in the evaluation, and determining key criteria and elements of evaluation before carrying out the research.

**Recommendations**

To improve the public participation in the protected areas, the team recommends that China should take action from the three perspectives: information disclosure, participation in decision-making and access to justice. Specifically, the team recommends:

1. An improved information disclosure system will provide better foundations for public participation. The language in the disclosed information should be simple without the use of very technical terms so that the public can easily understand it. The information should also be available in the commonly understood languages, including those of the aboriginal people.
2. 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 NGO. Community-led processes should also be supported and respected. The key requirement is to empower local people and communities with the aim to enable them to access information, voice their opinion, share their local knowledge and assume a greater role in protected areas conservation activities.

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3. To improve the implementation of the access to justice principle, changes to the legislation combined with other measures are required. This would allow the public to have a greater capacity to go to a court, which would at least guarantee an effective channel for the people to look after their interests.

**Australia: Participation principle and marine protected areas**

The purpose of the research team’s work was to objectively evaluate the effectiveness of the participation principle in protecting marine diversity in the current governance arrangements for Marine Parks in South Australia.

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. The proposed Act raised a number of conflicting values amongst 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 management of the marine parks, but not in the establishment of marine parks.

**Natural Resource Governance Issue**

Internationally, marine parks are recognised as a key tool in 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. 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).

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48 Karen Bubna-Litic, Emma Goreham, Taylor Pope, Kvitka Becker and Alex Craig (University of South Australia)


52 Marine Protected Areas Working Group 2007. Progress in implementing the National Representative System of Marine Protected Areas
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).\(^{53}\) 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.\(^{54}\) However, after nearly a decade of extensive planning, 19 marine parks came into operation in October 2014.

**Legal Principle**
The team identified the elements of this principle as including the ability and capacity of all stakeholders to participate; effective dissemination of information; the requirement for transparency and accountability in the decision-making process; and a fair process that can adapt to changing conditions. The team determined that the participation principle should be interpreted in the following way: 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?

**Evaluation across different levels**
This research team aimed to evaluate the effectiveness of this participation process through a number of ‘objective’ methods. This included an analysis of the 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 team found that the principle of public consultation in the development of marine park areas is reflected through a number of governance instruments across South Australia. The main drivers for public participation in the marine parks process is found in the *Marine Parks Act 2007 (SA)* (MPA). The MPA specifies the contents of a marine park management plan and sets out the critical public consultation requirements. The MPA contains provisions on consultation with regards to establishment of marine protected areas and development of management plans. However, failure to comply with the notification and consultation requirements does not invalidate a management plan.

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**Institutional Level**

The process adopted by the Minister on advice of the department involves community consultation on designating the outer boundaries of the parks, on the management plan and in review. This goes beyond what was required under the *Marine Parks Act 2007* (SA). To this end the Department created 13 Marine Park Local Advisory Groups (MPLAGs). The Minister was very supportive in this process. The consensus from the peak stakeholder group interviewed is that there has been an effective implementation of the principle, on the whole, but that lessons can be learnt from the process to improve future participation processes.

**Behavioural Level**

Implementation of the principle has occurred at an organisational level both inside and outside of government. On the introduction of the MPA, the Minister stated that the establishment of marine parks requires a long-term commitment to public understanding, communication and participation.\(^{55}\) At that time, independent market research showed that 88% of respondents were in favour of the creation of marine parks.\(^{56}\) 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 and 162 written submission on the draft bill were received.\(^{57}\) All submissions were considered in the final bill.

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.

**Outcome level**

The process of the design and management of marine parks involved a comprehensive public consultation process, over a five-year period. At the end of this process, 19 Marine Parks were designated in South Australia and the restrictions on commercial fishing and other uses came into force from October 2014. However, despite this process, in August 2014, a private members bill was introduced into the SA Parliament advocating for an abolition of twelve of the previously agreed to marine parks. It failed by only one vote. This raises an important question. How can a decision, which resulted from an extensive and ‘effective’ participation process, be undone so easily?

The research team learnt that overall most of the peak stakeholder groups thought the public participation process was effective. The comments they received from the peak stakeholder interviews confirmed that the commitment of the representatives from DEWNR was an important factor. One of the interviewees suggested to the research team that one of the measures for

\(^{55}\) National Parks South Australia above n *Error! Bookmark not defined.*, 2.

\(^{56}\) Ibid, 3

\(^{57}\) Ibid
A successful community consultation process is for regional communities to take ownership and stewardship of the marine reserves.\textsuperscript{58}

In practice the community consultation in the marine parks process involved large numbers of members of the community. The research team learnt that this was most likely due to political commitment at the highest level\textsuperscript{59} as well as the commitment to the public participation process by the representatives of DEWNR. Being dependent on committed individuals is setting the scene for failure in the absence of such individuals.

**Lesson learned from the evaluation process**

The team noted that many elements of an effective participation process cannot be measured objectively and need subjective metrics. They also described the need for inter-disciplinary skills in the evaluation, including skills in survey design and data analysis. They found semi-structured interviews to be more useful than survey questions, in that they allowed interviewees to explore in more depth the nature of the principle, how effectively it was implemented and what improvements could be made.

**Recommendations**

The research team identified eight major shortcomings that have inhibited the participation process being as effective as it could have been. Although all eight related to the specific Marine Park legislation, the suggested improvements can have general application when implementing the participation principle.

1. Establish a safe environment for participation by appointing a Chair of the MPLAG with strong leadership skills.
2. Effectively manage expectations by ensuring each stakeholder group is represented in the MPLAGs.
3. Improve media engagement by facilitating access to social media and allow online input as an alternative to face-to-face meetings. Provide media training for those managing the process.
4. The use of online tools can be helpful but their use needs to be explained well and there needs to be trust in the way it will be used.
5. Sell the message through a strong education campaign explaining the clear message to the community.
6. Recognise the need to build trust in the process and keep going back to the community to test that trust is being established and maintained.
7. A good community based monitoring group should be established with representatives from each of the 19 Marine Parks.

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\textsuperscript{58} Interview with Marine Parks Council

South Africa: Participation principle and protected areas

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.

The South African Constitution, requires there be legislative and other measures in place to “secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.” The research team’s focus was on whether the public participation principle is being implemented in the management of the KNP conservation area in ways that will promote the justifiable economic and social development of peripheral communities.

Natural Resource Governance Issue

The Kruger National Park is such a protected area and 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.

During the establishment of the park and thereafter, various indigenous communities were removed from the land to make way for conservation. 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 leads to the restriction to access to the resources of the people’s livelihood that were now fenced of inside the park.

Legal Principle

The research team defined public participation 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. Based on a review of national and international instruments, they determined that the public participation principle should: 1) enhance access to information that is necessary for

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60 Elmien Du Plessis, Amanda Mugadza, Niel Lubbe Jean-Claude Ashukem (North West University), Suzi Malan (University of British Columbia), Marie Parramon-Gurney (Southern Africa Representative IUCN), Clara Bocchino (University of Pretoria).


63 M Mkhacani ‘An analysis of the livelihoods of the Muyexe community located along the Kruger National Park in Limpopo province’ (MPhil dissertation, University of Johannesburg 2005) 29.

effective participation, 2) mean early and effective participation by all people who are affected by the decisions, and 3) include effective access to justice and administrative proceedings.

**Evaluation across different levels**
The 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**
The research team found that at an instrumental level, public participation principle is provided for in various legislation, most notably the National Environmental Management Act 1998 (‘NEMA’) and the National Environmental Management: Protected Area Act 2003 (‘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.

**Institutional Level**
The team identified multiple agencies involved in the management of the park (international agencies, national government, the Department of Environmental Affairs, SANParks and communities). They identified the local population, landowners and the wider community as the main stakeholders.

**Behavioural Level**
The research team identified at a behavioural level that SANParks has a stakeholder participation scheme when developing park management plans. The stakeholders were identified as being 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 very little participatory involvement from the communities has occurred to determine how this money will be spent.

**Outcome level**
At an outcome level, the research team found that while it seems that when information is made available (especially during the restitution process when the Land Claims Commissioners and lawyers are still involved), it is not always objective. The Land Claims Commissioner (in cases of restitution) might paint an unrealistic picture to the community to ensure that the land is restored, while private

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65 National Environmental Management Act 1998 (South Africa 107) (‘NEMA’).
66 National Environment Management: Protected Areas Act No 57 of 2003 (‘NEM: PAA’).
67 Suzie Malan ‘Improved decision-making processes for the transfrontier conservation areas of South Africa’ (PhD, University of British Columbia 2015) 65.
companies might present information to ensure that a deal will be reached. There are no specific legislative provisions to protect to communities from entering contracts that are unfair.

The research team found that most communities lack sufficient environmental education to enable them to participate meaningfully and more can also be done in terms of awareness raising. The Welverdiend community in this regard seem to benefit from the proximity of a University centre and the Wildlife College.

The public participation process is often transparent when public bodies are involved, but less so when private companies are involved. While it is consultative to some extent, some community members expressed concerns that it is only the elite or a certain portion of the community that is consulted. This is problematic, especially in light of the intra community conflicts over who wields authority in a particular community. Attention should be paid to the broader traditional leadership disputes happening in South Africa. Some communities also feel that they are not taken seriously as owners of the land, and that the consultation with them might be more of a *fait accompli* than anything else.

**Lesson learned from the evaluation process**
The research team encountered several challenges in applying the evaluation method through a desktop study, including the following:

1. It is difficult to get a real sense of what the communities’ perceptions are relying only on the interpretation of other researchers that conducted interviews and field studies;
2. The literature is often distributed over many disciplines, each with their own jargon;
3. The studies on benefits for community mostly focus on protection by ecotourism, and there seems to be a lack of studies on other land uses.

Due to time and institutional constraints it was not possible for the team to develop the study beyond a desk study.

**Recommendations**
The research team recommended that laws in South Africa should 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.

They recommend that for environmental governance in the area to be successful, *inter alia*, extensive socio-economic surveys are needed before community conservation projects are embarked on. 68

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68 Suzie Malan ‘Improved decision-making processes for the transfrontier conservation areas of South Africa’ (PhD, University of British Columbia 2015) 51.
The research team recommend that the more that people are involved in the decision-making processes (either facilitated by NGOs or government), the better. It is clear from this, that if the community’s wellbeing is looked after, the ecosystem health is better.  

Lastly they highlight the need for excellent leadership combined with well-established institutions, education and capacity building will lead to more success.

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69 Suzie Malan ‘Improved decision-making processes for the transfrontier conservation areas of South Africa’ (PhD, University of British Columbia 2015) 51.
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 methodology enabled disciplined evaluation of legal principles in different governance contexts, and 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 mandatory participation uses the law to help manage socio-political trade-offs. That the teams were able to use the evaluation framework to provide new insights into these legal norms, under constrained circumstances, is a credit to them.

The teams identified areas for improvement through the evaluations. The case studies demonstrate that legal effectiveness requires not only of conceptually sound laws, but also that ‘non-doctrinal’ elements of legal governance perform well. The cases highlight 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 when considering 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, if implementation resources are not available to responsible for implementation or ‘at the front line’. This suggests the need for more attention to economic and political feasibility issues, for 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, contract and property interests are important parts a total system that is environmental law. Law 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) greater attention to alignment with socio-economic and governance contexts, (3) tackling the practical constraint of resourcing and (2) paying more attention 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 these tentative
findings highlight the potential of the framework improve empirical intelligence about how to improve the ‘real-world’ effectiveness of legal 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 is not imprecision in a linguistic sense, but rather interpretative uncertainty which 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 without 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 ‘flexible’ 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 the participatory processes 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 the implications for these; about their ability to influence decisions; whether their needs or interests were ‘heard’, understood and taken into account; whether they had genuine power to shape decisions; and the options they had if they were dissatisfied with proposals or decisions, or how 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 from more radical forms of participatory processes 70. 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 this partly

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arises from a lack of specificity in the objectives and process standards of legal requirements to ensure citizen participation.

With the precautionary principle, the two evaluations illustrate the potential for the principle to lose potency because of ambiguity embedded by legislation (or a failure to remove imprecision in restatements of the principle). The examples highlight that implementation through advisory or administrative approaches rather than directive legal mechanisms can limit the principles’ effectiveness. In both jurisdictions implementation of the precautionary principle requires a trade off between environmental, economic and social interests. These are not directly interchangeable, 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 the evaluations were limited, 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, effective implementation requires deeper investigation 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 been 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. 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 within the jurisdiction, of which law is a part.

That governance system includes non-regulatory legal mechanisms such as property rights or 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 different 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 its perceived (and actual) inefficiencies. Meeting the challenge of “streamlining” law without undermining legal protections deserves careful attention.

We have discussed how political variables shape implementation, and the role of interest-holders lobbying for approaches that suit their interests. These factors partly account for compromised implementation. Another aspect of the political context is how concerns for popularity with voters influence elected or appointed 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 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 citizen 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 protection72. 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 also 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 showed 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 had historical, economic, political and interpersonal sources 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 skill 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 was important to implementation the precautionary principle and participation, affecting how the legal instruments are designed and legal powers to oblige performance of legal obligations. While the evaluations did not explore the role of civil law rights to exploit or protect environmental values, this is also an aspect of effective legal governance that deserves more careful. With some modification the evaluation framework would be applicable.

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 sets of interventions that take into account the interaction between law and other mechanisms, including social action (e.g. voluntary responsible consumption or land-stewardship, or political activism) might achieve better outcomes than legal arrangements alone.

**Issue 3. Resources and implementation feasibility.**

Theories of evolution or 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 legal natural resource governance resourcing issues are a key consideration in many ways. One aspect is the inability to implement any 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 ability 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 the lack of childcare, public transport and disabled access were identified as potential impediments to effective participation. For people in China (as in all jurisdictions) legal rights of appeal or civil action require knowledge and economic resources to be effective. As has been noted elsewhere in this report, the effectiveness of legal principles is typically constrained by the weakest link in the chain of implementation.

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 power transfer that is intended) were not well specified in law. This is coupled with an apparent a lack of accepted standards for the specialised methods for legally required engagement. There do not seem to be disciplined “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 applications of participation. A well-tested and principles-based body of legal standards for participative processes would seem to be desirable.

With regards to implementing the precautionary principle, the resourcing gap in New Zealand and Australia was scientific data and knowledge. The insufficiency of scientific knowledge is one concern of the IUCN, and other international agencies concerned with environmental governance. The type of data, its precision, and the evidentiary form for required legal purposes can be different from purely scientific requirements. This suggests that a strategy to ensure the availability of scientific evidence to implement legal versions of the precautionary principle may contribute to governance effectiveness.

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 consciously target tilting the weight of resources towards sustainability. They also suggest that more attention needs to be paid to fiscal and other resourcing issues in implementation of legal governance. It might be that the main strength of market instruments is not superior effectiveness, but the ability to secure non-government funds.

**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 that 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 limits 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 was the evaluation team able to obtain evidence of effectiveness from an authoritative agency supervising how well the environmental instruments are working within that jurisdiction. All teams reported that evidence of the implementation of the precautionary principle or of participatory requirements were difficult to assemble.

There are limited sources of intelligence about the 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 well 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. 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.

The reliability of legal and other governance arrangements could be advanced 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


74 See Appendix I.
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 have been met. With further experience 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 carrying out their investigations, but naturally the more sophisticated, well resourced and time-rich a team is the more sophisticated an evaluation 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 different approaches adopted by the teams undertaking the case studies. The teams developed instruments and used various matrices to facilitate analysis. As well as providing rich details of the implementation effectiveness of environmental law principles they provide specific details of possible approaches to using the framework.

That environmental law principles exist is widely accepted\textsuperscript{75}. However most teams found it difficult to ‘objectify’ the selected legal principle precisely enough for objective measurement. To distil what implementation of principles in practice would involve typically requires 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 logic of environmental law principles. It also reflects the problems in moving from politically developed statements of principle to 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.

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 simplifying assumptions, or by considering only part of the complex reality, may make analysis more precise but less realistic.

It is thus not surprising that the teams found it difficult to specify evidence that was feasible to evaluate, but 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](http://www.lawforsustainability.org).

Future evaluations may employ 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).

Another matter for further development is to broaden the focus from regulation 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 play a strong governance role. Hybrid arrangements with industry or civil society, and government or other policies are also relevant.\textsuperscript{76}

The eco-social challenges that legal governance addresses are varied, and so new issues will arise with the use of the framework to address other issues than those 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.

This is an exciting development in the march towards environmental sustainability. 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.

Resources


Appendix I: Online evaluation 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

World commodity indexes
http://www.indexmundi.com/commodities

CIA World Factbook

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:
FAO Statistics – by country
http://faostat3.fao.org/faostat-gateway/go/browse/I/*/E

Global Development information site
http://www.eldis.org/

UN Public Administration portal – country profiles

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