

A tiger is the central focus of the image, lying down and looking directly at the viewer. The tiger's fur is a mix of orange, black, and white, with distinct stripes. The background is a soft, out-of-focus natural setting. The text is overlaid on the image in a clean, black, sans-serif font.

Compliance with Wildlife Laws: Acknowledging Social Principles of Law

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August 2011**

Photograph cover: Sumatran tiger, Burger's Zoo, Arnhem
Photograph credits: Robbin van Turnhout

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Acronyms

ASEAN-WEN	Association of South East Asian Nations' Wildlife Enforcement Network
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CMS	Convention on Migratory Species
GO	Governmental Organisation
GTF	Global Tiger Forum
GTI	Global Tiger Initiative
GTRP	Global Tiger Recovery Program
ITC	International Tiger Coalition
NGO	Non-Governmental Organisation
NTRP	National Tiger Recovery Program
SA-WEN	South Asia Wildlife Enforcement Network
TCM	Traditional Chinese Medicine
TRC	Tiger Range Country
UN	United Nations
UNEP	United Nations Environment Programme

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Summary

In order to conserve endangered wildlife species in developing countries, international and national laws have been formulated for their protection. However, these legal tools are currently often not effective. This ineffectiveness is frequently primarily attributed to weak enforcement. As a consequence, many conservationists advocate for stricter enforcement of wildlife laws; they often emphasise the need for a stricter punitive approach for achieving compliance with existing wildlife laws.

This study is based on an alternative view on the limited level of compliance with wildlife laws. It goes beyond the notion of weak enforcement as cause of the ineffectiveness of existing legal instruments and makes a systematic attempt to assess the diversity of issues relevant for law compliance. It identifies specific approaches towards increasing the effectiveness of legal instruments by considering the basic social principles of law. The conservational literature does not sufficiently address these principles. The objective of this study is to develop and elaborate a comprehensive conceptual framework of law compliance that integrates social principles of law and factors of law compliance and that can be used to assess law compliance in relation to wildlife conservation, and to test the relevance of the framework in respect to the conservation of the tiger (*Panthera tigris*).

This study attempts to provide answers to two general research questions. The first one relates to a theoretical study, and the second to an empirical study:

1. What legal issues and factors of law compliance require attention for understanding the principle dimensions of law compliance and how can they be combined in a comprehensive conceptual framework of law compliance?
2. What is the relevance of the Compliance Framework in respect to tiger (*Panthera tigris*) conservation?

The theoretical part of the study consists of two elements, i.e. a review of the main legal principles and social principles of law compliance, and an assessment of the relevance of these principles to wildlife conservation. To this end, an extensive literature study was made, using both scientific articles and encyclopaedic handbooks. A reiterative approach was adopted to identify conceptual issues and to develop an analytical framework regarding law compliance, and to assess how the emergent features relate to law compliance in respect to wildlife conservation.

In the review of legal principles three basic social principles of law are identified that are central to most legal systems, and that are crucial for studying law compliance. These are:

1. Laws are established to back-up morality and/or self-interest;
2. Laws aim to impose restrictions but also to grant people specific rights; and
3. Governments are subject to a rule of law which relates to mechanisms that impose limits on governments' powers.

These principles form the basis for an elaborated Compliance Framework consisting of three main dimensions. The first dimension represents the role morality and self-interest as prominent factors of law compliance. The second dimension represents the factors of morality and self-interest, i.e. the potential costs and benefits of illegal compared to legal activities, and the perception of legitimacy. The third dimension represents the role of rights and their role in effecting perceptions of legitimacy and potential costs and benefits. Six legal rights are identified for which core laws that are central to most codified legal system provide a legal basis and which impact on law compliance: - use rights; - property rights; - contract rights; - compensation rights; - equity rights; and - governing rights.

The analysis of main issues relevant for law compliance leads to the conclusion that a rights-based approach is an effective approach for wildlife conservation. In this context, additionally two main conclusions

are drawn. Firstly, a rights-based local governance approach is considerably more effective for wildlife conservation than a restrictions-based centralised governance approach. Under a rights-based approach it is far more likely that laws are established that back-up morality and/or self-interest of local people. Achieving law compliance with such laws can be considerably less costly and less complex than achieving compliance with restrictions-based centralised laws.

Secondly, an incentive-based approach is considerably more effective than a punitive approach. In an incentive-based approach the main focus is on backing-up and positively influencing morality and self-interest of local communities, thereby taking into consideration the main issues relevant for law compliance. In this approach the use of punitive mechanisms remains important but as an additional tool only. A punitive approach only influences the willingness to comply by negatively influencing self-interest regarding non-compliance behaviour, and is inconsiderate of factors relating to the capacity to comply.

The social principles of law compliance identified in the theoretical part of the study are further tested in the empirical part of this study. This preliminary evaluation has as objective to test the relevance of the Compliance Framework by assessing the overall approaches and efforts adopted under the international regime of tiger conservation. It specifically addresses a) the approach currently used to establish tiger laws, and b) the primary approach and efforts taken to achieve compliance with the legal provisions. It addresses the following more specific research question: Are the current conservation approaches and efforts adopted under the international regime of tiger conservation adequate to achieve a level of law compliance that prevents a further decline of tiger populations?

This empirical study is a tentative assessment only. Due to time constraints, tiger conservation programmes and the legislative tools in the different Asian countries could not be studied in full detail. Rather, the main emergent characteristics of the tiger conservation programmes were studied. To this end, the websites of a variety of NGOs and GOs were consulted in combination with scientific literature. The gathered data was used to make a preliminary assessment of compliance with poaching laws and trade bans. This assessment focused specifically on whether and how the main dimensions of law compliance identified in the Compliance Framework were represented in tiger conservation programmes.

This assessment indicated that a) poaching laws and trade bans are primarily established through a restrictions-based centralised approach, and b) primarily a punitive approach is adopted to achieve compliance with the legal provisions. Assessing law compliance in respect to poaching laws and trade bans shows that currently the international regime of tiger conservation is not sufficiently backing-up or positively influencing morality and self-interest of local people, but rather is led by the morality of the non-local actors involved in the regime. The currently adopted approaches and efforts taken to conserve the tiger are not adequate to achieve a level of law compliance that prevents a further decline of tiger populations.

As illustrated by this initial case-study, the Compliance Framework provides a promising tool to study law compliance. It can be used to a) assess the existing approaches towards achieving law compliance and to gain a better understanding of either compliance or non-compliance behaviour in respect to wildlife conservation, and b) assess the adequacy of legal instruments and develop new legal instruments.

1. Introduction

Many populations of endangered wildlife species in developing countries are declining and are threatened with global extinction (IUCN, 2010). Several legislative mechanisms have been put in place to conserve these wildlife species. In many developing countries, national laws have been enacted to conserve such species on a national scale. Due to the global extent of threats, international laws have also been enacted to prevent a further decline of the species. One such international agreement appears to have strong legal notions in respect to endangered wildlife, i.e. the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) (CITES, 1975). This legal instrument prohibits the international trade in endangered wildlife species and their derivatives for commercial purposes. Many countries are Parties of the convention and are hence bound to an international law that prohibits trade in endangered species and their parts.

However, these national and international legislative mechanisms are currently not always effective in preventing a further decline in populations of endangered wildlife species in developing countries. This limited effectiveness is frequently primarily attributed to weak enforcement of existing legislation (Corlett, 2007; Heinen, 2002; Hilborn, 2006; Rowcliffe *et al.*, 2004). As a consequence, many conservationists advocate for strict enforcement of existing legislation by means of increased detection and punishment of law violators. Increased anti-poaching patrols and efforts to stop international trade are therefore common responses to the decline in population numbers.

Within such a punitive approach, an emphasis is made on imposing disincentives for non-compliance with existing legislation. This becomes apparent, for instance, by a report of TRAFFIC Southeast Asia (Ng & Nemora, 2007). The report discusses research conducted on illegal trafficking of tiger-parts in Sumatra in 2006 and provides empirical evidence to assume that illegal activities relating to the critically endangered Sumatran tiger, still take place on a massive scale. The research shows that 10 % of retail outlets were still selling tiger parts, whereas national laws are in place that prohibit the tiger hunt and trade. The report advocates for strict enforcement of tiger laws and to stop poaching and trade through increased detection and punishment. It implies that such a punitive approach is the only possible solution to conserve the subspecies.

In a punitive approach considerable financial and technical means are focused on the detection and apprehension of law violators. As a consequence, limited resources are available for alternative approaches towards achieving law compliance. The TRAFFIC report (Ng & Nemora, 2007) recommends that resources should be concentrated on effective enforcement and urge for arresting the main dealers/suppliers of tigers and closing down retail outlets selling tiger parts. The authors therefore urge to focus the means available for tiger conservation on the detection and punishment of law violators.

The process of detection is, however, extremely costly (Brack, 2004; Hayes, 2007; Holmern *et al.*, 2007; Keane *et al.*, 2008) and even considered the most expensive concept of conservation (Sutinen & Kuperan, 1999). Law enforcement often comprises a quarter or half of the total expenses of conservation. Costs of enforcement include, for instance, investment costs such as training, equipment and salaries, and social costs, such as the erosion of trust and undermining traditional systems of resource management (Keane *et al.*, 2008). Advocating for more detection and punishment therefore incurs high costs whereas it has, so far, not shown very effective in preventing a decline of populations. Increasing law enforcement is even considered economically not realistic for most developing countries (Holmern *et al.*, 2007).

Furthermore, strict enforcement and focusing on disincentives can be very inconsiderate of local people's needs. Yonariza & Webb (2007), for example, conducted empirical research to understand the high extent to which people in Sumatra participate in illegal activities. They concluded that the main incentive for conducting illegal activities is to sustain in basic livelihoods. Even though their research is not related to wildlife activities *per se*, it can be questionable whether closing down retail outlets selling tiger parts, as suggested by the TRAFFIC report, is ethically justified. Local people's capacity to comply with laws in Sumatra in general

might be considered very limited. Yet, besides the establishment of legislative instruments, capacity for law compliance needs to be built accordingly in order to achieve a level of law compliance that ensures the conservation of wildlife species.

In respect to international legislative mechanisms, wildlife laws often seem to be internationally imposed, whereas individual countries are expected to implement and achieve compliance with the legal provisions of international agreements practically on their own (Brack, 2004; Khanna & Harford, 1996; Hemley, 1995; CITES, 2011). The international community provides only limited assistance and funds for developing countries to successfully achieve compliance with the provisions of international agreements. CITES Parties individually 'carry the responsibility of appropriate measures to enforce the provisions of the convention and to prohibit trade in specimens in violation thereof' (CITES, 1975). National laws also seem often enacted as a consequence of international pressure.

Developing countries are, however, often subject to poverty and therefore have very limited resources available for conservational purposes and to achieve compliance with wildlife laws. The ineffectiveness of international agreements such as CITES is, for instance, attributed to a lack of resources and expertise to implement and enforce the legal provisions (Brack, 2004; Hemley, 1995). Corruption is also mentioned in respect to the ineffectiveness of CITES. Brack (2004) further stresses the unsuitability of regulation and costs of compliance as constraint to successful enforcement of CITES. The international community is also not sufficiently willing to pay for successful wildlife conservation (Holmern *et al.*, 2007). Developing countries are, however, expected to achieve compliance in respect to national and international wildlife laws and policies, often with only limited financial and technical aid from the international community.

So far little research has been conducted in the field of law compliance and empirical studies of how compliance with wildlife laws can be most cost-effectively achieved is limited (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). Keane *et al.* (2008), for instance, argue that managers and conservation planners only have little practical guidance in inducing law compliance. Furthermore, several authors have argued for alternative approaches towards achieving law compliance (Hayes, 2007; Holmern *et al.*, 2007; Nielsen, 2003; Sutinen & Kuperan, 1999). Moreover, the adequacy of existing legal instruments can be debated in light of their ineffectiveness, rather than merely advocating for increased enforcement levels.

This study adopts an alternative view in relation to the limited level of compliance with wildlife laws, going beyond the concept of weak enforcement as cause of the ineffectiveness of existing legal instruments. It identifies diverse approaches that can be adopted to increase the level of compliance with legal instruments and increase the effectiveness of such instruments. To this end, a systematic attempt is required to gain a better understanding of issues relevant for law compliance that can ultimately provide an insight into non-compliance behaviour in respect to wildlife conservation, and assess various approaches to law compliance.

To properly study law compliance and gain a better understanding of non-compliance behaviour, it is crucial to acknowledge the basic social principles of law. The conservational literature, however, does not appear to systematically consider principles of law and only limitedly address factors of law compliance. Moreover, even though quite some knowledge has been gained concerning compliance behaviour, this knowledge is limitedly extended to conservational issues (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999).

The objective of this study is to develop and elaborate a comprehensive conceptual framework of law compliance that successfully integrates social principles of law and factors of law compliance and that can be used to assess law compliance in relation to wildlife conservation, and to test the relevance of the framework in respect to the conservation of the tiger (*Panthera tigris*). In this regard the following general research questions are central in this study:

1. What legal issues and factors of law compliance require attention for understanding the principle dimensions of law compliance and how can they be combined in a comprehensive conceptual framework of law compliance?

2. What is the relevance of the Compliance Framework in respect to tiger (*Panthera tigris*) conservation?

Hence, throughout this study a comprehensive conceptual framework of law compliance is developed and elaborated which integrates legal principles and issues relevant for law compliance in respect to wildlife conservation. This Compliance Framework can be used to analyse, for instance, whether putting an emphasis on increasing incentives for compliance behaviour can be more effective than emphasising on a punitive approach. In respect to the adequacy of legal instruments, it is hypothesised that adapting legal frameworks might be considerably more cost-effective and ethically justified than merely enforcing existing wildlife laws.

2. Research approach and methods

This research concerns a literature study on the issues that appear relevant for gaining a better understanding of compliance, respectively non-compliance behaviour, in relation to wildlife conservation laws and in respect to developing countries. As indicated by the overall research objectives and main research questions, this study has a dual character. It has two aims:

1. Make a review of the concept of law compliance and develop an integrative framework on social principles of law and factors of law compliance that can provide a better understanding of law compliance in relation to wildlife conservation; and
2. To preliminary evaluate the relevance of this framework in respect to tiger (*Panthera tigris*) conservation.

The first aim pertains to a theoretical study, and the second to an empirical study. In order to accomplish these aims, the overall research design consisted a two-phased literature study.

The theoretical part pertains to an integrative study extending the theory of legal principles to applications for wildlife conservation. The Compliance Framework is thus developed and elaborated against the background of two theoretical considerations. Firstly, pertaining to legal principles, and secondly, the assessment of issues relevant for wildlife conservation. The nature of this study relates, at least partly, to sociology of law. The term 'sociology of law' is applicable to this study since such studies relate to a sociological approach towards understanding the origin and nature of law and legal systems (Law & Martin, 2009). This study is partly concerned with such legal issues.

For the development and elaboration of the Compliance Framework extensive use was made of a reiterative approach. To this end, first an initial screening of literature took place to gather information that enabled the development of the conceptual framework for this study. Next, a further literature study was conducted to elaborate on the concepts as identified in the framework. A reiterative approach was crucial to properly integrate all issues relevant for a study of law compliance, including but not limiting to legal principles. Such an approach provided a basis for a preliminary assessment of the concepts relevant for law compliance first, and a more thorough analysis of how the emergent features relate to compliance with wildlife laws second.

A reiterative approach was also adopted to identify the main legal issues relevant for law compliance. In this respect, a preliminary review was conducted and a variety of legal principles emerged that showed relevant for studying law compliance. A more thorough review of these issues was subsequently conducted. Furthermore, an initial screening of the conservational literature was also conducted in respect to both compliance and enforcement. Due to the relative abundance of literature on enforcement compared to law compliance, the concept of law enforcement and its relevance for law compliance and for this study were analysed.

In the empirical part of this study the theoretical findings were further tested. To test the relevance of the Compliance Framework in respect to tiger conservation, empirical data was gathered to analyse the approaches and efforts taken currently adopted under the international regime of tiger conservation. It specifically assessed a) the overall approach used to establish tiger laws, and b) the primary approach and efforts taken to achieve compliance with the legal provisions.

This empirical study pertained to a tentative assessment only. Due to time constraints, tiger conservation programmes and legislative instruments in the different Asian countries could not be studied in full detail. Rather, the main emergent characteristics of tiger conservation programmes were assessed. The gathered data was used to make a preliminary assessment of compliance with poaching laws and trade bans.

This assessment focused specifically on whether and how the main dimensions of law compliance identified in the analytical framework were represented in tiger conservation programmes.

The case of the tiger is used for this initial case-study since the species is considered an umbrella species for Asian tropical ecosystems (Damania *et al.*, 2008; World Bank, 2005). Tiger habitat is drastically degraded and the tiger is excessively hunted for its skin, its cultural and medicinal value in the traditional Chinese medicine and the high human-tiger conflicts that are the result of the tiger's predatory habits. Tiger conservation and achieving compliance with tiger laws seems a rather complex task. It was therefore suitable for testing the relevance of the Compliance Framework, considering the various dimensions of issues relevant for law compliance.

Even though this study was a preliminary assessment only, it provides valuable insight into the elements that require further attention in studies of compliance with tiger laws. Also, lessons could be learned from the experiences with tiger conservation regarding the potential applications of the Compliance Framework.

Sources used

Since legal issues are only limitedly addressed throughout the conservational literature, insight in legal issues in general was an important step in this study. To provide the theoretical framework of principles and concepts of law relevant for this study, the book of Honoré (1995) "About law, an introduction" showed particularly suitable. This data was supplemented by various dictionaries and encyclopaedic handbooks within Oxford Reference Online. These sources were particularly relevant since terms such as 'law enforcement' are hardly clarified within the conservational literature. Specific dictionaries and handbooks ultimately appeared particularly suitable to provide practical definitions for the terms in this study.

In addition, an extended search was made of specialised scientific literature. This literature was reviewed to gather background information in respect to wildlife conservation in developing countries and to provide an overview of issues relevant for compliance with wildlife laws. Both a systematic literature search and a snowball approach were used in identifying relevant literature. A systematic search with the term 'enforcement' in relation to 'wildlife conservation' showed to provide an abundant list of articles. The search term 'compliance' in relation to either 'wildlife conservation' or 'conservation', however, showed to be much less abundant. A snowball approach was therefore used to identify additional literature that was suitable for this study.

The potential use of the website www.wikipedia.org was also evaluated. The use of this website as a reliable source, however, is fairly ambiguous. At times it showed to provide additional information on a subject and backed-up information provided by scientific dictionaries and encyclopaedic handbooks. Yet, at other times it showed even contrasting. Only occasionally it provided significant additional information. The website has therefore been used to provide a general background and as a starting point for scientific searches for which it seems a very useful source.

For understanding law compliance in respect to tiger conservation, the focus of advocacies and the efforts taken by various actors of the international regime of tiger conservation needed to be outlined. To this end, the websites of a variety of NGOs and GOs were consulted in combination with scientific literature. Since the empirical part of this study pertained to a preliminary assessment only, not every NGO is made specific reference to. To this end, an overview of the consulted websites of NGOs is provided at the back. This is, however, probably not an extensive list of all the players involved in tiger conservation but this report does address the main players. Using the lists of members of the two global tiger forums, provided a useful first insight in the GOs and NGOs involved in tiger conservation.

Analytical approach

The study was based on a reiterative approach. On the basis of the literature study, gradually the understanding of the various features of law and law compliance emerged. The growing understanding resulted in the gradual development and refinement of a conceptual framework for law compliance. The ultimate version of this Compliance Framework (Figure 1) served to structure the final analysis.

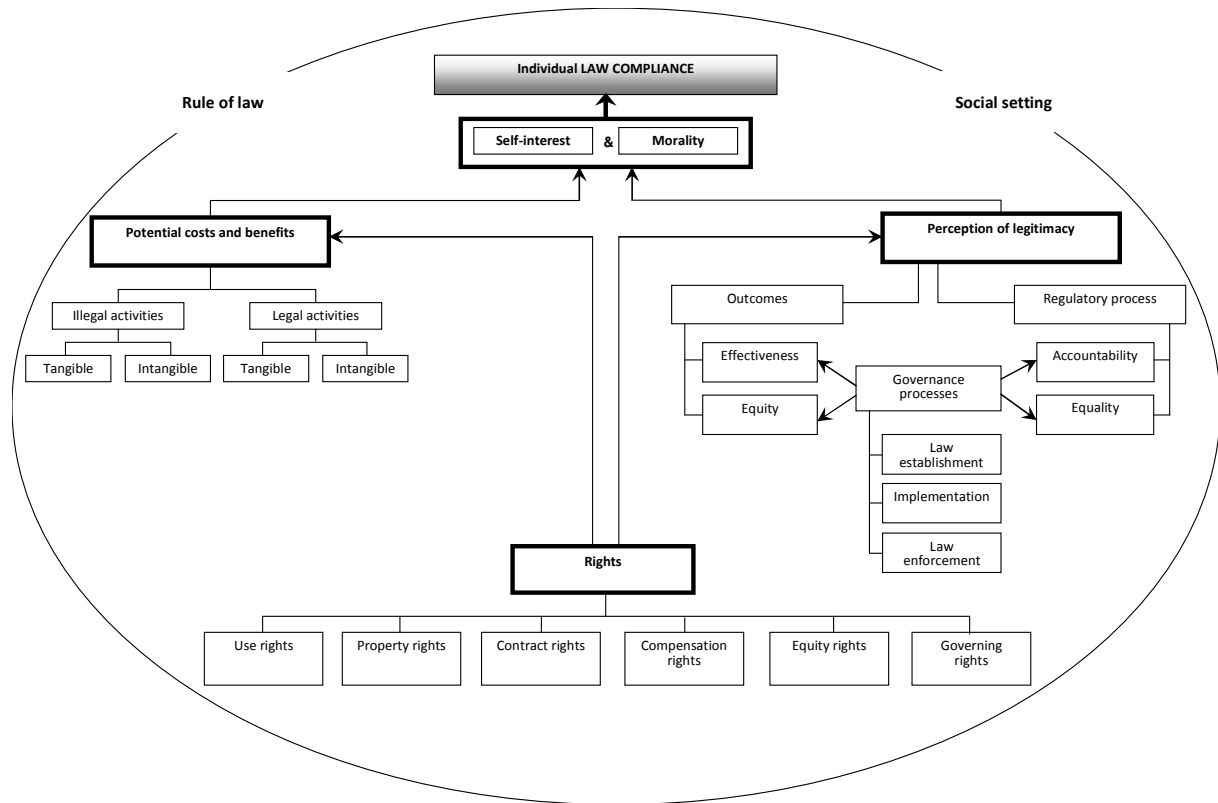


Figure 1: The Compliance Framework.

In respect to the first aim of the research this Compliance Framework was developed and elaborated by reviewing legal issues and factors of law compliance that require attention to study law compliance. On the basis of this Framework, the first theoretical aim of the study was addressed by considering the following specific research questions:

1. What legal principles require attention to provide a theoretical background for studying law compliance?
 - a) What types of law can be distinguished?
 - b) What are the basic social principles of law?
2. What are the principles of law compliance?
 - a) What approaches can be distinguished in respect to achieving law compliance?
 - b) What is the relevance of law enforcement for studies of law compliance?
 - c) What are the most prominent factors of law compliance?
3. How do the factors of morality and self-interest relate to law compliance?
 - a) What are the factors of morality and self-interest?
 - b) What issues are relevant in respect to the potential costs and benefits of wildlife-related activities?
 - c) What issues are relevant for the perception of legitimacy?
4. What is the role of a specific set of rights for wildlife conservation?

The second empirical aim of the research was to assess what the relevance of the Compliance Framework is in respect to the international regime of tiger conservation. This second aim of the study was addressed by considering the following specific research question and sub-questions:

Are the current conservation approaches and efforts adopted under the regime adequate to achieve a level of law compliance that prevents a further decline of tiger populations?

1. What constitutes the international regime of tiger conservation?
2. What main approaches are currently adopted under this regime in respect to laws and law compliance, and what efforts are taken to protect the tiger?
3. What level of compliance with poaching laws and trade bans can be expected under the current regime of tiger conservation, considering the elements discussed in the Compliance Framework?

Structure of the report

The structure of the report is in conformity with the specific research questions. The first theoretically based research question and related sub-questions are answered in chapter 3 to 6, whereas the second empirically based research question is discussed in chapter 7.

Chapter 3 provides an overview of the emerged legal issues that are relevant for this study and provides an overview of the main concepts and types of law, and the basic social principles of law. In chapter 4, principles of law compliance are being discussed in which the most prominent factors of law compliance, morality and self-interest, is the central theme. In chapter 5, the factors of morality and self-interest receive further attention. It discusses the extent to which the perception of legitimacy and the potential costs and benefits influence law compliance. Chapter 6 discusses the role of rights in respect to wildlife conservation. It provides an overview of a bundle of rights for which specific core types of law provide a legal basis. It further highlights how these rights affect law compliance.

Chapter 7 discusses the empirical part of the study, and thus addresses the preliminary evaluation of the relevance of the Compliance Framework in respect to tiger conservation. It specifically addresses the international regime of tiger conservation, and the approaches and efforts taken in respect to law compliance. It provides an answer to the question whether this is adequate to prevent a further decline of tiger populations.

3: Legal principles

3.1. Introduction

To better understand compliance behaviour an insight into the concepts and social principles of law is required. A first step in this study is therefore the analysis of basic concepts and underlying considerations of law that are relevant for studying law compliance. This section addresses the core types of law and the basic social principles of law, and provides an overview of legal systems and dimensions of law as an introduction.

Legal systems

Each state or jurisdiction might apply a different system of law which they base on society's perception of what is important for that specific society. A specific set of rules are hence being applied that are in adherence with the situations within that jurisdiction. A broad variety of legal systems exists worldwide, but a general distinction can be made based on the specific source of law that states or jurisdictions recognise as authoritative, which can be either specific codes, the judiciary system or religious beliefs and customs (Wikipedia, 2009).

The most common legal systems are the civil law system and the common law system (Calhoun, 2002; Martin & Law, 2006; Philip's, 2008). Another major legal system of the world is a religiously based law system (Freestone & Boisson de Chazournes, 2001). Other countries are governed based on customary beliefs or are mixed systems of civil and common law systems (Wikipedia, 2009).

Civil law systems can be characterised by recognising the codifications of rules as the authoritative source of law and hence rely on a system of codes (Calhoun, 2002; Freestone & Boisson de Chazournes, 2001; Philip's, 2008). Civil law systems systematically organize and integrate all legal rules into codes (Freestone & Boisson de Chazournes, 2001) and decisions are 'precisely worked out from general basic principles' (Philip's, 2008).

The common law system, on the contrary, recognises as authoritative and central source of law the judiciary system instead of strict codifications (Calhoun, 2002; Freestone & Boisson de Chazournes, 2001; Martin & Law, 2006; Philip's, 2008). Common law countries do not make as systematically an attempt to codify their laws and laws are thus mostly un-codified. The common law system relies for the most part on judicial decisions and hence on 'a history of precedent and custom' (Calhoun, 2002), whereas in civil law systems the judges have to 'follow the evidence and are bound by the conditions of the written law and not by previous judicial interpretation' (Philip's, 2008).

The civil law system is the most widespread legal system in the world. It prevails in most European continental countries (Calhoun, 2002; Philip's, 2008; Soanes & Stevenson, 2008), in most countries of Latin America, some Asian countries (Freestone & Boisson de Chazournes, 2001) as well as in parts of Asia and Africa (Wikipedia, 2009). Common law systems are applied by Great-Britain and the United States (Calhoun, 2002) and in most of the previous English colonisations (Freestone & Boisson de Chazournes, 2001). It appears that the common law system prevails in most English speaking countries (Philip's, 2008). Figure 2 provides a map of the world's legal systems.

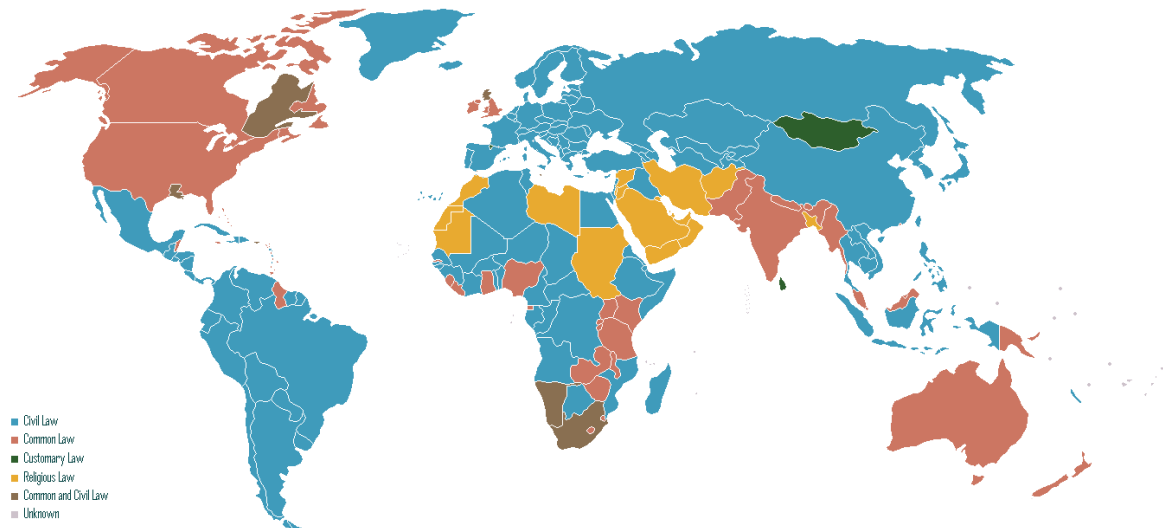


Figure 2: Legal systems of the world (adopted from Wikipedia, 2009).

The civil law system is most suitable for this study due to the use of codifications. It is also the most widespread legal system throughout developing countries (see Figure 2). International treaties and agreements are also better expressed in codifications than through a judiciary system as central source of law. Therefore, this report will henceforth discuss the concepts and principles of the civil law system.

The concept of law

Law can be defined as a rule that is established in order to govern human affairs within a specific jurisdiction, for which mechanisms are in place or can be developed to enforce them. This is based on the definition provided by 'A dictionary of law' (Law & Martin, 2009) that defines law as 'the enforceable body of rules that govern any society' and the argument of Calhoun (2002) that law is established to 'govern human affairs within a specific jurisdiction'. The term enforceable could refer to specific mechanisms that enable the enforcement of the established rules, whether these rules are internally or externally enforced and whether or not these mechanisms are being legally accepted. Law can also be explained as 'an official status' given to certain behavioural rules (Honoré, 1995). However, any rule that is more or less accepted to guide behaviour of society might be considered a law by a specific part of society. Hence, the concept of 'law' can be quite ambiguous.

Formal and informal law

The term 'law' is frequently used to refer to written, codified and/or formal rules that are enacted by a government or other political authority (Calhoun, 2002; Park, 2007) and are formally being accepted. These laws are often written down in 'statutes' or referred to as 'statutory law'. 'Statutory law' can be defined as 'written law enacted by a legislative body' (Soanes and Stevenson, 2008; Park, 2007). Also, commonly accepted as a formal type of law is 'common law'. In this context not referring to a legal system but to a type of law that can be part of any legal system and thus also applied by civil law systems. Common law is not written down in statutes but is 'an unwritten body of law that is based on general custom and usage, and which is recognised and enforced by the courts' (Park, 2007) and hence 'based on judicial decisions' (Calhoun, 2002). Since the courts and the judicial system is in most countries formally acknowledged as an authority, common law can be perceived as a formal type of law.

There are also many laws that have not been codified, nor written down and might not be formally accepted by any political authority. These laws might be socially acknowledged and form a basis for social behaviour and are being upheld and enforced at a social level. This type of law is frequently referred to as 'customary law'. This can be defined as 'law passed by unwritten tradition' (Calhoun, 2002) or 'law established by or based on custom' (Soanes & Stevenson, 2008). Many customs in civil law countries have been codified or formally written down. Other custom, however, have not (yet) been formally accepted by any political authority. Hence, it appears that a distinction can be made between formal laws that apply in a more legal context and informal laws that apply within a more social setting.

A purpose of this study is to gain a better understanding of issues of civil law systems relevant for compliance with formal, codified laws. Nonetheless, the relevance of informal laws needs to be taken into account while considering governance of a variety of societal issues and therefore does appear relevant for understanding compliance or non-compliance behaviour with formal laws.

International, national and local laws

Since law is being established in order to govern human affairs within a specific jurisdiction (Calhoun, 2002), law appears to be established at several policy levels (Bodegom *et al.*, 2008). 'International law', 'treaties' or 'environmental agreements' are established at an international level to govern global affairs. The national or state level governs the affairs of a state and is highly concerned with the establishment of laws. A definition of a state can be 'a political unit with a territory that the international community treats as independent' (Honoré, 1995). A third policy level relates to the local affairs. Local political authorities are often granted authority over a specific part of a country and can be granted power to establish local laws. Laws might also be established at a more social level, mostly referring to the less formal types of law such as 'customary law' or the social codes of conduct of a community or other social group.

Hence, laws can be enacted at several levels, from governing international affairs to social affairs. International laws (or treaties) are becoming more and more important for the governance of a variety of global issues nowadays. International law can be defined as 'regulating the interrelationship of sovereign states and their rights and duties with regard to one another' (Martin & Law, 2006). International law governs the 'relations between independent states' and 'provides facilities for states to make binding agreements and for the settlement of disputes' (Honoré, 1995). The usual sources of law for the establishment of international law are – 'conventions and treaties'; - 'international custom, in so far as this is evidence of a general practice of behaviour accepted as legally binding', and - 'the general principles of law recognized by civilized nations' (Martin & Law, 2006). Certain organizations, companies and sometimes individuals may have rights or duties under international law, such as accounts for the United Nations (Honoré, 1995; Martin & Law, 2006).

National or state laws yet appear to play a central role in governance since international agreements are not mandatory (Khanna & Harford, 1996) and the enforcement of international laws can currently only be realised at the state level (Honoré, 1995; Martin & Law, 2006). Furthermore, local governments are granted powers from a central government and are hence limited in their exercise of powers by central authority. Hence, it appears that the state level generally plays the most significant role in respect to law and law compliance. In conclusion, laws are established at several levels and even though the state level plays a central role in the establishment and enforcement of laws, other levels may also have significant capacities to solve problems of a global, regional or local scope.

Processes of governance

In general, three bodies or branches of government can be distinguished to be part of a jurisdiction's organ to deal with law (from Bodegom, 2008; Honoré, 1995; Soanes & Stevenson, 2005; Calhoun, 2002), being:

- the legislative body or legislature, which is the branch of government that is responsible for and given the power to make and amend laws;
- the executive, which is the branch of government that is responsible for putting laws into effect and hence for carrying out government policy; and
- the judiciary, which is the branch of government that is responsible for the settling of disputes. According to Calhoun (2002) the judiciary is responsible for ‘interpreting the law’, ‘resolving legal disputes’ and ‘often determining the legality of legislative or executive actions’.

The term ‘*legislation*’ is frequently used to refer to laws made by a legislature. The executives, on the other hand, are, at least in some governance systems, responsible for making less important laws referring to ‘*regulations*’ (Honoré, 1995). Laws made by the judiciary can refer to ‘*judge-made law*’.

Based on these three branches of government, three specific governance processes can be distinguished. Since the legislative is responsible for making laws, the corresponding process can be referred to as the “law establishing process”. A second governance process relates to the executive which is responsible for putting laws into effect. Both the term execution as well as implementation are being defined as ‘putting into effect’ (Soanes & Stevenson, 2005). Hence the process relevant for the execution of policy, can be referred to as “implementation process”. Furthermore, it can be argued that the judiciary judges the findings of the law enforcement agencies and imposes the actual sanctions. The process of law enforcement can therefore be considered more or less similar to the responsibilities of the judiciary. Hence, a third type of governance process relates to “law enforcement”. A schematic overview of the conclusion in respect to these three governance processes, is presented in Figure 3.

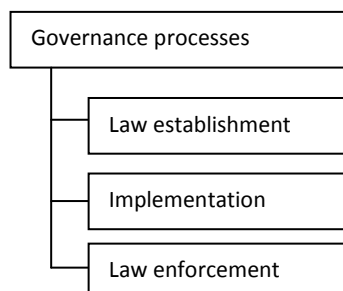


Figure 3: Processes of governance.

3.2. Core types of law

A broad variety of law types can be distinguished. Such a distinction is frequently made based on the types of affairs that the law is expected to govern, i.e. public law and private law. Generally acknowledged to be ‘public law’ is law that governs the relationship between individuals and the state or, in other words, civil-state relationships (Calhoun, 2002; Martin & Law, 2006; Soanes & Stevenson, 2005). Private laws refer to laws that govern the relationship between individuals, or civil-civil relationships. Private law is also being referred to as ‘civil law’ (Calhoun, 2002) which, in this context, refers to a type of law instead of a legal system.

Public law is generally concerned with ‘constitutional law’, ‘administrative law’ and ‘criminal law’ (Martin & Law, 2006). Most legal systems include at least ‘property law’, ‘contract law’ and ‘tort law’ as part of the body of private law (Honoré, 1995, Martin & Law, 2006). A high diversity of private laws are, however, being applied by states or jurisdictions to govern a specific type of relationship between individuals.

Consulting Honoré (1995) and Martin & Law (2006), some core types of laws can be distinguished as being central to most legal systems:

1. Constitutional law;
2. Criminal law;
3. Property law;
4. Contract law;
5. Tort law; and
6. Equity law.

3.2.1. Constitutional and statutory law

Constitutional law is sometimes referred to as a third type of law as distinguished to public and private laws (Calhoun, 2002). Constitutional law is defined as ‘the set or body of fundamental rules, principles, practices and/or established precedents that determine the composition and functions of the organs of central and local government, according to which a state is acknowledged to be governed’ (Calhoun, 2002; Soanes & Stevenson, 2005; Law & Martin, 2009). In most countries the constitution is written down in a single document, referred to as ‘the constitution’ (Calhoun, 2002; Law & Martin, 2009). Nonetheless, these countries might also apply some basic rules that are the result of ‘accumulated custom, practice and judicial precedent’ (Calhoun, 2002).

It appears that administrative law does not significantly differ from constitutional law. Administrative law can be defined as ‘the branch or area of public law governing the exercise of powers and duties by the executive branch or public authorities’ (Calhoun, 2002; Law & Martin, 2009). According to Calhoun (2002) it is considered with the ‘powers, organization, and procedures of particular administrative bodies, as well as the means by which citizens may appeal their decisions’. Law & Martin (2009) highlight that ‘there is no universally accepted demarcation of the area of administrative law’ and argue that it is generally concerned with ‘the exercise of power by central and local government, planning, housing, social security, education, immigration and tribunals and inquiries’.

It is, at least for the purpose of this study, relevant that a distinction can be made between law referring to the rules that determine the governance system, and the set of laws made within this system. A distinction is thus made between ‘constitutional law’ and ‘statutory law’. Statutory laws, as discussed above, refer to laws that are established by a legislative body, and includes criminal law and the body of private laws. Constitutional law refers to laws required to determine the functions and powers of governing bodies.

3.2.2. Criminal law

The capacity of criminal law is to make certain behaviours a ‘legal wrong’. This behaviour is considered to be ‘disruptive’ and requires the force of the state to ensure such behaviour remains within limits (Honoré, 1995). Criminal law is the ‘system of law concerned with the punishment of offenders’ (Soanes & Stevenson, 2005). Besides punishing offenders, criminal law also determines what exactly is being considered to be a crime and how this has to be dealt with (Philip’s, 2008). Criminal law can be enforced through ‘criminal punishment’ referring to mechanisms such as fines and prison terms.

Considering the definition of criminal law provided by Philip’s (2008), criminal law refers to the body of law that:

- ‘defines crimes’;
- ‘lays down rules of procedure for dealing with them’; and
- ‘establishes penalties for those convicted’.

3.2.3. Property law

Property law can be defined as 'law that lays down who owns what and gives exclusive rights to the owners of the thing owned' (Honoré, 1995). Property might refer to money, land and buildings, but also to leases, shares and rights under contracts that grant people exclusive rights. A distinction can be made between tangible and intangible property. Property law enables the protection of property and makes the owner more independent (Honoré, 1995). It further has the capacity for specific aspects of life to be carried out independently of other people. Furthermore, it has the capacity to create new assets.

Property law can be considered to provide clarification over (from Honoré, 1995):

- what is considered to be property;
- 'who owns what' or moreover 'what justifies giving a particular person an exclusive right to a particular thing'; and
- 'how the protection of property rights is being arranged'.

3.2.4. Contract law

Contract law can be defined as 'the branch of law concerned with the making and observation of contracts' (Soanes & Stevenson, 2005). A contract is considered to be 'a legally binding agreement' (Honoré, 1995; Kennedy, 2007). Where contracts refer to agreements between individuals or between a state and an individual, treaties refer to legally binding agreements between states (Honoré, 1995).

The prominent capacity of contract law is to give legislative power to agreements and hence to enable the enforcement of agreements by law and avoid and/or solve conflicts (Soanes & Stevenson, 2005; Honoré, 1995). For some agreements morality and self-interest are sufficient to provide the guarantee that agreements are honoured. Many other situations require the capacity to enforce the agreement through the legal system in order to feel secure and to be able to actually rely on contractual rights and obligations (Honoré, 1995). Contract law can provide 'a legal promise for future conduct' and has the capacity to create economic assets in terms of legal rights and property due to the fact that agreements can be enforced by courts.

Examples of rules that can potentially be included in contract law are (from Ellinghaus, 2007):

- 'prescribe what a contract is and how it is made';
- 'what obligations it imposes';
- 'who can enforce it';
- 'what constitutes a breach of it';
- 'when its performance is excused';
- 'how it is terminated'; and
- 'the remedies for breach'.

Contract law also has to determine what requirements need to be met for specific agreements. Examples of these requirements are: the inclusion of 'offer and acceptance', 'there must be a consideration', 'the parties must have an intention to create legal relations', 'the parties must have capacity to contract', 'the agreement must comply with any formal legal requirements', 'the agreement must be legal', and 'the agreement must not be rendered void either by some common-law or statutory rule or by some inherent defect' (Kennedy, 2007).

In respect to the enforcement of contracts, a court can compel the following (Honoré, 1995):

- 'the parties have to carry out the contract';
- 'the parties have the right to rescind when the contract is breached'; or
- 'that a substitute is provided or that compensation is being paid'.

3.2.5. Tort law

Tort law can be defined as ‘a wrongful act or an infringement of a right (other than under contract) leading to legal liability’ (Soanes & Stevenson, 2005). It can also be defined as ‘a wrongful act or omission for which damages can be obtained in a civil court by the person wronged, other than a wrong that is only a breach of contract’ (Kennedy, 2007).

Tort law can be considered to compensate for damage such as personal injury and property damage, but also to protect rights through seeking compensation from people who infringe people’s rights (Honoré, 1995). Tort law is thus concerned with providing compensation and to protect other interests, such as ‘title to property’, ‘enjoyment of property’ and ‘commercial interests’ (Kenney, 2007). The demarcation of what counts as either a tort or a breach of contract or violation of criminal law, can be quite ambiguous. A breach of contract or specific crimes can also be considered a tort. Tort law, however, is concerned with handling the right to seek compensation or a remedy for which no contractual rights and obligations have been predetermined. Criminal law is enforced by the state, whereas compensation in tort law is sought by the victim.

Tort law has the capacity to provide a legal mechanism for those who suffer harm to take the initiative to claim compensation, called ‘damages’ (Honoré, 1995). Tort law thus has the capacity to ensure compensatory mechanisms can be applied. Furthermore, tort law also has the capacity to be responsible for specific actions even though the conduct is not really wrong.

Tort law could determine the following:

- what counts as a tort;
- the requirements for having a right to compensation; and
- rules that determine what kind of compensation can be claimed in specific situations.

Tort law is mainly concerned with the wrongs done by other people, but might, however, also include other wrongs for which compensation should be provided. The term ‘engineer compensation’, for instance, refers to ‘planning for side effects or other unintended issues in a design’ (Wikipedia, 2010).

3.2.6. Equity law

The term ‘equity law’ can be used to lay down those rules that ensure a level of equality within a governance system. Even though equity law is a branch of law that originally developed alongside common law, it expresses a type of law that is concerned with fairness and justice (Soanes & Stevenson, 2005). In general, the term ‘equity law’ can thus be used to refer to the body of law that ensures a level of equality within society.

Equity law can then refer to legal mechanisms that limit powers of e.g. more influential individuals. Equity law could include rules such as relating to (based on UNDP’s description of rule of law in Saunier & Meganck, 2007):

- ‘clear communication of the rules’;
- ‘indiscriminate application’;
- ‘effective enforcement’;
- ‘predictable and legally enforceable methods for changing the content of laws’; and
- accountability and predictability mechanisms required to ensure the ‘citizenry perceives the set of rules as fair, just or legitimate, and that is willing to follow it’.

3.3. Social principles of law

Understanding compliance behaviour requires acknowledgement of social principles of law, such as to what purpose laws are principally being established. Social principles of law relate significantly to law compliance. For studying law compliance, full considerations are required of these social principles of law. In this section an overview is provided of the social principles of law that appear relevant for understanding law compliance.

3.3.1. Rights and restrictions

Law can guide behaviour by discouraging certain behaviours and/or encourage specific behaviour by giving a rule 'an official status of law' and provide a legal basis for its proper enforcement (Honoré, 1995). Four aims can be distinguished as being central to any system of law (from Honoré, 1995):

1. 'to set up an official framework of compulsion' referring to laws forbidding or compelling certain ways of behaving through the threat of sanctions;
2. 'to provide facilities for people to make their own arrangements', for which the law then provides the guarantee that the state or other authority will enforce these arrangements if necessary;
3. 'to settle disputes about what the law is and whether it has been broken'; and
4. 'to settle what the system of government is to be', determining how governance is being executed.

The establishment of laws is required to ensure stability and security, and to enable people to 'flourish'. In general, law is being established to achieve the following objectives (from Honoré, 1995):

1. restrict and prescribe certain behaviours;
2. protect people's interests and provide people with specific rights and guarantees; and
3. to limit the power of governments, which is 'one of the main and oldest functions of law'.

Based on the objectives of law and the stated aims of law, it is concluded that law is required and has capacity to impose both restrictions and grant specific rights.

3.3.2. Morality and self-interest

Law is established to back-up morality and/or self-interest (Honoré, 1995). Moral opinion and people's interests guide authorities to mark specific behavioural rules as 'an official status of law'. Law then supports moral opinion and self-interest by making a rule more applicable to society as it can specify more exactly what behaviour is required and what behaviour jeopardizes security and stability. Morality or self-interest alone will not be sufficient to 'provide a clear guide' and initiate specific collectively conducted behaviour. Hence, the desired behaviour requires an official status as law and mechanisms to enforce it.

Law shows to have capacity to determine and specify the required steps that are to be taken in cases of non-compliance behaviour. Since law is considered to be an official status of certain behavioural rules, specific behaviour that is considered morally wrong or not in people's self-interest receives an official status as law to ensure this way of behaving is forbidden and can be legally enforced by enforcement authorities (Honoré, 1995). Behaviour considered to be morally right or in people's self-interest can be encouraged through establishment of law pertaining to that behaviour. In that way law can also persuade people in perceiving that specific behaviour as morally right and in their self-interest. Honoré (1995) further argues that 'law and moral opinion support one another', that 'law builds on moral opinion and self-interest, and that 'laws

claim to be morally sound, to be part of morality and try to mould moral opinion'. He even argues that 'morality is incomplete without law, and law can only be enforced when it is backed by morality and self-interest'. Hence, another prominent social principle of law relates to the aim of law to back-up morality and/or self-interest.

3.3.3. The rule of law

Even though the concept of the 'rule of law' is quite an ambiguous concept, it is generally agreed that it relates to limits on government's powers and the protection of citizens against arbitrary state actions (Calhoun, 2002; Honoré, 1995; Law & Martin, 2009; UNDP in Saunier & Meganck, 2007). Honoré (1995) shows that 'a rule of law exists when a government's powers are limited by law and citizens have a core of rights that the rules are bound to uphold, and actually do uphold'. It is also defined as 'the principle that power should be exercised according to mutually understood rules and procedures that are applicable to all members of a polity, including officers of the state' (Calhoun, 2002).

The social principle of law relating to the rule of law is in this study primarily used to refer to mechanisms that impose limits on governments' powers, and ensure a core of citizens' rights are respected. One way to impose these limits is the appointing of independent bodies overseeing government's actions, such as an independent judiciary (Calhoun, 2002; Honoré, 1995). Another mechanism through which limits are often imposed are elections. If an authority is subject to elections, future votes depend on the extent to which authorities respect human rights and govern in favour of citizens' morality and/or interests. If not by means of elections or independent bodies, governments can be opposed by means of strikes or demonstration. More aggressive forms of denunciation are uprisings, civil wars or other types of strong resistance.

Imposing limits on governments' powers is expensive and hence a wealthy country can impose more limits on government's powers than less developed countries (Honoré, 1995). Corruption further undermines people's capacities to impose restrictions on government's powers. This implies that in developing countries the rule of law is weaker, whereas in western countries the rule of law can be considered stronger. However, this does not mean that in developing countries governments do not have to uphold human rights to a certain extent, nor that state laws more strongly apply or can be more easily enforced. Even these governments are subject to a rule of law and thus to respect certain rights. Every government or other governing authority thus seem somehow bound to govern in favour of their citizen's morality and/or interests and to respect a core of rights, or at least of a relatively influential part of society.

Furthermore, it seems that the rule of law relates either directly or indirectly to the extent to which citizens can ensure laws are actually backing-up morality and/or self-interest. If mechanisms are limited to impose limits on governments' powers and a weak rule of law thus exists, there are also generally less means to ensure that laws reasonably back-up morality and/or self-interests of local people and to grant them specific rights. In wealthier countries, for instance, people have several means at their disposal to express their interests and to change the outcome of governance process, such as unions and/or strikes. People in developing countries have less access to such means and consequently laws are more easily established that in fact do not back-up morality and interests of local people, or grant them with limited rights.

In those legal systems where mechanisms are relatively abundant to ensure laws back-up morality and self-interest and specific rights are granted, a higher level of expected subjection to and compliance with laws can be expected than without these mechanisms. If such mechanisms are limited it can be assumed that people are less inclined to respect state laws. If corruption levels are high people might be less inclined to abide by the law. Hence, differences in the role of state laws for a particular society can be detected.

Acknowledging the existence of a rule of law is thus crucial to understand limits on authorities' powers, either in the establishment of specific laws or strict enforcement of such laws. Since there are still some mechanisms to impose limits on governments' powers, there will be constraints to strictly enforcing laws that do not back-up morality and/or self-interest. Strict enforcement of such laws can eventually lead to

denunciation and can thus jeopardise power. Mechanisms that limit powers therefore seem to either ensure that laws are established to reasonably back-up morality and interests and respect specific rights, or limit the powers to enforce laws that do not. The rule of law can thus be used to express the necessity of laws to back-up morality and/or self-interests and to respect specific rights of the citizens if applies to. For the purpose of this research it is particularly crucial to acknowledge that there are limits on strictly enforcing laws that do not sufficiently back-up morality and interests of local communities.

3.4. Conclusion

Worldwide, there exists three main systems of law, i.e. civil law, common law, and religious law. This distinction is made on the authoritative sources of law, being either codifications, the judiciary system or respectively religious customs and believes. This study focuses specifically on the civil law system as this legal system is of most direct relevance to international wildlife conservation, as considered in this study. It is also essential to acknowledge that even though the role of international law is increasing, state laws play a central role in governance and international laws can currently only be enforced at the state level.

Considering law compliance, three basic social principles can be distinguished as being central to most legal systems. Firstly, law is established to back-up morality and/or self-interest. An official status as law is given to prescribe specific behaviour that is considered moral conduct and/or to protect people's interests. A second social principle of law relates to the aim of law which is to impose restrictions and to grant people specific rights. Hence, it appears that rights play a significant role for studying law compliance and analysing the role of rights for law compliance in respect to wildlife conservation appears to contribute to an understanding of non-compliance and approaches towards increasing effectiveness of laws.

A third social principle of law relates to the rule of law. Acknowledging the existence of a rule of law is crucial to understand limits on authorities' powers, either in the establishment of strict laws or strict enforcement of such laws. The rule of law relates to mechanism that impose limits on government's powers and ensure that a core of citizen's rights are being upheld, ranging from elections and strikes to more aggressive forms of denunciation such as upraises. Even though the extent to which limits can actually imposed on governments varies strongly among nations all governing authorities seem subject to a rule of law. For the purpose of this research it is particularly crucial to acknowledge that there are limits on strictly enforcing laws that do not sufficiently back-up morality and/or interests of local communities.

A specific set of laws are considered central types of law of civil law systems and can therefore provide a legal basis for a core bundle of rights. The following set of laws make up the body of core types of laws:

- constitutional law, which is considered a basic type of law, laying down rules that determine the system of governance and government's powers;
- criminal law, which is required to determine what counts as a crime and how to deal with them;
- property law, to provide clarification over who owns what and to provide exclusive rights over the things owned;
- contract law, to formalise specific agreements;
- tort law, to express the right to claim compensation; and
- equity law, to ensure a specific level of equality within the governance system.

In chapter 6 the relevance of these different types of laws to wildlife conservation will be further evaluated. But first, the issues of law compliance will be addressed in the next two chapters.

4. Principles of law compliance

4.1. Introduction

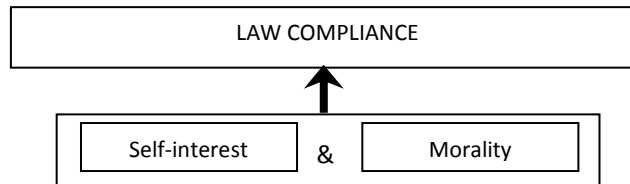


Figure 4: First dimension of the conceptual framework of law compliance; morality and self-interest as prominent factors of law compliance.

The previous chapter highlighted the legal principles that appeared relevant for law compliance. This chapter discusses the social principles of law compliance and addresses the first dimension of the Compliance Framework relating to the prominent factors of law compliance, as schematically shown in Figure 4.

Law compliance can be defined as ‘the rule-consistent behaviour of those actors, to whom the rule is formally addressed and whose behaviour is targeted by the rule’ (Börzel & Gupta, 2000). Börzel and Gupta (2000) make a distinction between legal compliance and practical compliance. Where legal compliance refers to legal and administrative measures, practical compliance refers to the ‘measures taken on behaviour of those actors who must change their behaviour’.

A distinction can also be made between voluntary non-compliance that refers to the lack of willingness to comply, and non-voluntary non-compliance that refers to the lack of capacity to comply (Börzel and Gupta, 2000). Based on this, two aspects of law compliance require attention for understanding compliance, respectively non-compliance behaviour, i.e.:

- the willingness to comply; and
- the capacity to comply.

To gain a further understanding of issues relevant for law compliance, this chapter addresses principles of law compliance and concludes on the prominent factors of law compliance. Since the concepts of law compliance and law enforcement are often closely linked and frequently even used more or less synonymously, this chapter also presents the results of an analysis of the concept of law enforcement and its applications for law compliance. A discussion is also presented of distinct approaches that can be adopted to achieve law compliance.

4.2. Incentives and disincentives

According to Stigler (1970), the goal of enforcement can be described as ‘the achievement of that degree of compliance with the rule of prescribed (or proscribed) behaviour that the society believes it can afford’. In other words, law compliance can be achieved by either disincentives that discourage non-compliance behaviour, or incentives that encourage compliance-behaviour.

Disincentives for non-compliance behaviour generally relate to punitive mechanisms. Such mechanisms can also be referred to as instrumental tools. The use of instrumental tools has long been considered the most prominent method for inducing law compliance (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). This method refers to the threat of sanctions, and relates to the deterrence effect, which can be explained by the 'probability of an act of non-compliance being detected and punished' and the 'anticipated consequences of getting caught' (Keane *et al.*, 2008; Sutinen & Kuperan, 1999). Instrumental theory considers this threat of sanctions the only policy mechanism available to induce law compliance (Sutinen & Kuperan, 1999). These kinds of disincentives are also referred to as 'instrumental incentives' (Nielsen, 2003).

Incentive-based compliance (Lindsey *et al.*, 2006) relates to incentives that encourage law compliance rather than discourage non-compliance behaviour. Incentive-based compliance mechanisms are in line with the acknowledgement of 'normative considerations' of law compliance (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). A variety of incentive-based mechanisms can be developed to stimulate compliance behaviour rather than deter non-compliance behaviour.

4.2.1. Positive and negative sanctions

One way to provide direct incentives for law compliance is rewarding, as distinguished from disincentives in terms of punishment. The potential role of both punishment and rewards is, for instance, highlighted by Bodegom *et al.* (2008). The expression 'the stick and the carrot' is a rather common phrase to highlight the use of either punishment or rewards. This expression can be defined as 'a method of persuasion or coercion, characterized by both the offer of reward and the threat of punishment' (Stevenson, 2010). Coercive enforcement methods as distinguished from voluntary compliance (Sutinen & Kuperan, 1999) is another way to stress the existence of mechanisms that either coerce behaviour through punitive measures or persuade behaviour through the offering of rewards.

A more formal term for punishment and rewards are sanctions. A sanction can be defined as the 'threatened penalty for disobeying a law or rule, or official permission or approval for an action' (Soanes and Stevenson, 2005). Even though some authors limit their definition of sanctions to 'official measures of disapproval' (Honoré, 1995), a sanction can also be expressed as either positive or negative (Nielsen, 2003). Negative sanctions are used as punitive mechanisms and hence for discouraging specific behaviour. Positive sanctions refer to the offering of rewards and the encouragement of compliance behaviour.

A sanction can either be formally and/or legally imposed by official enforcement authorities, or informally and/or socially imposed and applied as a social enforcement mechanism (Gibson *et al.*, 2005; Keane *et al.*, 2008; Sutinen & Kuperan, 1999). Social sanctions are, for instance, imposed by members of the community who can either reward or punish the members (Sutinen & Kuperan, 1999). Social sanctions are socially specific and can hence encompass a broad variety of measures. For moral actions a positive social sanction will be provided and for immoral actions negative social sanctions will be imposed. Social sanctions do not necessarily have to be in line with the legal status of certain activities.

Negative sanctions, 'the official measures of disapproval', can be punishments or penalties. A penalty can be defined as 'punishment imposed for breaking a law, rule or contract', punishment as 'the infliction or imposition of a penalty as retribution for an offence' (Soanes & Stevenson, 2005). Hence, it appears that there is no significant difference between the use of the term punishment or penalty. It might, however, be assumed that the term 'penalty' is used to refer to more legal forms of punishment.

Negative legal enforcement mechanisms are mostly imposed in terms of fines and prison terms. Other examples include: - the use of armed force; - economic boycott; - disqualification; - being made to pay compensation (Honoré, 1995); - verbal warning; - confiscation of equipment; - forced labour (Holmern *et al.*,

2007); - permanently or temporarily shutdown ((a) certain part(s) of) an operation or practices; - deny or revoke a permit; - require a facility to clean up part of the environment; - compel compensation for damage caused by the violation; - compel monitoring and reporting; - imposing specific labelling requirements; - compelling specialised training; - compel to provide information, seize property, ensure reimbursement, bar a facility or company from government loans, guarantees, or contracts; and - require service or community work (UNEP, 2008).

Negative social sanctions can include: - social opprobrium (Keane *et al.*, 2008); - the subtle form of ostracism; - withholding of favours; - withholding signs of groups status and respect; - channelling material resources away from a member of the group; and - verbal or physical abuse (Sutinen & Kuperan, 1999).

Positive sanctions, 'official measures of approval', can be a reward or a remedy for specific actions, outcomes or behaviour. The term remedy is used to refer to 'means of counteracting or elimination of something undesirable' or 'a means of legal reparation' (Soanes & Stevenson, 2005). Positive sanctions can also be provided through either legal mechanisms or in regard of social mechanisms.

Examples of positive informal or social sanctions can be: - channelling material resources toward a member of the group; and - conferring signs of groups status and respect (Sutinen & Kuperan, 1999). Examples of positive formal sanctions can be: - to provide a permit; - the right to seek compensation; - granting a label for meeting labelling requirements; - providing specialised training; - to be properly informed; - to seek reimbursement; - to get a (government) loan, guarantee or contract; - and the right to specific service (UNEP, 2008).

4.2.2. Distinguishing an incentive-based approach from a punitive-based

In conclusion, non-compliance behaviour can be discouraged by disincentives, relating mostly to negative sanctions. Law compliance can also be encouraged by compliance-based mechanisms such as rewards, or positive sanctions, for compliance behaviour. However, simply distinguishing between a punitive and a rewards-based approach, will not be sufficient for studies of law compliance. Such approaches relate to the willingness to comply only and neglect the aspects relating to the capacity to comply. Moreover, normative considerations encompass more than just rewards and relate to moral incentives independent of external reward systems.

A distinction can, however, be made between a punitive approach and an incentive-based approach. Within the punitive approach, extensive use is made of punitive measures only. The incentive-based approach focuses primarily on measures that encourage compliance behaviour, and the development of incentive-based compliance mechanisms is the central focus. In the incentive-based approach, punitive mechanisms are merely used as additional tools for law compliance. Punishing law violators remains a crucial part of any type of approach to law compliance. The incentive-based approach takes into consideration the aspects relating to the capacity to comply, whereas the punitive approach merely relates to the willingness to comply.

4.3. Relevance of law enforcement

Throughout the conservational literature the term 'law enforcement' is a fairly common concept. Literature on law enforcement shows more abundant, however, than scientific literature on law compliance. Yet, a clear and practical definition of law enforcement and its applications for law compliance is hardly provided. This section therefore addresses the concept of law enforcement, before further elaborating on aspects relevant for law compliance.

4.3.1. The concept of law enforcement

Analysing the concept of law enforcement showed that it is quite an ambiguous concept. It is generally agreed that law enforcement deals with violations. To what extent law enforcement deals with these violations, however, is not clear. Violations are concerned with several activities such as the apprehension, the investigation of who committed the crime, to what extent the law is violated, and sanctioning. Whether all these processes are included in the notion of law enforcement, is not clear.

As such, it could be discussed whether or not law enforcement includes the processes of monitoring, surveillance and/or patrolling. These terms are often mentioned in relation to law enforcement but whether these are notions of law enforcement or not, is not clear. Several authors separate these concepts (Gibson *et al.* 2005; Hayes, 2007; Nielsen, 2003; Sutinen & Kuperan, 1999). Nielsen (2003) distinguishes enforcement, monitoring and control as 'responses of government agencies to non-compliance behaviour'. Sutinen & Kuperan (1999) also separates the concepts by arguing that controlling is done through 'monitoring, surveillance and enforcement'. Furthermore, Gibson *et al.* (2005) and Hayes (2007) also clearly distinguish monitoring from enforcement.

On the other hand, Keane *et al.* (2008) defines enforcement as 'monitoring adherence to rules and agreements and punishing infractions when they are detected' and hence implies that law enforcement includes the notion of monitoring. Furthermore, the term 'law enforcement agency' is generally agreed to refer to agencies that both detect and apprehend violators. Sutinen & Kuperan (1999) even argue that law enforcement agencies both detect and sanction violations. Furthermore, investigation and providing proof can also be considered common tasks of law enforcement agencies. Whether these agencies are also tasked with sanctioning is, again, not clear. The police, generally agreed to be a law enforcement authority, is often granted power to impose fines. In other cases the law enforcement agency gathers the evidence, whereas a judge or jury decides whether or not a person is guilty and what sanction fits the crime. It seems that, overall, the concept of law enforcement is closely linked to the processes of detection and apprehension, as well as penalising those convicted.

Whether the term law enforcement only relates to the use of negative forces that discourage non-compliance behaviour, or also positive forces that encourage compliance behaviour, could be debated. The term law enforcement is often left undefined, but the use of the term often implies to refer to punitive mechanisms only. If a definition is provided, it is also mostly used to refer to punishment. Stevenson (2010), for example, defines law enforcement as 'the act of compelling observance of or compliance with a law'. The definition provided by Keane *et al.* (2008) also limits to 'punishing infractions'.

A definition provided by the conservational literature that does imply that law enforcement also relates to positive sanctions is the definition provided by Park (2007). He defines law enforcement as 'legal methods that are used to obtain compliance with environmental laws, rules, regulations, or agreements and/or deal with violations'. This definition, however, is also not practical to express the mechanisms available to enforce laws, since it limits to legal methods and does not take into account the less formal or social enforcement mechanisms. Hence, it appears that the concept of law enforcement is ambiguous, and no practical definition can be found for its applications for law compliance.

4.3.2. Applications of law enforcement for law compliance

Even though law enforcement appears to be a crucial process for achieving law compliance, it is crucial to acknowledge that achieving law compliance is far but limited to law enforcement. Law enforcement generally only influences the willingness to comply and does not relate to the capacity to comply. Processes of law enforcement also do not seem to relate to normative considerations of law compliance. Studying law

compliance can therefore not be limited to studies of law enforcement and the term cannot be used synonymously for law compliance.

Moreover, in chapter 3, the process of law enforcement was concluded to be one of several governance processes. The term 'law enforcement' was used to distinguish from the governance processes law establishing and implementation. All these processes more or less influence the level of law compliance. The process of law enforcement then refers to the whole system of dealing with violations and is therefore threefold: - the detection and/or apprehension of violators; - investigating whether a law has been broken, to what extent the law is violated and whom committed the offense; and - determining what sanctions fit the crime or deed.

Based on previous discussions, it appears that law enforcement is often limited to the use of punishments and not in the context of rewards. In respect to wildlife conservation, the scientific literature also seems to imply that enforcement limits to the use of negative sanctions only (Corlett, 2007; Heinen, 2002; Hilborn, 2006; Rowcliffe *et al.*, 2004). Such articles thus seem to focus on the lack of willingness to comply, whereas the capacity to comply is limitedly considered and the normative aspects are generally not addressed. Whereas literature relating to the enforcement of wildlife laws is fairly abundant, literature on law compliance in respect to wildlife conservation is limited. Thus it appears that there is a large focus on punitive mechanisms as approach to compliance with wildlife laws.

Yet, if the term law enforcement merely refers to punitive mechanisms, there should be consensus about an additional concept that relates to rewards. For purposes of this research and even though it is not generally agreed on, law enforcement refers to imposing and providing both negative and positive sanctions. It is considered to be one of three governance processes relevant for law compliance, and it is crucial to acknowledge that law enforcement includes mechanisms that enable the enforcement of restrictions and of rights. Law enforcement thus has to ensure that those that violate the law are punished, and that rights are actually granted. In this context, two general types of law enforcement are distinguished, i.e. - legal law enforcement, referring to external enforcers and imposing legal sanctions, and - social enforcement, referring to local enforcers making use of social sanctioning.

4.4. Factors of law compliance: morality and self-interest

A variety of factors can be identified that influence whether people comply with laws or to participate in non-compliance activities. Based on the social principles of law, it can be concluded that it is crucial that a law is backing-up morality and/or self-interest of those directly impacted by it. Prominent factors of law compliance can consequently be considered to be morality and self-interest. To strengthen this argument, this section addresses the significance of these factors, particularly for the approaches to law compliance, and further outlines aspects relating to morality and self-interest.

4.4.1. The significance of morality and self-interest

The role of self-interest for law compliance appears to be a widely acknowledged factor of law compliance. A theory that expresses the role of self-interest for compliance behaviour is instrumental theory. According to this theory, non-compliance behaviour occurs when 'tangible, immediate benefits outweigh the costs incurred through penalties for non-compliance behaviour' (Becker in Keane *et al.*, 2008; Nielsen, 2003;

Sutinen & Kuperan, 1999). The article of Hardin, the 'Tragedy of the Commons'¹ also provides a classical theory on the role of self-interest for behaviour regarding the use of natural resources. He argued that a shared resource is at risk of being depleted due to people's self-interest. Even though Hardin received plenty of critics and nowadays normative considerations of law compliance have also gained attention, the fact remains that self-interest affects law compliance. Moreover, for a law that is in people's self-interest there are less reasons to participate in illegal activities and hence a higher level of compliance behaviour can be expected.

Morality is also widely agreed to be a crucial factor of law compliance (Hayes, 2007; Honoré, 1995; Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). Sutinen & Kuperan (1999) provides empirical evidence showing a correlation between 'individual's personal moral standing' and the number of violations. They argue that their empirical research provides substantial evidence to acknowledge that morality influences economic outcomes. They refer to evidence provided by experiments that show that many people do not act as free riders even though circumstances are advantageous for free riding behaviour. Conducting repeated prisoner dilemma games showed that over half of the subjects of the experiments cooperate without coercion or payments. They further discuss a study in which a percentage of about 50 to 90 % of fishermen comply with fisheries regulations even though illegal gains are large, there is a low chance of being caught and there are small expected sanctions. They conclude that the level of law compliance depends on the appropriateness and consistency of the law with the individual's internalised norms.

Furthermore, studies present evidence pertaining to compliance behaviour in fisheries that also show that compliance behaviour is, at least partly, determined by the personal morals of the fishers (Tyler, 1990 in Nielsen, 2003). Bodegom *et al.* (2008) mention moral responsibility as criteria of evaluating governance performance. The critics of Hardin's Tragedy of the Commons (Dietz, 2003; Gibson *et al.*, 2005) also provide substantial evidence to acknowledge the importance of normative factors for compliance behaviour.

The concept of 'moral development' is stressed by Keane *et al.* (2008) and Sutinen & Kuperan (1999) and provides a basis for analysing the relevance of either moral opinion or self-interest for ultimate compliance behaviour. Specific moral development results in an internal obligation to observe laws which is either initiated by fear of sanctions, a strong sense of social order or an aspiration to do what is right and refrain from what is wrong (Sutinen & Kuperan, 1999).

Which factor, morality or self-interest, is more determining for an individual's final decision, and the extent to which morality and self-interest influence compliance behaviour varies spatially, individually and inter-temporarily and depends on the matter at hand (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). Since every individual is unique, people vary in their perception of what is important and hence varieties in what is morally important, varies between regions or communities but also between the various members of a specific community. Whether a law is in one's self-interest depends on occupational factors and many other factors and social positions. There is also substantial evidence to support the hypothesis that losses and gains are differently being evaluated by individuals (Keane *et al.*, 2008). Hence, even though external factors are similar, perceptions might still differ. The prominent factors of law compliance therefore relate to specific individual perceptions of morality and the backing-up of individual's self-interest.

Morality and self-interest can also influence one another, for instance, because people might perceive what is morally right to be in their best interest. Or, if a law is in their best interest, it is also backed by morality. Yet, laws might also be complied with for moral reasons only without it being in their interest (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999) and people might comply with specific laws because it is in their interest even if it is actually against their moral principles.

¹ Hardin's 'Tragedy of the Commons' is an often referenced article in relation to natural resources and is extensively used within an academic setting. Throughout the conservational literature the article received strong critics. His work, however, initiated debates around common property resources, and a discussion of a variety of factors influencing behaviour regarding the use of natural resources, was the result.

4.4.2. Concepts of morality and self-interest

Self-interest

Self-interest in relation to compliance behaviour can be explained as the extent to which an individual perceives to be made better off. If an enacted law is entirely backed by the individual's self-interest, the individual is generally not interested in not complying. The law can also be partly backing-up self-interest. In that case the level of law compliance depends on the perception of the individual to what extent the law should be backing-up the interests of the individual.

Morality, norms and values

Morality can be defined as the 'principles concerning the distinction between right and wrong or good and bad behaviour' (Soanes & Stevenson, 2005). The sense of morality is highly influenced by norms and values (Keane *et al.*, 2008; Sutinen & Kuperan, 1999). Hence, the distinction between right and wrong is at least partly determined by what is 'usual, typical or standard' and the 'importance, worthiness or usefulness of the act' ('norm' and 'value' in Soanes & Stevenson, 2005). Norms and values are culturally determined (Bodegom *et al.*, 2008) and morality appears to be influenced by religious customs and believes.

According to Nielsen (2003) 'moral is usually considered as being based on a normative internalised obligation to follow what is personally considered right or wrong'. Morality is hence a personal perception and intrinsic motivation which is influenced by personal reflections and expectations of and experiences with extrinsic factors and pressures.

Social influence

Morality and self-interest are highly influenced by the social setting. Social influence is often mentioned as factor of compliance and several studies have proven that an individual is more non-compliant if other members of the community are non-compliant (Keane *et al.*, 2008; Sutinen & Kuperan, 1999). The more the community is compliant, the more individuals seem to be compliant as well. The social structure thereby proves to provide both incentives and disincentives to comply with laws. The previous section already highlighted the relevance of social sanctions for law compliance.

An individual's perception of morality is subject to social influence (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). Morality even seems to be established through interaction with other individuals and groups or within the individual's environment, and is especially concerned with behaviour and attitude of peers (Keane *et al.*, 2008; Nielsen, 2003). Cultural and religious norms and values are also generally collectively considered to be morally right behaviour. Moral values are, for instance, often taught by members of society, such as parents and teachers. Moreover, norms seem mostly related to typical social conduct. Psychic well-being is, at least partly, based on receiving the approval of others (Sutinen & Kuperan, 1999). In conclusion, individual moral opinions are embedded in the social structure.

Furthermore, the extent to which a law backs-up an individual's self-interest is often influenced by activities of others (Keane *et al.*, 2008). The 'payoff from complying' depends on the compliance behaviour of others (Sutinen & Kuperan, 1999). Specific benefits, for example, will only be achieved if others also comply. This is being referred to as an 'assurance problem'.

The extent to which social influence is being exercised varies both spatially and temporarily and the extent to which it influences an individual also varies. The perception of morality changes over generations due to inter-generational differences, increase of knowledge and changes in the social settings. Important to note is

that the moral principles on which individuals base their own behaviour also form their basis for the social influence they exercise (Sutinen & Kuperan, 1999). The total of individual perceptions thus make up the ultimate social influence. It can thus be concluded that, even though perceptions are individually processed, a thorough understanding of the social setting is crucial to understand an individual's choice in respect to law compliance.

Characteristics of moral acts

Sutinen & Kuperan (1999) describe 3 prominent characteristics of moral acts. Firstly, it is highlighted that morality is not necessarily limited to the perception of the outcome as being right or wrong, but is often even more concerned with good or bad intentions and/or processes. What can be justified as a moral act might depend even more on the use of specific methods, techniques and/or taking of proper measures than on the actual outcome. Even if the perception of morality is concerned with the consequences of actions, the process might still play a crucial role for moral opinions regarding the act.

Secondly, moral opinion is an individual justification of specific behaviour for which external factors might be of little importance. An act might intrinsically be perceived as morally justified even if there are negative consequences, e.g. sanctions. Therefore, morality frequently includes 'non-material rewards internal to oneself'. A third characteristic of morality is that it often results in 'sacrifice' and 'denial of pleasure'. Therefore, moral acts can also include the sacrifice of income and the incurring of costs.

Moral behaviour

As discussed above, morality varies individually, spatially and temporarily and hence no predetermined standards appears to exist pertaining to moral opinions. Some general statements can, however, still be made regarding moral behaviour. For instance, since morality is influenced by norms and values, it can be argued that by conducting specific activities for long periods of time it can become the norm and be perceived as morally the right thing to do. Also, specific values of activities can result in perceiving the activity as morally right. Religious values can, for example, result in strong incentives to conduct specific activities and perceive them as morally right. If a species is religiously considered sacred, such as the cow in India, the animals will generally remain unharmed. Besides religious values, also cultural, social, political, financial, medicinal or aesthetic values might influence perceptions of morality and hence the level of law compliance. Furthermore, subsistence as incentive for non-compliance behaviour, either in terms of food or money, is often perceived as morally accepted, rather than a mere increase of wealth as incentive (Keane *et al.*, 2008).

Limits to moral suasion

Information and education can influence personal and/or social morality and could be considered functions of 'moral suasion' (Sutinen & Kuperan, 1999). Moral suasion plays an important role in inducing law compliance. It has to be noted, however, that actual change in morality can only be influenced by external factors and not be externally imposed. Moral opinions remain individual perceptions of what is right and wrong and are based on personal reflections of the external factors. Since the perception of morality correlates with norms and values, influencing norms and values can induce a change in the perception of morality. Yet, norms and values are often embedded in cultural or religious customs and beliefs. Externally imposing cultural and religious change is likely to meet major resistance since cultural and religious values are often deeply integrated in people's daily lives and behaviour.

Inducing change regarding the norm is likely to require a specific time-frame of conducting practices or using methods and/or techniques differently. These changes can only be initiated if practical alternative techniques, methods and/or practices exist and the perceived values are similar to former actions with a special note regarding security and risks.

Also, cultural change can be defined as 'the dynamic process whereby the living cultures of the world are changing and adapting to external or internal forces' (Wikipedia, 2010). Internal and external processes function as mechanisms producing or inhibiting social shifts or change. Yet, even though external factors can be major drivers of cultural changes, the change still occurs from within. Even more difficult to alter are religious beliefs. A change of religion requires strong persuasion and perhaps even bar circumstances for someone willing to be persuaded and give up their own beliefs. Religious beliefs are extremely difficult to alter through external processes only.

In conclusion, merely raising awareness is unlikely to induce a significant shift in moral opinion and achieve law compliance. However, since morality is linked to information and education, raising awareness is still a crucial factor for achieving law compliance. Even though morality is difficult to alter externally, without the knowledge of a possible 'wrong' of specific actions, these actions can also not be considered as wrong. However, since morality is a prominent factor of law compliance and difficult to manipulate or alter, laws will have to be established in line of the social moral of the specific society or societies that are being governed by these laws. It is hence required that law establishers acknowledge spatial and temporal varieties in the perception of morality.

4.5. Discussion

Based on the discussions of this chapter, a distinction can be made between a punitive approach and an incentive-based approach to law compliance. In the incentive-based approach, the main focus is on backing-up and positively influencing morality and self-interest of local communities, thereby taking into consideration the main issues relevant for law compliance. A punitive approach only influences the willingness to comply by negatively influencing self-interest regarding non-compliance behaviour, and is inconsiderate of factors relating to the capacity to comply. The relevance of these approaches is further discussed in this section.

4.5.1. Limits to punitive mechanisms

As expressed by the concept of the rule of law, government's powers can be limited (Calhoun, 2002; Honoré, 1995; Law & Martin, 2009; UNDP in Saunier & Meganck, 2007). It appears that there are several mechanisms available to impose such limits, ranging from elections to upraises. Elections can be considered official means of approval or disapproval of government's actions and hence can be considered formal sanctions for rulers. Authorities can also be subject to denunciation resulting in upraises, civil wars or other types of resistance if they do not govern in favour of their citizen's interests and/or morality. Even though, as discussed, developing countries do not have the resources required to impose all possible limits on government's powers as developed countries can (Honoré, 1995), all governments are to a certain extent bound to ensure that their governance backs up morality and self-interest of local people, or at least of an influential part of society.

If an enacted law turns out to be contrary to local people's interests, it is strict legal enforcement of that law that will be perceived morally unacceptable by society. Authorities are then subject to some type of denunciation and might risk the loss of power. Moreover, if authorities do not deem it in the best interests of its citizens to introduce specific behavioural rules, the law might either not be established or, for instance in cases of international laws, simply not be enforced. Honoré (1995) highlights that even though sanctions might

be effective in the short run, law enforcement can only be effective in the long run if the law is backed by morality and self-interest.

Severe legal sanctions are also considered morally questionable (Keane *et al.*, 2008, Sutinen & Kuperan, 1999). In specific cases, severe penalties can be considered to be in contrast with some basic human rights. Furthermore, specific norms and values, as explained, might result in a higher level of perceived morality of certain activities over others. Imposing (severe) penalties under these circumstances is likely to be perceived as morally wrong. Imposing (severe) penalties on marginalized people might, for example, be considered morally wrong, especially if subsistence turns out to be the reason to conduct the illegal activity (Gibson & Marks, 1995; Keane *et al.*, 2008). Consequently, sanctions will either not be imposed or provided, or simply be less severe or beneficial.

Severe penalties can also have unintended consequences. Without the backing of morality and self-interest it is more likely that people invest in detection avoidance behaviour and/or techniques instead of investing in capacities to benefit from legal practices (Keane *et al.*, 2008). Specifically acquired skills might result in investing in illegal practices to be more in one's self-interest than acquiring new skills to benefit from legal practices since this also incurs costs. Investing in detection avoiding techniques and skills decreases the risk of costs and might result in more benefits. Hence, people are inclined to invest in tactics reducing the chance of getting apprehended or sanctioned and reduces effectiveness.

Severe penalties can also lead to other unintended consequences. For instance, severe penalties might lead to increased environmental damage or worsen the political, social or economic situation (Keane *et al.*, 2008). Due to an equal deterrence effect of conducting highly damaging practices and conducting less damaging activities, people are more easily inclined to conduct illegal activities that carry the least risks of getting apprehended and negatively sanctioned. These activities might yet put a higher burden on the environment. This principle can be referred to as 'loss of marginal deterrence' (Stigler, 1970).

Hence, it appears that sanctions cannot be imposed without limits. Simply advocating for strict law enforcement with penalties set on the highest possible, can therefore not be considered the best tool for compliance. It is likely that even though laws are being enacted, sanctions will only actually be imposed or provided if laws are morally sound and in people's self-interests. Hence, setting penalties extremely high will merely reduce the likeliness of them ever being imposed.

4.5.2. Potential of social enforcement

As discussed, besides legal enforcement mechanisms, social enforcement mechanisms also play a role for inducing law compliance. These social enforcement mechanisms are considered cost-effective tools for inducing law compliance (Hayes, 2007; Holmern *et al.*, 2007; Milner-Gulland & Leader-Williams, 1992; Tang & Tang, 2001). Whereas legal enforcement often relates to external enforcement, social enforcement can relate to local enforcers and is therefore often referred to as local enforcement. Within this type of enforcement often extensive use is made of social sanctioning to both discourage and encourage specific behaviours.

It is shown that enforcement by local enforcers is highly effective in achieving conservation objectives (Agrawal, 2001; Dietz *et al.*, 2003; Gibson *et al.*, 2005; Holmern, 2007; Johnstone & Bishop, 2007). Empirical evidence is, for instance, provided to conclude that in Kumaon, India, local monitoring and enforcement by forest councils correlate positively to forest condition (Agrawal, 2001). The results from Gibson *et al.* (2005) show that local user groups as enforcers significantly correlate to forest condition under many circumstances. People within society are generally more aware of the behaviour of others than external enforcers and hence a higher level of detection can be expected. Local people are also expected to have greater knowledge of patrolling areas and put greater effort into enforcing local rules than external enforcers would (Lewis *et al.*, 1990 in Holmern *et al.*, 2007). Local people have more knowledge of the area and local specific circumstances and can therefore be expected to be more effective in patrolling.

Social enforcement is also often independent of additional external financial investments (Gibson *et al.* 2005; Tang & Tang, 2001). It is shown that people contribute resources voluntarily to monitor and sanction others. Social enforcement is also far less vulnerable to corruption. It can even be used as a tool to monitor officials and hence to prevent corruption. Since corruption jeopardises conservation efforts and reduces efficiency considerably, preventing corruption increases efficiency considerably. People might also be more vulnerable to social sanctions than to legal sanctions.

Social enforcement will only take place if a specific law is backed by morality and/or self-interest. People will not invest in the enforcement of laws that are not in their best interest and social sanctions will only be imposed for laws that are socially accepted. Also, if a law is not morally sound and/or in people's best interests, externally imposing severe penalties will meet major resistance. External enforcement can thus even be a disincentive to comply (Cardenas *et al.* 200 in Hayes, 2007) rather than resulting in law compliance. Moreover, positive effects on morality and self-interest also increases acceptability and efficiency of legal enforcement and sanctions.

Hence, it appears that stimulating social enforcement is a cost-effective approach towards achieving law compliance. Social enforcement is generally far more effective, requires substantially less means and is less vulnerable to corruption compared to external or legal enforcement. Social enforcement can be stimulated by developing effective incentive-based compliance mechanisms. Such mechanisms are thus not only more effective than a punitive approach due to the effects on morality and self-interest, it is ultimately also more efficient due to the potential to stimulate social enforcement. Hence, an incentive-based approach is, at least in the long run, much more cost-effective than a punitive approach.

An international law is being enacted to protect the interests of a global community, but might be contrary to the interests of the national and/or local communities. A national government and especially a local government is, however, expected to govern in favour of the interests of the national, respectively local community. If laws do not back-up local communities' interests and morality, external enforcement is likely to meet major resistance and social enforcement will not occur.

4.6. Conclusion

In respect to efforts taken to achieve law compliance, two distinct approaches can be adopted, i.e. a punitive approach and an incentive-based approach. Within a punitive approach, extensive use is made of punitive measures to deter people from conducting illegal activities. In the incentive-based approach, focus is primarily on backing-up and positively influencing morality and self-interest of the people that are expected to comply with the laws. In this approach, the use of punitive mechanisms remains important but as an additional tool only. The incentive-based approach could consider aspects relating to the 'capacity to comply', whereas punitive mechanisms only influence the 'willingness to comply' by negatively effecting self-interest regarding non-compliance behaviour.

The process of achieving law compliance goes far beyond law enforcement only. The latter has to be considered one of three governance processes that are directly or indirectly relevant for law compliance. These processes also include law establishing and implementation. Inducing law compliance in terms of law enforcement should not only consider negative sanctions but also positive sanctions, often expressed as rewards. Furthermore, besides restrictions, rights also require proper enforcement in order to be effective.

Essential elements to consider in law compliance are the significance of morality and self-interest. Law is principally established to back-up morality and interests and hence these factors are prominent factors of law compliance. If it is in one's best interest to comply or a law simply protects one's interest, no or limited incentives to participate in illegal activities exist. In light of morality, it is important to highlight the role of

norms and values. Also, perceptions of morality and self-interest are highly embedded in social settings, yet can nonetheless vary highly among individuals. In light of law compliance, particularly in respect to international law, it is important to consider the high spatial and inter-temporal varieties of perceptions of morality and factors that influence the extent to which people are made better off.

In respect to the punitive approach, it is highlighted that such an approach might not be sufficient to protect wildlife species, particularly considering that punitive measures can or are often not imposed, for instance due to the possible denunciation of authorities as expressed by the concept of the rule of law. Since governments are somehow bound to govern in favour of their citizens' morality and self-interest to prevent denunciation, enforcement levels generally relate to the extent to which a law is backing-up morality and/or self-interests of people directly interacting with wildlife. Also, increased enforcement levels might lead to detection avoidance behaviour rather than law compliance. Severe penalties can even have unintended consequences that can lead to higher pressure on wildlife resources, e.g. due to the loss of selectivity. Hence, sanctions cannot simply be set the highest possible, since the likeliness of not being enforced even increases.

In regard to the incentive-based approach, it can be concluded that such an approach provides a higher chance of realising social enforcement than the punitive approach due to its positive effects on morality and self-interest. Social enforcement mechanisms, as distinguished from legal and/or external enforcement, are very effective and often do not require substantial external investments. Local communities may voluntarily invest considerably in the enforcement of laws that back their moral opinions and/or interests. Social sanctions also show to be very effective and less vulnerable to corruption. Social enforcement is thus a cost-effective tool for inducing law compliance. Yet, social enforcement only takes place if laws back-up morality and self-interest of local people. Developing incentive-based mechanisms that increase the level of morality and self-interest can thus be considered a cost-effective approach towards achieving law compliance, particularly due to its potentials to stimulate social enforcement.

Hence, it appears that the incentive-based approach towards law compliance is more effective than a punitive approach, due to its positive effects on perceptions of morality and self-interest. It is also more efficient due to its potential to stimulate social enforcement, which is generally more effective in achieving compliance, whereas it generally requires substantially less means. The positive effects on morality and self-interest also increase the acceptability and effectiveness of legal enforcement and sanctions. In view of the importance of morality and self-interest, these factors will be further elaborated in the next chapter.

5. Factors of morality and self-interest

5.1. Introduction

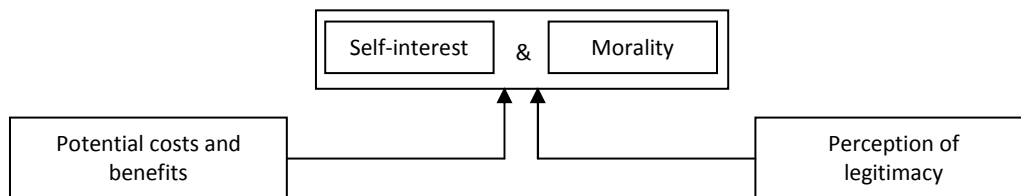


Figure 5: Factors of morality and self-interest; perception of legitimacy and potential costs and benefits.

The previous chapter discussed the significance of morality and self-interest for law compliance and concluded that these can be considered the most prominent factors of law compliance. These concepts are presented as the first dimension of the Compliance Framework. This chapter addresses the second dimension of the Framework as schematically represented in Figure 5.

In respect to the second dimension of the Compliance Framework, an attempt was made to synthesise the factors of morality and self-interest from a review of the factors of law compliance discussed by the conservational literature. This chapter starts with an outline of this synthesis. It further addresses the two concepts that were concluded to be the factors of morality and self-interest, i.e. potential costs and benefits and the perception of legitimacy, outlines their role for compliance with wildlife laws. For each factor a discussion is presented that contributes to the understanding of non-compliance in respect to wildlife conservation.

5.2. Factors of morality and self-interest

Table 1 presents an overview of conceptual frameworks of law compliance discussed by various conservation articles. Additional articles were consulted (Bodegom, 2008; Hayes, 2007) that could make a contribution for a synthesis of specific concepts that express factors of morality and self-interest and determine the second dimension of the Compliance Framework.

Table 1: Conceptual frameworks of compliance discussed in several scientific articles.

Sutinen & Kuperan (1999)	Deterrence	Enforcement
	Illegal gains	
	Moral obligation and social influence	Moral development and personal values
Keane <i>et al.</i> (2008)	Economic incentives	
	Morality, equity and justice	
Nielsen (2003)	Internal obligation	Moral/norms
		Legitimacy
	Industry structure	
	Control and enforcement	

In order to synthesise the factors of morality and self-interest, the discussion of instrumental theory as distinguished from normative considerations (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999) provides a useful starting point. It is generally acknowledged that instrumental or external factors of law compliance relate to illegal gains or economic incentives and to punitive measures. This relates, at least on basis of instrumental theory, to the immediate benefits and incurred costs through penalties. This implies, however, an important role of costs and benefits of certain activities. A first concept can thus relate to the potential costs and benefits.

As intrinsic or normative motivation for law compliance the role of morality was highlighted. Also generally acknowledged is the role that legitimacy plays for compliance behaviour (Tyler, 1990 in Hayes, 2007; Keane *et al.*, 2008; Nielsen, 2003; and Sutinen & Kuperan, 1999). The concept of legitimacy could thus be used to express the normative factors of morality and self-interest.

From a thorough analysis of issues relating to law compliance discussed by the consulted literature, it can be concluded that the following processes precede an individual's final decision that leads to either compliance behaviour or in participation in illegal activities:

1. weighing the individual potential benefits against the costs;
2. evaluating legitimacy of the governance processes; and
3. weighing the result(s) with internalised norms and values and evaluate whether the law is established to back-up morality and/or self-interest.

The significance of morality and self-interest for law compliance has been highlighted as the first dimension in the Compliance Framework and has been discussed in previous chapters. From the review of factors and issues relevant for law compliance as highlighted by a variety of scientific articles, the second dimension of the framework can be concluded to relate to the expected costs and benefits of certain activities and the perception of legitimacy.

It is important to note that factors of law compliance relate to individual costs and benefits and individual perceptions of legitimacy, even though external factors are also generally agreed to influence compliance behaviour (Keane *et al.*, 2003; Nielsen, 2003; Sutinen & Kuperan, 1999). The social setting was shown to influence perceptions of morality and aspects relating to personal interests. The perception of legitimacy is also to a certain extent dependent on the social structure. This also influences the capacities of the individual to benefit from certain activities and reduce the potential costs (Gibson *et al.*, 2005). It can also negatively influence potential costs or benefits. All issues relating to law compliance thus appear to be embedded in a specific social setting. Nonetheless, the decision to participate in illegal activities or to comply with a certain law remains an individual's decision.

It is also not the level of legitimacy *per se*, but moreover the perception of legitimacy that influences law compliance. The potential costs and benefits are also not absolute measures but pertain to individual perceptions and expectations. Individual expectations might not even be realistic. Costs and benefits are objectively perceived and influenced by aspects such as knowledge and education through which individual varieties exist. For instance, the perception of the probability of getting caught can be influenced by the information that is being provided and the experiences of others with authorities (Sutinen & Kuperan, 1999). The costs can also be differently perceived as a result of wealth varieties. Poor people cannot as easily afford to pay a fine as rich people can and costs are hence perceived to be relatively much higher. Furthermore, skills and experience determine the level of confidence which influences the perception of the potential benefits and costs of certain activities. Hence, it can be concluded that factors that influence morality and self-interest are:

1. the individual's perception of legitimacy; and
2. the potential costs and benefits for the individual.

5.3. Potential costs and benefits

Concluded above was that weighing the benefits against the costs is one of the main processes that shows to influence compliance behaviour. This section addresses the relevance of costs and benefits of both illegal as well as legal activities, and the relevance of tangible and intangible costs and benefits. This section thereby discusses issues affecting both the willingness to comply as well as the capacity to actually comply with wildlife laws. A discussion is further presented of the potential costs and benefits of wildlife related activities after illegalising certain practices, which seems to be the case for many wildlife laws that were enacted in the last decennia.

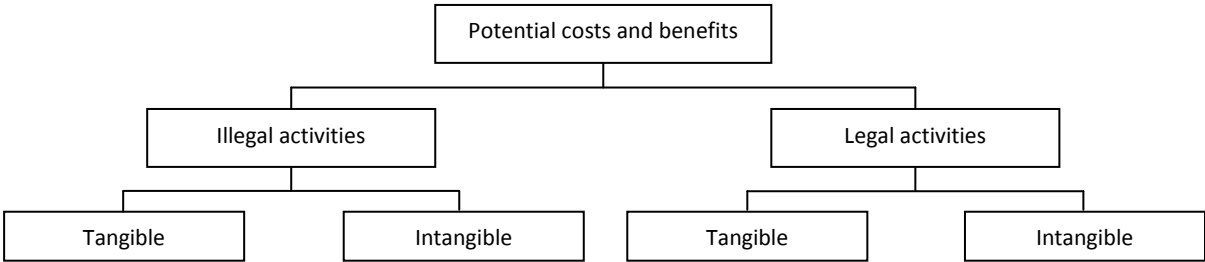


Figure 6: Schematic overview of concepts relating to the potential costs and benefits.

5.3.1. Tangible and intangible costs and benefits

Instrumental theory stated that non-compliance behaviour occurs when tangible benefits outweigh the costs. Compliance behaviour is, however, also influenced by intangible motivations (Sutinen & Kuperan, 1999; Kumar, 2002). Hence, costs and benefits cannot be expressed in terms of tangible consequences only. The costs and benefits therefore also relate to economic incentives in respect to law compliance and non-material costs and benefits, relating to e.g. moral incentives (Sutinen & Kuperan, 1999).

5.3.2. Illegal and legal activities

Both compliance behaviour as well as non-compliance behaviour might have specific costs and/or benefits. Therefore it is likely that people do not only evaluate illegal costs and its gains but also evaluate the costs of and benefits derived from legal activities for their decision to participate in or withhold from participating in illegal activities. The difference between the net benefits of non-compliance behaviour compared to the net benefits of compliance behaviour is therefore more likely to influence law compliance than simply the benefits and costs of illegal activities.

The consulted literature on this subject does not explicitly include the possibility to gain from legal activities as a factor of law compliance. Sutinen & Kuperan (1999) and Keane *et al.* (2008) only consider illegal gains as incentive for non-compliance behaviour. These studies, however, also use terms like ‘wealth enhancement’ (Sutinen & Kuperan, 1999) and ‘economic incentives’ (Keane *et al.*, 2008) and express the role of the industry structure for law compliance (Nielsen, 2003). These terms do imply an evaluation of both illegal as well as legal costs and gains. It can be argued, for example, that the gains from legal activities contribute to one’s wealth enhancement and it can therefore be an economic incentive for compliance behaviour, or when lacking legal gains it leads to non-compliance behaviour.

Therefore, the net balance of costs and benefits of illegal compared to legal activities provides either an incentive for compliance behaviour or non-compliance behaviour. It can be assumed that if the net benefits of conducting legal activities equal the net benefits of illegal activities people will be less inclined to participate

in non-compliant activities. In an ideal situation, in which the net benefits of legal activities outweigh the net benefits of illegal activities, there is no economic incentive for non-compliance behaviour. It is then in people's self-interest to comply with the law.

5.3.3. Potential costs and benefits of wildlife related activities

In Table 2 and 3 a list of potential intangible and tangible costs and benefits of illegal, respectively legal activities relating to wildlife are presented. Since many wildlife-related activities have become illegal over time that were once considered legal and are still often morally accepted by society, the examples that are presented here are viewed from the perspective of adapting former practices to livelihoods consisting of legal practices only. This applies to many wildlife related activities in developing countries since formerly legally accepted activities have gained an illegal status in the last decennia. Analysing the costs and balance from this perspective therefore appears to have potentials to contribute to gaining a better understanding of compliance behaviour in relation to wildlife conservation in developing countries.

Table 2: Examples of potential tangible and intangible costs and benefits of illegal wildlife-related activities.

Illegal activities			
Costs		Benefits	
Tangible	Intangible	Tangible	Intangible
operational costs	unsustainability	food supply	subsistence
loss of future potential gain	loss of values	products	medicinal values
loss of resources	loss of ecosystem functions	monetary gains	cultural values
negative sanctions			political values
			social status

Table 3: Examples of potential tangible and intangible costs and benefits of legal wildlife-related activities.

Legal activities			
Costs		Benefits	
Tangible	Intangible	Tangible	Intangible
operational costs	increased uncertainty	legal gains	aesthetic values
loss of income	loss of safety nets	wages	medicinal values
loss of career opportunities	loss of experience's value	ecological services	ecosystem functions
loss of job opportunities	increase of fear	potential future use	
loss of livestock	loss of freedom		
increase of human attacks	loss of rights		
loss of equipment's worth	loss of access to resources		
investments	bad working conditions		
interests of loans	health risks		
user fees			

Both legal and illegal gains can be expressed in direct gains such as food supply, monetary gain or wages, or indirectly as gaining status or expressed in obtaining specific values. Illegal gains are in general higher than legal gains due to the legal status and a rise of prices as a result. The term 'operational costs' refers to the 'costs of undertaking specific activities' (Nielsen, 2003). Both legal and illegal activities thus incur operational costs which depend on the activity itself. A different type of costs are 'opportunity costs', which can be explained as the loss of possibilities such as grazing cattle or time investments such as time spent on meetings (Kumar, 2002). Both legal and illegal activities might incur opportunity costs.

Conducting legal, environmentally friendly activities might require the adaptation of livelihood strategies and/or conducting alternative practices, using more environmentally friendly methods and/or techniques or by using alternative resources. Yet, these changes are likely to incur costs due to requirements of

new investments in terms of time-investment and capital. A variety of types of capital can be distinguished being natural, social, human, physical and financial capital (Fabricius & Collins, 2007). If financial capital is lacking, loans would be required for which interests have to be paid. Social capital is important for the building and the use of social networks that, as has been explained, influences an individual's capacity to benefit and reduce costs. Human capital also appears crucial for increasing benefits and reducing costs. Practical knowledge, for instance, can be considered a non-monetary incentive to conduct specific practices (Nielsen, 2003). Practical knowledge has an impact on compliance behaviour (Nielsen, 2003) as well as the acquired skills and specific experience with activities. Experience, skills and knowledge increases the capacity to benefit from and also to reduce the potentially incurred costs. Conducting compliance behaviour might therefore incur high costs if existing practices are criminalised and existing investments are lost.

Uncertainty can be considered a determining factor of withholding from participating in certain activities (Keane *et al.*, 2008). The level of certainty of gains and hence the perceived level of risks is of high influence to a person's individual decision making process. Activities for which experience is limited or absent and skills and knowledge have not yet been acquired will induce a higher level of uncertainty and hence more risks will be involved. The chance of enhancing wealth will be much more uncertain and costs will be higher due to the investments that are required to gain knowledge and develop necessary skills and experience. It therefore appears that for 'unknown' activities the costs are likely to be high and benefits might be fairly low.

Specific environmentally harmful activities are frequently merely used as safety nets in times of droughts and other environmental, political or economic stressful times. Losing legal opportunities for these safety nets increases costs in terms of either uncertainty and risks or due to actually imposed sanctions.

Adopting more environmentally friendly methods also requires considerable investments. For instance, to increase selectivity of hunt, specific technology might be required that reduces accidental catch of 'vulnerable non-target species' (Keane *et al.*, 2008). The purchase of new techniques, however, incurs costs in terms of investments and loss of equipment's worth. Previously used equipments might become more or less worthless. This equipment is likely to lose market value, whereas finances have to be spent on alternative equipment that might have relatively high market values, especially in cases of new developments. Skills also need to be acquired in order to use the alternative methods and/or techniques effectively.

The amount of job opportunities is another determining factor for potential benefits. If there are limited legal practices available or most legal positions have been filled, people have only little choice but to participate in illegal activities. It is likely that if there are sufficient legal practices from which local people can actually benefit without incurring extreme costs, it will become more interesting to participate in legal activities. Investing in practices for which only limited job opportunities are available will increase the risk of high costs and low benefits due to investments, uncertainty and inexperience. The same also applies to the number of job opportunities within specific practices. The total number of legal practices as well as the job opportunities within a specific practice thus influence the potential costs and benefits of the specific activities.

The costs for illegal activities, on the other hand, appear mostly limited to the consequences of unsustainable use and negative legal sanctions. Unsustainable use results in loss of future potential gain and will therefore not favour local resource users. Yet, unsustainable use and hence the depletion of resources can mostly not be considered the result of the actions of only one individual. The concept of sustainable use and loss of future potential gain might be taken into account as a cost of illegal activities, but if regulations are not set up to sufficiently protect the individual against unsustainable use by others, especially against over-extraction by outsiders, it will not be in the best interest of the individual to use the resource sustainably. Hence, the costs of illegal activities from an individual perspective is mostly limited to negative sanctions.

5.3.4. Discussion on costs and benefits of wildlife-related activities

In an ideal situation, in which benefits of legal activities are high and costs are low, people will be less inclined to participate in illegal activities. Legal gains can then suffice to provide a solid income. A law will be more easily perceived as backing morality and self-interest than in cases where the opposite is true. If realising benefits from legal activities is minimal or not practical, there will considerably be less incentives for participating in legal activities.

Marginalized people have particularly limited capacities to adapt livelihood strategies since they have limited capital to increase capacity to benefit from and reduce the costs of legal activities. Specifically marginalized groups of people are less likely to have capacity to incur the costs of any type of investment. People are likely resistant to change, especially due to the uncertainty of new practices. Therefore, it can be assumed that people prefer activities that are known to them and/or to society over newly adopted alternative practices and techniques.

As a consequence, some people, and thus specifically marginalized people, might not be able to carry the heavy costs of conducting legal activities and are hence charged with negative sanctions. Marginalized people are, however, not able to incur high sanctions either. Therefore they often have to settle for bad working conditions to legally obtain an income, such as low wages or health risks. The costs of conducting either legal or illegal activities have to be borne by those who formerly conducted the recently illegalised practices. Marginalized people therefore are extremely negatively influenced by the illegalisation of wildlife related practices.

People might be more easily inclined to invest in detection avoidance behaviour (Keane *et al.*, 2008) due to the relatively high costs of investments for legal activities over investing in detection avoiding techniques. This likely results in an increase of waste and reduces the use of killed specimen. Species might be disposed of and left to rot in an attempt to avoid sanctions (Keane *et al.*, 2008).

As thoroughly discussed, there is a limit to imposing negative legal sanctions, especially if laws are not backed by morality and people's self-interest. Imposing sanctions without sufficiently increasing the capacity to benefit from legal activities, can also be considered morally questionable. Negative social sanctions are also not likely imposed for activities that have long been socially accepted and are therefore perceived as the norm or to have specific values.

It can be concluded that without any additional effort taken to influence the balance between illegal and legal costs and benefits, the situation is likely to strongly disfavour compliance behaviour. In Table 4 a schematic overview of this conclusion is presented. In this table an increase is presented with +, a strong increase with ++, a decrease with - and a strong decrease with --. It has to be noted that Table 4 represents the costs and benefits of illegalised practices for which negative sanctions, both legal and social, are very limited and capital to increase capacities to benefit and reduce costs, have not yet or only limitedly been acquired. As can be concluded, potential legal benefits can be very low, whereas potential illegal benefits appear much higher. Table 4 shows that if no additional efforts are taken to influence the potential costs and benefits of legal activities, the balance of costs and benefits of illegal activities compared to legal activities outweighs those of legal activities.

Table 4: Possible relative value of the potential costs and benefits of illegal vs. legal activities when wildlife-related activities receive an illegal status.

	Illegal activities	Legal activities
Costs	+	++
Benefits	++	-
BALANCE (benefits-costs):	+1	-3

'-' indicates a slight decrease, '+' indicates a slight increase, '++' indicates a more significant increase.,

It appears that for the adoption of effective policies, a thorough consideration is required of the potential costs and benefits of legal compared to illegal activities. It appears that efforts are crucial to ensure the potential costs and benefits favour compliance behaviour instead of non-compliance behaviour. Sufficient alternatives therefore need to be accessible in order to increase potential benefits gained from legal activities.

It appears wise to adapt existing practices instead of completely substitute these activities. Complete substitutes for indigenous practices have higher costs than adapting and conducting research into already existing practices. Capital has already been invested and competencies acquired. By adapting existing practices, the investments and competencies remain at least partially valuable for livelihoods. Therefore, local livelihoods and circumstances should be at the centre of discussions of sustainability.

5.4. Perception of legitimacy

As discussed above, the perception of legitimacy is another main process of law compliance. It appears that there is a close link between the perception of legitimacy and the sense of moral obligation and self-interest. Nielsen (2003) argues that even though there is not a direct relation, there is a linear correlation between the perception of legitimacy and compliance behaviour.

Many aspects are being discussed throughout the conservation literature that relate to the perception of legitimacy. A thorough analysis of these aspects and the factors of legitimacy as mentioned by the literature, provided insight into issues relevant for the perception of legitimacy. In Figure 7 a schematic overview of these issues is presented. In this section, these aspects are further elaborated.

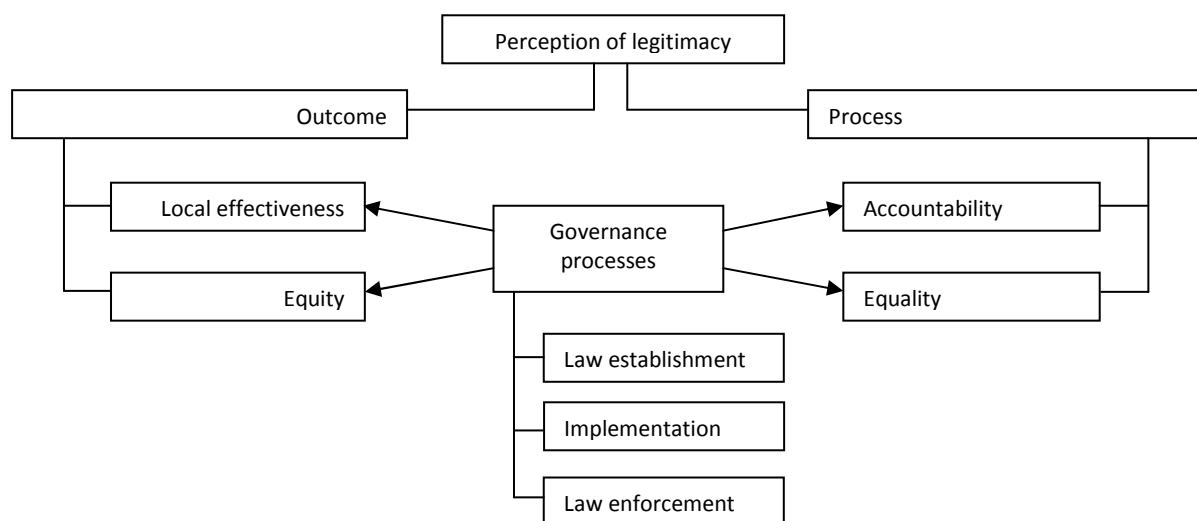


Figure 7: Schematic overview of the concepts relevant for the perception of legitimacy.

5.4.1. The concept of legitimacy

Process and outcome

Legitimacy can be defined as 'the acceptability or appropriateness of a ruler or political regime to its members' (Calhoun, 2002). Legitimacy is also being defined as 'a reservoir or stock of loyalty on which leaders can draw' (Sutinen & Kuperan, 1999). Nielsen (2003) adds that legitimacy gives leaders 'discretionary authority

or loyalty they require to govern effectively'. It thus appears that authorities and institutions require legitimacy as a basis for their capacities to govern a specific (part of) society.

It is generally agreed that both the regulatory process or procedure and the outcomes influence the perception of legitimacy of a specific governance system (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). Sutinen & Kuperan (1999) and Keane *et al.* (2008) both refer to the process, whereas Nielsen (2003) uses the term procedure to refer to the process and participation. Sutinen & Kuperan (1999) express the relevance of institutions and regulatory authorities for the concept of legitimacy, whereas Keane *et al.* (2008) stress the role of the rules themselves. Nielsen (2003), on the other hand, stresses the relevance of both the regulatory system and the rules for legitimacy.

Legitimacy appears to be related to the governance system. Since Bodegom *et al.* (2008) defines governance as 'the capacity to solve social problems and create social opportunities', the perception of legitimacy is, at least partly, related to the capacity to solve social problems and create societal opportunities. Nielsen (2003) further highlights the role of previous experiences with a specific authority and participation in the context of perceiving the governance system as legitimate.

Legitimacy and governance processes

Since a governance system is subject to perceptions of legitimacy it can be assumed that the several processes of governance as previously discussed play a role in the perception of legitimacy. Evaluating legitimacy of a governance system is therefore linked to the law establishing processes and the outcomes, the implementation processes and the outcomes, and the law enforcement processes and the outcome. Subsequently, both the law establishing authority, the implementing institutions as well as law enforcement authorities are subject to perceptions of legitimacy. Besides the outcome, the methods and procedures they use to establish, implement and enforce the laws are all subject to perceptions of legitimacy.

5.4.2. Factors of legitimacy: local effectiveness, accountability, equality and equity

In Table 5 an overview is provided of the issues that the consulted literature consider to be some core issues of legitimacy or principles of governance.

Table 5: Issues relevant for perception of legitimacy.

LEGITIMACY
<ul style="list-style-type: none"> • Participation (Bodegom <i>et al.</i>, 2008; Nielsen, 2003) • Fairness (Bodegom <i>et al.</i>, 2008; Keane <i>et al.</i>, 2008; Sutinen & Kuperan, 1999) • Decency (Bodegom <i>et al.</i>, 2008) • Accountability (Bodegom <i>et al.</i>, 2008; Nielsen, 2003) • Transparency or openness (Bodegom <i>et al.</i>, 2008; Nielsen, 2003) • Efficiency (Bodegom <i>et al.</i>, 2008; Keane <i>et al.</i>, 2008; Sutinen & Kuperan, 1999) • Effectiveness (Keane <i>et al.</i>, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999) • Complementarities (Nielsen, 2003) • Coherence (Nielsen, 2003) • Justice of outcome (Keane <i>et al.</i>, 2008) • Distributional justice or fairness (Nielsen, 2003; Sutinen & Kuperan, 1999) • Procedural justice (Sutinen & Kuperan, 1999)

Nielsen (2003) thoroughly discusses compliance and legitimacy in fisheries management but his findings can be considered to be applicable to wildlife conservation in general. The findings of Sutinen & Kuperan (1999) are also mostly based on fisheries but are also discussed in light of wildlife conservation in general. Keane *et al.* (2008) on the other hand, applies his theories to nature conservation and more specifically elephant conservation. Even though Bodegom *et al.* (2008) do not explicitly explain the concept of legitimacy, they do make some interesting points that can contribute to the understanding of the perception of legitimacy of governance systems. They adopted six principles of governance from the Universal Declaration of Human Rights, 1948. They argue these principles to be ‘widely accepted by researchers and governance stakeholders in developing and transitional societies around the world’.

Since there is an overlap of the elements discussed by the literature in respect to legitimacy, it was analysed what core concepts could synthesise the factors of legitimacy addressed by the conservational literature. This analysis concluded that the following four factors can be distinguished to be central for the perception of legitimacy:

- local effectiveness;
- accountability;
- equity; and
- equality.

In Table 6 the factors of legitimacy mentioned by the consulted literature are presented as categorised by these four factors of legitimacy.

Table 6: Synthesis of factors of legitimacy.

<p style="text-align: center;">LOCAL EFFECTIVENESS</p> <ul style="list-style-type: none"> • Effectiveness • Complementarities • Coherence 	<p style="text-align: center;">EQUITY</p> <ul style="list-style-type: none"> • Fairness or justice • Distributional effects • Spatial and temporal distribution costs and benefits (Keane <i>et al.</i>, 2008)
<p style="text-align: center;">ACCOUNTABILITY</p> <ul style="list-style-type: none"> • Accountability • Efficiency • Capacity of authority to solve problems within a specific time-frame (Sutinen & Kuperan, 1999) • Authority’s ability to provide favorable outcomes (Sutinen & Kuperan, 1999?) • Institution’s capacity to coordinate various interests and reduce transaction costs (Nielsen, 2003) 	<p style="text-align: center;">EQUALITY</p> <ul style="list-style-type: none"> • Participation • Procedural justice or fairness • Transparency • Decency • Justice and moral enforcement (Sutinen & Kuperan, 1999) • Representation of people’s interests (Sutinen & Kuperan, 1999; Nielsen, 2003) • Power relations (Sutinen & Kuperan, 1999) • Methods used for implementation and enforcement (Nielsen, 2003) • Transparency of activities (Nielsen, 2003) • Adherence to the principles of the rule of law (Bodegom <i>et al.</i>, 2008)

It could be discussed which of these factors should be considered to be the most determining factor for an individual’s perception of legitimacy. However, no general evaluation criteria seem to exist (Keane *et al.*,

2008; Nielsen, 2003) and a concluding statement can therefore not be made about what factor of legitimacy can be considered more important for an individual's perception of legitimacy. It can be assumed that, again, perceptions of legitimacy are subject to spatial, inter-temporal and individual varieties. Judgements of fairness are for instance case specific and changes of perceptions over time occur due to alterations of relationships between several actors and as a result of altering social values (Nielsen, 2003).

Local effectiveness

Effectiveness refers to 'the extent of realisation and an individual is made better off' (Sutinen & Kuperan, 1999). The effectiveness of the outcome is also concerned with both 'complementarities' and 'coherence' (Nielsen, 2003). Complementarities refer to the link between regulations and practice, whereas coherence refers to the link between the objectives and the regulations as well as the contradictions between regulations.

It can be argued that it is only in the self-interest of local users if laws, implementation and enforcement are both accurate, site-specific and adaptable to local changes. Bodegom *et al.* (2008) stress that for legitimacy the effectiveness on the actor level is crucial. For instance, what counts as sustainable use in one place does not have to apply for other places. It can be assumed that for local users of natural resources, especially in developing countries, the effectiveness at the local level plays a prominent role for the perception of legitimacy, whereas the effectiveness of the governance system at the global level appears to be of less influence for local concerns. Hence, it appears that both the laws, their implementation as well as their enforcement should be locally effective.

As was shown by the discussion on social principles of law and law compliance, the establishment of both restrictions and rights, and imposing both negative and positive sanctions play a role for law compliance. Therefore, the concept of effectiveness has to be translated into locally effective restrictions and rights, and positive and negative sanctions.

Accountability

Accountability can be defined as 'the extent to which political actors are responsible to society for what they say or do' (Bodegom *et al.*, 2008). The law establishing authority, the implementing institutions and the enforcement authorities are subject to public opinions of accountability. As stressed by Nielsen (2003) the experiences with these authorities play a crucial role for the perception of accountability. It has to be noted that it is not the concept of accountability *per se* but rather the perception of accountability that influences the perception of legitimacy.

Generally agreed is the high influence of efficiency on the perception of legitimacy (Bodegom, 2008; Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). Efficiency can be described as 'the extent to which limited human and financial resources are applied without unnecessary waste, delay or corruption' (Bodegom *et al.*, 2008). In light of efficiency, Sutinen & Kuperan (1999) discuss the role of 'the speed and efficiency with which people perceive the authority responding to problems within the scope of the authority's jurisdictions'. Furthermore, accountability relates to the capacity of authorities to 'solve problems within a specific time-frame' (Sutinen & Kuperan, 1999) and the authority's or institution's ability to 'reduce transaction costs' (Nielsen, 2003).

Furthermore, authorities are considered responsible for its citizens and to rule in favour of their citizens' interests. Accountability also relates to the 'institution's capacity to coordinate various interests' (Nielsen, 2003) and ensuring 'favourable outcomes' (Sutinen & Kuperan, 1999). Authorities' and institutions' credibility can play a crucial role. Since corruption reduces efficiency and 'undermines good governance' (Bodegom *et al.*, 2008), corruption negatively influences the perception of legitimacy. Furthermore, in light of accountability it is even shown that it is crucial that monitors 'who actively audit bio-physical conditions and

user behaviour, are at least partially accountable to the users and/or are the users themselves' (Bodegom *et al.*, 2008).

It can thus be concluded that for accountability the integration of people's interests in the governance processes, and the efficiency and the experience with the authority determine the level with which they are perceived accountable. The accorded accountability is crucial for e.g. re-election. Bodegom *et al.* (2008) distinguish six parameters important for 'social accountability', being:

1. incentive structure: punishment or reward based approach;
2. accountability for what: rule following or performance oriented;
3. level of institutionalisation: from independent external initiatives to institutionalised participation of outside groups;
4. depth of involvement: consultative to closer interaction from the planning stages; and
5. inclusiveness of participation: including only the 'well behaved' groups to extensive consultations with a variety of actors, including marginalized groups.

To what extent an individual values authority's accountability for the perception of legitimacy, again, there are spatially, temporarily and individually varieties. Local perceptions of who is held accountable is local specific (Bodegom *et al.*, 2008).

Equity

Several authors stress the importance of equity in the context of legitimacy and law compliance (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). Equity can be defined as 'the quality of being fair and impartial' (Soanes & Stevenson, 2005) and is mostly used to express the balance between inputs and outcomes. Equity refers to the distributive effects (Nielsen, 2003) or the distributive justice, which can be explained as 'perceived fairness of how the benefits or sacrifices are shared among the parties' (Sutinen & Kuperan, 1999). In conclusion, the term equity can be used to express the balance of how costs and benefits are shared among actors of society.

It is generally agreed that the balance of costs and benefits play a crucial role for law compliance (Lindsey *et al.*, 2006; Kumar, 2002; Thoms, 2008). The previous chapter discussed the relevance of individual costs and benefits for law compliance. The relative costs and benefits play a crucial role for the perception of legitimacy and ultimately for compliance behaviour. The individual costs and benefits are compared to those of others. If an individual has to bear a disproportionate part of the costs, especially compared to peers or members of the same community, the individual is less likely to perceive the governance system as legitimate.

Evaluating the balance of costs and benefits can therefore be considered in terms of at least three different dimensions of comparison. Firstly, an individual might compare his own individual benefits with his costs. This relates to the expected individual costs and benefits as discussed in the previous section. Secondly, the individual can compare his own balance between costs and benefits with people of his peer group. A peer group is 'a set of individuals who, sharing certain common characteristics such as age, ethnicity, or occupation, perceive themselves and are recognized by others as a distinct social collectivity' (Scott & Marshall, 2009). Thirdly, the balance of costs and benefits can also refer to the comparison with other members of the community or comparison within the larger community, either pertaining to the state level or global. It can be argued that for the perception of the outcome as justified, some or all of these evaluation processes are important. Keane *et al.* (2008) further stresses the importance of both the spatial as well as the temporal distributions of the outcome of the governance system for the perception of legitimacy.

Equality

Equality can be defined as the 'state of being equal, especially in status, right or opportunities' (Soanes & Stevenson, 2005) and can be considered to refer to 'an equal status under law and hence equal subjection to law and sanctions' (UNDP in Saunier & Meganck). Where equity refers to the outcome or result from specific processes, equality can be used to refer to the processes achieving a sufficient level of equity within a specific society. Equality thus differs from equity in that it refers to procedures rather than to the outcomes. Sutinen & Kuperan (1999) distinguish procedural equity from outcome equity. Keane *et al.* (2008) subsequently translate the distinction into 'fairness of the process' and 'justice of the outcome'. Where equity can refer to the proportionate circumstances, equality can refer to the regulatory processes leading to a level of equity.

Equality can be expressed by several concepts that are mentioned by the consulted literature such as 'participation', 'the procedural justice', 'transparency' and 'decency' (Bodegom *et al.*, 2008; Keane *et al.*, 2008; Sutinen & Kuperan, 1999). The term 'procedural justice' can refer to 'fairness' which in this context can be explained as 'the degree to which rules apply equally to everyone in society' (Bodegom *et al.*, 2008). It is also explained as 'how fairly the authority treats people and the concerns of those affected by the process' (Sutinen & Kuperan, 1999). The transparency of activities has also been mentioned as relating to equality (Keane *et al.*, 2008) which can be defined as 'the degree of clarity and openness with which decisions are made' (Bodegom *et al.*, 2008). Equality also relates to 'decency' which can be explained as 'the degree to which the information and stewardship of the rules is undertaken without humiliating or harming people' (Bodegom *et al.*, 2008). 'Justice and moral enforcement' and 'power relations' can also be argued to relate to equality. Last but not least, the adherence to the principles of law can also be considered part of the concept of equality (Bodegom *et al.*, 2008).

Several aspects can be concluded to play a role for equality which include at least (from Bodegom *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999):

- the level of participation and representation of interests; and
- the methods used for establishment, implementation and enforcement.

Participation is related to 'the degree of involvement by the affected stakeholders' (Bodegom *et al.*, 2008). It appears that the more directly involved people are in the establishment, implementation and enforcement, the more the governance system is perceived as legitimate. Issues relating to participation are representation and organization (Nielsen, 2003). In this light, the role of how participation is organized, who is represented and how representation is taking place, either directly or indirectly, is highlighted.

Furthermore, all methods used throughout the governance processes are likely subject to perceptions of legitimacy. Hence, all methods used for law establishing, implementation and enforcement likely influence the perception of legitimacy. Enforcement methods subject to opinions of legitimacy is very likely to include methods used to apprehend violators, to investigate and a fair trial. Graduated sanctioning is also more likely perceived as legitimate than predetermined sanctions (Keane *et al.*, 2008; Sutinen & Kuperan, 1999).

In conclusion, equality appears to be a crucial factor of the perception of legitimacy for which participation and representation of interest and the methods used for law establishment, implementation and enforcement, play a considerable role. A higher level of equity can be realised. Furthermore, it appears that the level of equality also influences the perception of accountability and the effectiveness. Through a higher level of participation of local people and thoroughly taking into account local interests is likely to result in more effective rules, and their implementation and enforcement. In many cases there might also be a link between the level of equality and the perception of accountability.

5.4.3. Discussion on relevance of governance systems in respect to legitimacy

As discussed above, legitimacy relates to the processes of governance. Gaining insight into the perception of legitimacy in respect to distinct types of governance systems could contribute to the analysis of approaches towards effectiveness of laws. Here a discussion is presented of two distinct types of governance and their relevance in respect to perceptions of legitimacy.

It is generally agreed that a distinction can be made between a centralised governance system and a local governance system (Agrawal, 2001; Bodegom *et al.*, 2008; Dietz *et al.*, 2003). More specifically, a distinction can be made between 'command and control' and 'alternative compliance' as types of environmental regulation (Park, 2007). Command and control can be defined as 'an approach to environmental regulation that relies on the ability of the state to regulate the behaviour of individuals, companies, and other groups by setting and imposing controls'. Control is 'usually exercised through legislation and the introduction of regulations that require specific action, and setting targets and defining how to meet them'. Alternative compliance can be defined as a type of environmental regulation that is 'based on setting targets but allowing those responsible to choose amongst a variety of different methods for achieving them'. The term 'alternative compliance' is mostly used for pollution control but has potential to be used in a broader sense. Whereas command and control refers to a centralised approach, alternative compliance can refer to a local governance approach.

A local governance approach can then be referred to as a layering of institutional arrangements, or a hierarchy of governance structures encompassing international, national and local legal frameworks (Agrawal, 2001; Bodegom *et al.*, 2008; Dietz *et al.*, 2003). In this local governance approach, lower level governance structures are granted powers from a higher level governance structure. Higher level governance structures are then required to set standards for lower level structures and create local capacity for decision making (Agrawal, 2001), implementation and enforcement. Higher level structures can set specific standards, determine requirements such as maintaining records and can provide guidelines of possible ways to achieve the stated goals. Higher level structures then define the limits of local autonomy and make sure that local governance remains within national or international limits. Lower level governance structures establish, implement and enforce regulations that are effective at the lower level governance scale. Higher level government officials are then expected to monitor lower level governments.

The concepts of decentralisation and local governance have gained thorough attention in the conservational literature and is widely recognised as an effective tool for conservation (Agrawal, 2001; Bodegom *et al.*, 2008; Dietz *et al.*, 2003; Hayes, 2007). In light of legitimacy, local governance systems can provide a significantly higher level of perceived legitimacy than the centralised approach (Agrawal, 2001; Dietz *et al.*, 2003; Nielsen, 2003; Hayes, 2007; Sutinen & Kuperan, 1999). Local governance is likely better suited to represent local interests and establish active participation. It will therefore be easier to realise equity and effective governance. Local governance structures are also more likely held accountable especially if they are represented by locally respected individuals. A centralised governance system is not likely perceived as legitimate and will therefore be ineffective and costly (Sutinen & Kuperan, 1999).

Furthermore, local enforcement can be expected to be better perceived as legitimate than external enforcement (Agrawal, 2001; Gibson *et al.*, 2005; Johnstone & Bishop, 2007). As discussed, local enforcement can be considerably more effective than external enforcement. Local enforcers will also be more easily perceived as accountable whereas the accountability of external enforcers can be considerably lower. Local enforcement is also less vulnerable to corruption and therefore has a higher chance of realising equity and equality than external enforcement.

Hence, through local governance it is more likely that the established rules, their implementation and enforcement will be actually effective at a local scale, that authorities are held accountable and a higher level of equality and equity can be realised. It can thus be concluded that a local governance approach is better suited to achieve a desirable level of law compliance than a centralised approach.

5.5. Conclusion

The main factors impacting on morality and self-interest are the potential costs and benefits and the perception of legitimacy. Concerning potential costs and benefits it is crucial to consider benefits and costs of conducting legal activities instead of merely considering both illegal gains and costs incurred through penalties. An individual compares the potential costs and benefits of illegal activities with the potential net benefits of legal activities. Also, besides tangible costs and benefits, non-material incentives play a role for law compliance.

For understanding compliance behaviour in relation to wildlife conservation, it has to be taken into account that conducting compliance behaviour can incur high costs and may provide limited benefits. Especially after illegalising certain practices with the enactment of a new law, livelihood strategies often have to be adapted. Investments are then required since newly adopted activities often require new capital such as other venues, new equipment or additional social contacts. Experience, on the other hand, might be limited and capacity to benefit and reduce costs of such activities might be highly constrained. Hence, costs of legal activities might be substantial, whereas benefits are possibly very limited. Particularly marginalized people often lack the capital to properly adapt livelihood strategies and are not able to incur the costs that correspond with such adaptations.

The benefits of illegalised practices, on the other hand, often increase significantly due to the rise in prices as a result of the illegal status. Due to the limits of punitive mechanisms, costs cannot simply be indefinitely raised. Hence, illegalising practices can result in a considerable increase of benefits of illegal activities, whereas costs increase only slightly if they increase at all.

In conclusion, for illegalised practices net benefits of illegal activities often considerably outweigh net benefits of legal activities. Therefore, the potential costs and benefits of legal as compared to illegal activities often favours non-compliance behaviour. Especially for marginalized people conducting illegal activities would be significantly more beneficial and are therefore likely inclined to invest in detection avoidance behaviour rather than in conducting legal activities.

The perception of legitimacy correlates with compliance behaviour. The processes of both law establishment, implementation and enforcement processes are subject to perceptions of legitimacy. A variety of factors are concluded to influence this perception. The equity and effectiveness of the outcome and equality and accountability in relation to the process, play crucial roles. The balance of how costs and benefits are shared among actors of society, relating to equity, is often mentioned to influence compliance behaviour. This can be achieved through increasing the local participation and representation of people's interests in governance processes. The accountability of governance authorities also influences the perception of legitimacy. Furthermore, in respect to effectiveness the relevance of the effectiveness at a local scale needs to be highlighted.

Two main types of governance can be distinguished, i.e. a local governance approach, and a centralised approach. A local governance approach will be more easily perceived as legitimate. In a centralised approach restrictions are based on external actors, whereas a local governance approach relates to a layering of institutional arrangements in which higher level governance structures set limits to and monitor lower level governance structures. Within such a local governance approach, establishing locally effective rules is easier, a higher level of equality and equity can be achieved and there is a higher chance of local authorities to be accountable to local communities. Due the relation between legitimacy and law compliance, within a local governance approach, a higher level of law compliance can be achieved as compared to a centralised approach. These conclusions highlight the role of representing local people's interests and rights. The local issue is elaborated in the next chapter.

6: Role of rights

6.1. Introduction

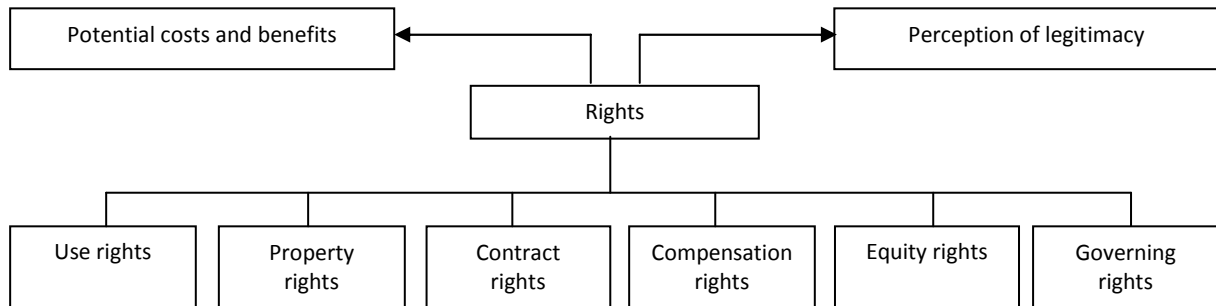


Figure 8: Schematic overview of the relation between rights and the potential costs and benefits and perception of legitimacy.

Previous chapters discussed the first two dimensions of the Compliance Framework. This chapter addresses the third dimension of the Framework, relating to the role of rights. Chapter 4 showed the significance of morality and self-interest for law compliance. Chapter 5 discussed the two factors of morality and self-interest, i.e. the potential costs and benefits and the perception of legitimacy. This chapter discusses the impact of rights on these two factors. Figure 8 presents a schematic overview of the relation between specific rights and the two factors of morality and self-interest.

The social principles of law, as described in chapter 3, showed the relevance of both restrictions and rights to achieve a set of objectives of law, i.e.; - to compel specific behaviour; - to provide people with facilities to make their own arrangements; - to settle disputes; and - to determine the system of governance. Compelling specific behaviour can mostly be realised through setting restrictions. Achieving the other three objectives requires the establishment of effective rights.

An analysis of the effects of specific rights on compliance with wildlife laws can contribute to the understanding of compliance and non-compliance behaviour in relation to wildlife conservation. Specifically what rights should be integrated in legal frameworks in order to achieve law compliance with wildlife laws requires careful consideration. In section 3.2. a set of core laws were discussed that are central to most legal systems. These laws have potentials to provide a legal basis for specific set of legal rights. These are represented in Figure 9, and further discussed in the next sections.

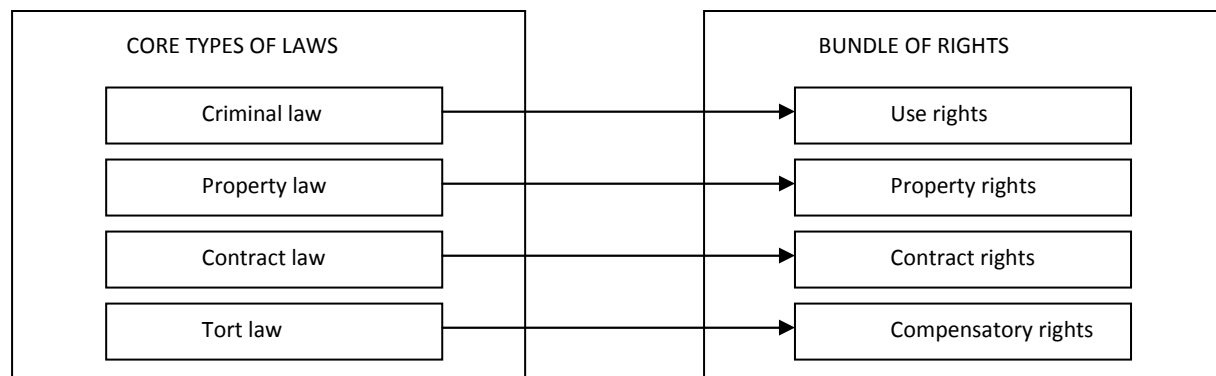




Figure 9: Core types of laws that provide a legal basis for a bundle of rights in the context of wildlife conservation.

6.2. Use rights

Since wildlife resources make up essential natural capital to sustain in livelihoods people require rights to use such resources. Native people can even be granted ‘ancestral rights to land and its resources’ (Hayes, 2007). It can thus be considered morally right for native people to use the wildlife species that inhabit their lands. In cases where wildlife resources are part of a livelihood strategies, and in particular where they are, at least partly, used to sustain in a basic income, the right to use such resources is crucial.

The concept of sustainability is characterised by the capacities to use the resource by future generations but also includes the notion of present use. This implies that besides restricting use for future use of wildlife resources, people of present generations should have the right to use the resources presently. Limitations to present use contributes to future security of local livelihoods since it provides future use opportunities. Legislative mechanisms are required to properly regulate use in such a way that it provides capacity for current use as well as ensures sustainable use of the wildlife resources for future use.

Criminal law has the potential to properly regulate use since it can determine legal use margins and determine what harvest rates are considered to be violations. It can also determine what technologies or methods are allowed and which ones are not. Criminal law can be used to set specific use margins within which sustainable use can be realised. It ensures that the extraction of wildlife resources remains within certain limits, and provides the guarantee of species survival for future generations and the guarantee of continuous use for present generations. Besides restricting certain behaviours criminal law provides capacity for legal use.

In chapter 3 it was shown that criminal law defines crimes, lays down rules of procedure for dealing with them and establishes penalties for those convicted (Honoré, 1995). In respect to wildlife conservation, criminal law then has capacities to set margins of use, and define to what extent and in what way a wildlife resource should and could be used sustainably. It could determine what harvesting rates, activities, methods and/or techniques are considered to be illegal and if there are any specific periods that require more protection, such as specific seasons. Criminal law can also determine what is formally set to be the sanction for violating wildlife laws and to ensure proper processes for punishment of violators. It can set prerequisites such as requiring proper investigations, the necessity of proof and graduated sanctions.

Criminal law can give people who are interested in long-term use the right to do so. Criminal law can contribute to people’s security of future use due to the restrictions of use by others. Reasons for people for unsustainable use of wildlife resources can be over-harvesting by others (Keane *et al.*, 2008; Nielsen, 2003; Sutinen & Kuperan, 1999). Criminal law therefore ensures that people who are less interested in long-term use can be restricted in their use.

Granting people sufficient use rights over wildlife resources can provide people with more capacities to conduct legal activities. By granting such rights, benefits can be derived from legal activities in respect to wildlife which enhances incentives to comply due to the aspect of potential future use.

The capacity of a wildlife resource to be used sustainably is dependent on several factors, such as wildlife population numbers, human population numbers, human demands and wealth, and technology. Hence, effectiveness of use rights can be increased if they are adapted to local site specific circumstances. Regionally a species can go extinct whereas the same species might be abundant in some other areas. Also, specific circumstances can make a species vulnerable for climatic changes whereas in other places these circumstances might even be advantageous for the species. It is hence not realistic to decide on locally effective use rights at the international or regional level, and perhaps not even on a state level.

Through the adoption of use rights that are adapted to local circumstances the governance system is generally more easily perceived as legitimate. Not only are laws locally more effective, a higher level of equity can be realised due to the relative high costs of restrictions of use for resource dependent people. The needs of local people are better represented in policy outcomes and a higher level of equality is the result. Furthermore, since the authorities provide more favourable outcomes for the local people, they are more easily perceived as accountable to them.

To ensure locally effective use rights, it is crucial that the standards on sustainable use that are set by criminal law are very accurate and are adapted to local specific circumstances. Local effectiveness and adaptability has to be thoroughly considered and proper research needs to be conducted into what is locally sustainable use. Proper research hence plays an essential role and has to entail how a resource can be most efficiently used. It should be determined what the possible harvest rates are for which sustainability on the local level can be realised. Use rights and proper restrictions, the implementation and the imposed sanctions need to be adaptable to local specific changes in order to ensure they remain locally effective over time and that local interests stay successfully integrated. Therefore dynamic site-specific rules are crucial to achieve sustainable use of wildlife resources over time.

6.3. Property rights

Property rights (PR) gained thorough attention throughout the conservational literature and have been widely accepted to be a crucial concept for nature conservation (Bodegom *et al.*, 2008; Gibson *et al.*, 2005; Hayes, 2007; Johnstone & Bishop, 2007). A large body of information is therefore available that stress the need for PR, which are required specifically to demarcate or to clearly define boundaries. Well-defined boundaries influence the certainty over benefits and the expected costs, and reduces uncertainty (Gibson *et al.*, 2005).

It is crucial to acknowledge that PR are not limited to individual rights but also entails group's rights over property (Johnstone & Bishop, 2007). Common property can be defined as 'rights vested in a defined group that has private rights over the resources'. The term property regime is mentioned in contrast to state property regimes.

Local people are often dependent on local wildlife resources. Consequently, they are frequently interested in sustainable use to safeguard future security of their livelihoods (Gibson *et al.*, 2005; Tang & Tang, 2001). 'Outsiders', who can be considered to be 'endemic in their exploitation and use' (Johnstone & Bishop, 2007), are, on the other hand, generally less interested in long-term use of these resources and are therefore more easily inclined to over-harvest the resources (Tang & Tang, 2001).

To safeguard local wildlife populations and future use, local users frequently developed specific use strategies (Dietz *et al.*, 2003; Gibson *et al.*, 2005; Lindsey *et al.*, 2006; Robbins *et al.*, 2006; Tang & Tang, 2001). For example, in Shan-Mei, Thailand, the indigenous community developed methods such as harvesting only fully grown fish and sparing the younger fish, compensatory mechanisms such as leaving yam, and bans during 'dry or spawning seasons' (Tang & Tang, 2001). These people showed fully capable of 'self-regulation'. Another example of mechanisms, developed by indigenous communities to ensure sustainable use, is restricting the lion

hunt to male adults (Lindsey *et al.*, 2006). Dietz *et al.* (2003) discusses a 'community's allowance of every local household to graze cattle in the community forest even when these rules might contradict national law'.

Outsiders frequently showed disrespectful of these locally effective mechanisms, and without legal rights to enforce local rules, these rules do not apply to outsiders (Tang & Tang, 2001). Outside use often jeopardised the applications of such locally effective mechanisms. Outside use reduces local people's potentials to derive direct benefits from resources due to a decline of population numbers. Outside use can therefore result in a reduction of incentives for sustainable use (Sutinen & Kuperan, 1999). The case of Shan-Mei, Thailand, showed that the major cause for unsustainable use was indeed the intrusion by outsiders (Tang & Tang, 2001). Causes of unsustainable use can thus often be attributed to outside use.

Inadequate legislation to provide local people with benefits from local wildlife resources can result in an inequitable balance of costs and benefits of wildlife conservation (Gibson *et al.*, 2005; Lindsey *et al.*, 2006). Resource dependent people bear disproportionate costs of both unsustainable use as well as for closing access to wildlife resources. Since the extraction of wildlife resources often is a norm within a local community structure, the local community is likely highly adapted to these activities and have to bear the costs of change, whereas outsiders are less dependent on occupations relating to local specific resources. Closing and restricting access to local resources therefore incurs higher costs for local people than for outsiders.

Since the costs for resource dependent people appear higher than the costs for outsiders, it can be argued that resource dependent people should be able to derive more benefits from local wildlife resources than outsiders. Yet, research showed that outsiders often derive more benefits from resource use than local people do (Holmes-Watts & Watts, 2008; Johnstone & Bishop, 2007; Tang & Tang, 2001). For example Holmes-Watts & Watts (2008) argue that in Tsitikamma, S-Africa, 'non-native businesspersons derive more benefits from the surrounding indigenous forests than the native people'. It appears that without sufficient legal means to ensure local people benefit, outsiders often have more legal capacity to derive benefits from resource use than local communities.

Only providing local people with a right to use and close access to outsiders frequently showed not to be accepted by outsiders, especially without awareness of local people's reasons to control the access (Tang & Tang, 2001). In Li-Chia, Taiwan, for instance, outsiders perceived the enclosing of public lands as incentives for personal gains. Also, perceiving rights as legitimate is required by both indigenous as well as non-indigenous people (Hayes, 2007). Compliance behaviour by outsiders is also less likely if rules are not perceived legitimate by these outsiders. They should thus be allowed to use the resources to a certain extent but such that local people can somehow benefit from their use.

Since local people often showed capable of effectively regulating the use of wildlife resources, legal mechanisms that provide legal capacity for the application of these mechanisms, could significantly contribute to achieving conservation. These legal means can grant local people rights to benefit from indigenous wildlife resources in order to sustain in livelihoods. The mechanisms could additionally include a notion of outsider's use rights.

Providing local communities with PR over wildlife resources that ensure local people benefit either directly from the use of wildlife resources or indirectly from use by outsiders thus seem crucial for successful wildlife conservation. This relates, for instance, to benefit sharing mechanisms that can ensure local people are beneficiaries of park-revenues, license fees, national park entrance fees and revenues from hunting licenses (Tang & Tang, 2001) which reduces their resource dependency.

To ensure local people who are dependent on their wildlife resources do not have to bear disproportionate costs for either conservation or unsustainable use, legal methods are required that provide these people with the PR over wildlife resources. Hayes (2007), for instance, stresses the need for translating the property rights into laws in order to be effective. Legal mechanisms that could ensure local people benefit from local wildlife resources can be translated into PR by property law.

Property law was defined as 'law that lays down who owns what and gives exclusive rights to the owners of the thing owned' (Honoré, 1995). It was stated to give clarification over:

1. what is considered to be property, which in this case refers to (ancestral) rights over wildlife resources and determines for instance who has a right to harvest the resource;
2. 'what justifies giving a particular person an exclusive right to a particular thing' referring here to local community rights over wildlife resources, in particular wildlife resource dependent people; and
3. how the protection of property rights is being arranged, referring to means that settle disputes over arrangements under property rights.

Property rights can determine implementing requirements and can include rules relating to access, withdrawal, management, exclusion and alienation or exchange rights (Hayes, 2007; Johnstone & Bishop, 2007). Alienate refers to the right to sell or lease rights. Besides granting use rights to a 'property owner', PR can ensure that the 'owner(s)' can be held legally responsible (Honoré, 1995). Hence, property law can grant and limit authority over wildlife resources encompassing both specific obligations and rights.

Concluding, providing people with PR over wildlife resources can increase people's certainty of deriving benefits from wildlife related activities and/or ensure a more equitable distribution of the costs and benefits of wildlife conservation in general. PR can also ensure proper regulation of resource use and therefore increase capacity for long term resource use and benefits. PR supplement use rights in ensuring a higher extent of benefits for resource dependent people who have to bear the costs of either unsustainable use or conservation, while in the meantime providing, even though limited, rights to outsiders. PR grant the right to regulate use through locally sustainable use strategies and prevent outsiders from over-harvesting wildlife resources. PR could ensure that outsiders do gain access to the resources but local people additionally derive benefits from their use and therefore do not have to bear the costs of outside use. Through PR specific groups of people, who are highly dependent on wildlife resources to sustain in their livelihoods, can gain the right to derive sufficient benefits from wildlife resources and regulate use in order to secure future use.

Hence, PR can significantly contribute to enhancing compliance behaviour since it affects an individual's capacity to benefit and enhances capacity for a more equitable sharing of the costs and benefits of conservation. PR influence the capacity to benefit from legal activities and thus effects law compliance through the influence on the potential costs and benefits derived from legal activities as compared to illegal activities. It also affects law compliance through its influence on perceptions of legitimacy since it can result in a more equitable balance of costs and benefits of wildlife conservation in general.

The extent to which an individual is dependent on a resource could determine the degree of property rights that should be granted. However, defining resource dependency requires careful consideration. Even though it is not easy to define PR over wildlife resources, especially in cases of wide-range migratory species (Hayes, 2007), legal mechanisms are required to ensure people who are dependent of these resources do not have to bear the costs of unsustainability and conservation. It can be argued that one is dependent on a wildlife resource if livelihood is at least partly made up of activities related to that wildlife resource. Therefore, PR often refer to the notion of community instead of resource-dependent people.

6.4. Contract rights

The potential costs and benefits showed to be highly affected by the access to capital. Access to capital showed to influence people's capacities to benefit from and reduce the costs of alternative sustainable practices, resources, methods and/or techniques. Various types of capital showed to be relevant for an individual's capacity to actually participate in legal activities, i.e. natural, financial, physical, human and social capital. It was shown that compliance behaviour often incurs high costs if an individual has to make new investments since the adaptation of livelihoods is required. As discussed, potential costs and benefits do not automatically favour compliance behaviour.

Perceptions of legitimacy are also likely influenced by the access of capital to conduct legal activities if certain practices are illegalised. People who participate in activities that have been illegalised either have to bear the costs of legal activities or the costs of non-compliance behaviour such as fines. The perception of legitimacy is therefore likely to be negatively affected due to the disproportionate balance of costs and benefits of conservation. Hence, it appears that in order to achieve a balance of costs and benefits and a level of legitimacy that is in favour of compliance behaviour, people require sufficient access to various types of capital.

Marginalized people often have limited access to capital and therefore have limited capacities to benefit from and reduce costs of legal alternatives (Thoms, 2008; Kumar, 2002). Poor people are, for instance, often declined from loans due to small turn-over rates and consequently have limited access to financial capital. As discussed in chapter 5, such capital is crucial to invest in new equipment or venues. Other types of capital also seem crucial. Lindsey *et al.* (2006), for instance, stress the need to develop skills among communities that enable the participation in the hunting industry to ensure a more equal distribution of hunting revenues. Since marginalized people often have limited access to financial and other types of capital, e.g. due to limited opportunities for education and social gatherings, they have but limited capacity to adapt their livelihoods and to actually conduct legal activities. For such households it can be very attractive to participate in illegal activities.

Moreover, marginalized households often base, at least partly, their livelihoods on the extraction of wildlife resources (Kumar, 2002; Thoms, 2008). Such households are consequently subject to the costs that new rules incur such as user fees, costs for licences and costs of imposed sanctions. Due to their lack of financial resources, avoidance mechanisms, such as barbed-wire fences, cannot be invested in. Marginalized people therefore have limited capacities to properly protect their life-stock from predation. Hence, it appears that marginalized people generally have to pay the highest proportion of the costs of wildlife conservation, whereas their capacity to benefit from alternative practices is often very limited.

Legal mechanisms should be in place to grant marginalized people the right to capital in order to enhance their capacity to participate in legal activities. Simply providing capital would require substantial finances and hence different approaches are required to ensure marginalized people gain access to the various types of capital. Since wealthier households do have substantial access to capital that create capacities to benefit, private agents can play a crucial role in achieving conservational objectives. Formal arrangements between private agents and marginalized people can significantly contribute to enhancing capacity to comply with wildlife laws (Johnstone & Bishop, 2007).

Marginalized people might disfavour such arrangements since wealthy people could easily abuse their power (Johnstone & Bishop, 2007). Wealthier people are in a better position to negotiate contractual obligations which can result in disadvantaged circumstances such as bad working conditions or low wages. Marginalized people should be protected by law to avoid high costs and/or limited benefits in respect to legal activities.

Private agents might also disfavour commitments to such formal arrangements since it might pose a risk in terms of low turn-over rates or a lack of skills. Additionally, a reward-based structure could be developed for the people with capital to commit to such formal arrangements with marginalized people. This reward-based structure can make use of direct but also indirect rewards. Direct rewards could, for instance, include subsidies to the private sector. There can also be funds to compensate risks such as for loans in cases of low turn-over rates. A more indirect reward system could include certification. Labels can then be directly dependant of the commitments to contracts with marginalized people. For instance, an eco-label for tourism could be provided when contracts are signed with marginalized people that ensures them a sufficiently paid job, proper education and proper work conditions.

Legislative mechanisms could contribute to the establishment and control of arrangements between private agents and local people such that they strengthen equity and positively influence the potential costs and benefits in favour of compliance behaviour. These arrangements can be translated in contract rights that provide both parties with specific rights that facilitate such a commitment and ensure that marginalized people can increase their capacity to benefit from and reduce costs of legal activities. Such rights increases the

capacity to actually comply with wildlife laws. The right to enforce the contract, and more specifically a right to legal aid when the contract is breached, is crucial for the effectiveness of these formal arrangements.

Contract law is able to regulate and facilitate the establishment of formal agreements between private agents and marginalized people. Contract law has capacities to predetermine several characteristics of a contract, and to determine both specific obligations and/or responsibilities as well as contractual rights. Contract law could therefore facilitate the establishment of contracts and their actual implementation and can provide legal aid to enforce these formal commitments. Kumar (2002), for instance, stresses the need for legal aid for the enforcement of formal commitments.

Wildlife contracts could include rules that determine who is eligible for wildlife contracts and what constitutes eligibility for the rewards. Contract law can include rules to determine or set specific standards for marginalization and therefore to set rules for who has legal rights to wildlife contracts. To avoid disadvantaged situations for marginalized people, contract law can introduce rules that can be enforced and function as a protective mechanism of the marginalized people. Contract law also has the capacity to include rules crucial for the reward system. Contract law can determine the type and/or extent of the reward, such as a certified label, and can determine what rules apply to receiving the reward. It can set prerequisites to protect marginalized people and private investors should only be eligible for the reward if they establish a contract with people who are set to be marginal.

Contract law can provide a legal basis for wildlife contract rights that enable marginalized people to gain access to the various types of capital crucial to participate in legal activities. Since private agents have more access to capital, contract rights could relate to reward-based measures that stimulate the establishment of proper contracts with marginalized people. Since capital plays a crucial role in deriving benefits and reducing costs of legal activities, and ensuring a more equitable balance of costs and benefits of wildlife conservation, wildlife contract rights that provide a basis for formal arrangements between private agents and marginalized people can significantly contribute to compliance with wildlife laws.

Within the international setting contract rights can also play a role. These rights can, for instance, be used to stimulate multinational corporations and other foreign businesses to ensure specific minimum wages, specific working conditions and a specific proportion of marginalized employers. Within eco-tourism international contract rights could pertain to rules relating to tour operators and ensuring their proper contribution to the improvements of local communities.

6.5. Compensation rights

The rights discussed so far showed to have capacity to increase benefits and reduce costs of legal activities. Yet, there are several costs that still have to be borne. Negative consequences of conservational strategies, such as the risk of losing livestock, can relate to non-compliance behaviour. Compensatory mechanisms that compensate the costs that occur in spite of additionally granted rights could further stimulate compliance behaviour. This impacts on the potential costs and benefits, and has positive effects on perceptions of legitimacy. The people who are negatively impacted by wildlife laws are compensated in their costs, which strengthens the equitable sharing of costs and benefits of wildlife conservation.

Compensation can be provided for various situations, e.g. 'in recognition of loss, suffering or injury, as a counterbalance or make up for an undesirable or unwelcome state of affairs, and as salary or wages' (Soanes & Stevenson, 2005). A distinction of compensatory issues can be made between remuneration, damage, 'nationalization compensation' and 'compensation in engineering' (Wikipedia, 2009). 'Remuneration' refers to salary or wages. 'Nationalization compensation' refers to 'payment of compensation to the former owner' and can be used to refer to e.g. compensation of former holders of rights. 'Compensation in engineering' refers to

'side effects and other unintended issues in a design'. Since remuneration is provided for services or products, it does not require specific compensatory schemes. It can, however, be protected by law, e.g. by ensuring salaries or wages are sufficient to actually sustain people in their basic needs. The need for compensatory mechanisms, and in particular for marginalized people, is specifically stressed by Kumar (2002).

Based on the above discussion, specific issues could be identified in need of compensation regarding wildlife conservation policies. These are:

- compensation for policy decisions;
- unexpected consequences;
- damage reimbursement; and
- vulnerability and uncertainty.

Compensating the costs for people who are negatively affected by the introduction of new rules, could contribute to the acceptance of these rules and can hence positively affect law compliance. Even though policy should strive to achieve win-win situations for all parties, in practice to the ground, this is practically impossible and some people can still be negatively affected. Direct compensation of negative consequences of policy decisions can provide tangible benefits in cases of imposing 'new' restrictions or changing the granting or introducing of 'new' rights, such as direct compensation for losing specific property rights or access to resources (Johnstone & Bishop, 2007). Also, additional measures that reduce harmful side-effects can also be put in place.

Since policy is based on the acquired knowledge which might be limited due to insufficiency of techniques and science, new policies can lead to unintended or unexpected consequences. Side-effects such as negative environmental, political, social or economic consequences might not be foreseen. Preparing, on forehand, for compensation of unexpected consequences could provide capacity for compensation in case any unexpected consequence occurs.

One of the most prominent issue in need of compensation in respect to wildlife conservation is compensating the harm done by the conserved species. Wildlife conservation often relates to damage incurred by the protected species, such as loss of livestock and/or crop damage. Compensating the damage incurred by legally protected wildlife species reduces incentives for non-compliance behaviour in respect to these species.

Several alternatives to wildlife unfriendly activities carry specific risks in terms of uncertainties and vulnerabilities of costs and benefits, e.g. due to inexperience and lack of knowledge which might withhold households from participation in such practices. Especially marginalized people are vulnerable and therefore resistant to change. Compensatory schemes can reduce the sense of insecurity by compensating, for instance, transition periods or other situations that are the consequences of specific risks that people have to take when participating in environmentally friendly activities, instead of known activities.

Compensatory schemes are also crucial to avoid the fall back to illegal activities in critical times. People participating in environmentally more friendly activities are frequently subject to environmental, political and/or economic vulnerabilities. Eco-tourism, for instance, is often considered a practical alternative for resource use (Damania *et al.*, 2008) but depends on a variety of external factors. It is highly dependent on the number of tourists which may be reduced in critical times. Circumstances such as droughts also play a crucial role for an individual's sense of security over costs and benefits. Compensatory mechanisms that are capable of reducing vulnerability could therefore contribute significantly to compliance behaviour. It reduces costs of legal activities and reduces the need for illegal activities as safety-nets.

These compensatory schemes could contribute significantly to the success of wildlife conservation policies due to their positive effects on potential costs and benefits, and perceptions of legitimacy. The negative consequences of conservation are compensated, which reduces the indirect costs of law compliance. It influences perceptions of legitimacy since policy can be considered fairer if compensatory schemes for negative consequences are effective.

As has been discussed in chapter 3, tort law can be considered one of the core types of law. Tort law showed to provide a legal mechanism for those who suffer harm to take the initiative to claim compensation and showed to have capacity to ensure compensation mechanisms can be implemented. Even though the term

'tort' is limited to damage by other people, there is potential for the use of 'compensation law' to strengthen its applicability to wildlife conservation. Compensation law can then be used to refer to a body of rules that deals with the variety of compensatory issues, and is required to properly regulate compensation. By implementing legal compensation mechanisms, people can be granted 'compensation rights'.

In chapter 3 it was shown that tort law can specify what has to be compensated for, determine what requirements should be met in order to be eligible for compensation; and the extent of compensation. It is thus required that the negative consequences of wildlife conservation are assessed in order to determine what exactly has to be compensated, and, for instance, the amount or type of compensation that is required for specific 'damages'.

In conclusion, compensation law can grant people the right to effective compensatory mechanisms that enable the reduction of costs for compliance behaviour and increases people's capacity to comply with wildlife laws. Compensatory mechanisms in wildlife conservation framework are required to compensate the negative effects of the introduction of new rules, unintended consequences, damage incurred by legally protected wildlife species, risks due to inexperience and lack of knowledge and in times of vulnerable conditions. Compensation rights provide capacity for direct tangible benefits for compliance behaviour. Effective integration and implementation of compensation rights can contribute to achieving high levels of law compliance.

Compensation rights are particularly important for marginalized people as they are not as easily capable of reducing costs as wealthier people are (Kumar, 2002; Thoms, 2008). Yet, rules that only compensate the costs for marginalized people are 'losing situations' for the wealthier people and will therefore be less accepted by less marginalized people (Kumar, 2002). Moreover, it could be argued that wealthier households should have rights to compensation too if, despite of all their efforts, livestock is still being killed. Rights might even be ineffective if not supported by elites (Kumar, 2002). For instance, marginalized people sometimes show to honour the former rights of elites due to elite's position within society even though they were granted new property rights.

Even though several types of compensation schemes are required only temporarily, other schemes are required on a more permanent base. Compensating policy decisions, unexpected consequences and uncertainty and vulnerability is only temporarily and sometimes semi-temporarily needed. It might, however, require substantial funding due to the large scale for which compensatory schemes are required. Damage reimbursement schemes are required on a permanent base. It therefore appears that substantial funding is required to implement effective compensatory schemes. The development of cost-effective compensatory schemes that could enhance their autonomous funding, could therefore contribute significantly to law compliance.

6.6. Equity rights

The previous sections of this chapter showed the relevance of specific rights for law compliance. Use rights, property rights, contract rights and compensation rights showed to have capacity to positively impact on the potential costs and benefits, and the perception of legitimacy. In order to actually achieve the stated objectives, these rights need to be properly established, implemented and enforced, and need to be perceived as legitimate by those that are expected to comply with the laws.

To this end, a different set of rules is required that provide a legal basis for 'equity mechanisms'. Such mechanisms are needed to increase equality within the governance processes and can consequently strengthen the level of equity of the outcomes. Equity and equality showed to be closely linked and to play a crucial role for perceptions of legitimacy. Introducing equity mechanisms can significantly enhance successful

integration of local people's interests, and can also contribute to an individual's capacity to benefit from and reduce costs of legal activities.

Legal equity mechanisms can build on 'equity rights', and can significantly stimulate compliance behaviour. The need for such mechanisms is further elaborated below, illustrated by literature on conservation in general. This section also provides an overview of some equity mechanisms that can play a role for wildlife conservation.

Power disparities

Power disparities can, at least partly, be explained by differences in access to capital. Decision makers are, for instance, frequently inclined to favour investors and since multilateral companies and elites can offer these investments, decisions often favour the interests of elites and/or multilateral companies. Financial capital also increases an individual's capacity to participate in the decision making process, since participation frequently bears opportunity costs such as time required to spend on village meetings (Nielsen, 2003; Keane *et al.*, 2008). Furthermore, elites seem more capable of developing social capital, which is relevant for influencing decisions. Access to other types of capital also influences bargaining power.

As a consequence, realising a level of equality and equity within a society is a complex task. Particularly in developing countries where wealth disparities are high and poverty extreme, there are high levels of corruption, elites tend to dominate decision making processes and rules frequently favour multilateral companies (Brack, 2004; Thoms, 2008). Elites often have more decision making power which can be abused to 'reward allies and engender patronage'. The allocation of rights over wildlife resources are mostly based on negotiations, and the distribution of rights consequently often reflect power relations instead of local people's needs (Brack, 2004; Nielsen, 2003). Even within a local governance system, power disparities are apparent and elites frequently dominate the decision making processes (Kumar, 2002). Kumar (2002) argues that 'members of a village elite might already have captured the decentralized village-level forest institutions'.

Due to a lack of access to capital, marginalized people have lesser means to participate in or have an influence on decision making processes, implementation and enforcement processes. Therefore, marginalized people often have limited capacity to ensure successful integration of their interests in the processes of governance. Consequently, the costs of conservation policies frequently have to be borne disproportionately by marginalized people and hence costs of conservation are distributed in an inequitable manner (Kumar, 2002; Thoms, 2008). Empirical studies of Thoms (2008), for instance, showed that in Nepal poor people bear disproportionate parts of the costs for nature conservation. Empirical studies of Kumar (2002) in Jharkhand, India, also concluded that the net costs of joint forest management are paid disproportionately by the poor. This research shows that landless and marginal farmers derive less benefits but also pay more actual costs. The results show that elites benefit most from joint forest management, whereas landless people bear the highest costs. This is partly being explained by the fact that new rules were introduced that reduced access to the forest, the introduction of user fees and higher fines for the violation of rules. Kumar (2002) therefore argues that the 'regime reflects the social preference of the rural non-poor'. Hence, in both India and Nepal forest conservation disadvantages the poor.

The distribution of funds or other income that is generated from conservational purposes is also subject to power disparities and hence to inequality. The introduction of user fees, for instance, incurs costs, whereas marginalized people might not receive any benefit from it. Income that is generated from community forests, common pool resources or national parks and reserves, such as park revenues, user fees or hunting licences, frequently end up in village funds. Since village authorities are often dominated by elites, the distribution of these funds are often used for purposes that benefit elites and hardly benefit marginalized people (Kumar, 2002; Thoms, 2008). For instance, the case of Jharkhand, India, shows that the income generated from user fees goes to the common village fund which are then used for purposes such as temple

building or community feasting, and favour the influential households and limitedly benefit the poor. Income that is generated is thus often used as cultural and/or political capital of elites (Kumar, 2002).

In conclusion, wealthier household are in a better position to ensure they profit from conservation policies and reduce their costs to a minimum. Elites can afford alternatives to highly regulated forest products and sometimes even prefer the closing of access to resources (Thoms, 2008). Such regulations, however, negatively influence marginalized people to a high extent since they are often highly dependent on these resources. Since marginalized people have limited influence on decisions, they frequently have to bear the highest proportion of costs of conservation, and can limitedly ensure benefits. Closing access to resources results in a considerable loss of capacities to benefit from legal activities. Power disparities therefore severely impacts law compliance.

It appears that many conservational efforts are being jeopardised by intra- and inter community power disparities that negatively influence compliance behaviour. Since elites have more decision making power and marginalized people have limited capacities to integrate their interests in conservation policies, the level of inequality within wildlife frameworks are high. As a consequence, marginalized people frequently bear disproportionate costs of wildlife conservation resulting in a high level of inequity of policy outcomes. The level of perceived legitimacy is, in cases of strong power-disparities, therefore likely very limited, and has considerable negative impacts on law compliance. Also, since the capacity of marginalized people to benefit from legal activities is constrained by power disparities, the resulting potential costs and benefits disfavour compliance behaviour. Hence, it can be concluded that wealth and power disparities highly constrain the achievement of law compliance.

A legal framework that successfully integrates equity mechanisms could contribute to effectively translating marginalized people's interests in conservation policies. These equity mechanisms can be more easily applied in a local governance system than in more centralised systems. Yet, it has to be noted that local governance structures have to be properly monitored to ensure that these equity mechanisms actually apply.

Equity mechanisms

Several types of equity mechanisms can be distinguished to be crucial for achieving a level of equality within legal wildlife conservation frameworks. The following equity mechanisms can, at least, be distinguished to play a role for compliance in respect to wildlife laws (from Bodegom *et al.*, 2008; Dietz *et al.*, 2003; Fabricius & Collins, 2007; Gibson *et al.*, 2005; Hayes, 2007).

- Formalised decision making structures
- Participatory mechanisms
- Conflict resolution mechanisms
- Accountability mechanisms
- Communication and negotiation schemes
- Formalised enforcement and monitoring mechanisms
- Facilitating organisations
- Information mechanisms
- Adaptability mechanisms
- Collective choice arrangements

Equity rights relate to the adoption of mechanisms that empower marginalized people and ensure that the interests of wildlife dependent people, such as poachers, are effectively translated into legal frameworks. These mechanisms could include 'collective choice arrangements' which refer to the inclusion of those individuals that are affected by harvesting and protection rules in the group who can modify these rules. Formalised decision making structures, effective participatory mechanisms and communication and negotiation schemes appear to contribute to the integration of people's interests. Communication and

negotiation schemes are required to improve both intra- and inter-community communication. Indigenous rules might be perceived as illegitimate by outsiders if there is no consensus of the problems for local users (Tang & Tang, 2001). Mechanisms that have capacity to facilitate communications and negotiations are thus valuable for wildlife conservation. In light of participatory mechanisms, it appears that developing countries often lack experience in participatory processes and lack the means to efficiently and effectively involve the local people (Holmes-Watts & Watts, 2008). This should be strengthened in light of equity rights.

Development of knowledge networks is also crucial (Fabricius & Collins, 2007). People should be granted rights to be informed about specific issues such as the threats, status of species and abundance, the enacted laws, including both the rights and restrictions, and specifics on how to achieve sustainable use. People should thus be informed of the use rights that people have, the property rights, contract rights, compensatory mechanisms, and equity mechanisms. Also crucial is the information of the potential mechanisms available to increase benefits and reduce costs of legal activities.

Furthermore, mechanisms seem to be available to monitor corruption (Bodegom *et al.*, 2008). Several accountability mechanisms can be applied in a specific governance system. An overall description of accountability mechanisms is 'the capacity of accounting agencies to impose sanction on power holders who have violated their public duties'. Bodegom *et al.* (2008) distinguish 'vertical accountability mechanisms', 'horizontal accountability mechanisms' and 'social accountability mechanisms'. Vertical accountability refers to down to top mechanisms such as elections. Horizontal mechanisms refer to mechanisms providing sideways accountability by the reporting of officials and agencies of the state by other public officials and agencies of the state. Examples of horizontal mechanisms are 'human rights ombudsmen, corruption control agencies, legislative investigative commissions and administrative courts'. Equity rights should relate to these accountability mechanisms that enable monitoring law establishing, implementation and enforcement processes.

For the conflict resolution mechanisms it is argued that 'users and their officials have rapid access to low-costs, local arenas to resolve conflict among users or between users and officials' (Bodegom *et al.*, 2008). Formalised enforcement methods have to ensure that government officials and elites are subject to the same sanctions. Also, many authors have advocated for graduated sanctions (Bodegom *et al.*, 2008; Keane *et al.*, 2008; Milner-Gulland & Leader-Williams, 1992; Nielsen, 2003; Sutinen & Kuperan, 1999) which can also be considered a specific enforcement mechanism. It is also highlighted that sanctions should depend on the 'seriousness and context of the offense' (Bodegom *et al.* 2008).

These equity mechanisms can significantly increase equity of governance processes and thus the equity of the outcome, and can directly relate to accountability and efficiency. The implementation of such mechanisms thus directly relate to perceptions of legitimacy. Also, due to the representation of a higher number of stakeholders, the potential costs and benefits of those directly impacted by the policies can be positively affected.

Since high inter- and intra- community power disparities negatively influence compliance behaviour, the development and implementation of effective legal equity mechanisms could significantly contribute to enhancing law compliance with wildlife conservation laws. Such mechanisms can increase legitimacy and potential costs and benefits. These legal mechanisms are crucial to establish, implement and enforce effective use rights, property rights, contract rights and compensation rights. These mechanisms should include participatory means to integrate the interests of the stakeholders and in particular those of wildlife resource dependent people, including poachers. Decision making structures, conflict resolution mechanisms, communication tools and tools that provide access to information are examples of equity mechanisms.

In order for the discussed equity mechanisms to be effective and cordially accepted by society, it is crucial that these equity mechanisms are formalised and legitimately established, implemented and enforced (Fabricius & Collins, 2007). These equity mechanisms are also crucial at the various levels of governance, and appear essential at the local level as well as the higher level governance processes such as the international level.

6.7. Governing rights

A different set of rights can refer to governing rights. This set of rights is required to encompass a body of rules that deal with the establishment, implementation and enforcement of rights and restrictions by legal authorities. Consequently, law establishing, implementation and enforcement rights can be granted to specific authorities. Hayes (2007) illustrates the need for a 'collective choice decision making level', referring to 'the rights that entitle one to make rules and exclude others and make management decisions that determine future rights'.

Constitutional law showed to refer to the powers and functions of local and central governments (Calhoun, 2002; Law & Martin, 2009; Soanes & Stevenson, 2005). Constitutional law provides capacity to 'determine what the system of governance is to be', which was shown to be one of the four objectives of law (Honoré, 1995). Hence, constitutional law is suitable to formalise the arrangement of powers within specific institutional arrangements and to provide a legal basis for governing rights that grant rights over the establishment, implementation and enforcement.

Constitutional law is thus also suitable to provide a legal basis for local governance. As discussed, several authors provide empirical evidence for the potential of local governance for achieving conservation objectives (Agrawal, 2001; Dietz *et al.*, 2003). Yet, it appears that a legal framework for effective local governance is often lacking or even that these locally effective institutional arrangements have been eroded (Lindsey *et al.*, 2006; Robbins *et al.*, 2006; Tang & Tang, 2001). The importance of an adequate legal framework for local governance is, for instance, stressed by Lindsey *et al.* (2006) who argue that the ineffectiveness of wildlife conservation is often, at least partly, due to a failure of governments to devolve ownership over wildlife to communities. Robbins *et al.* (2006) discusses that traditional resource management regimes that previously contributed to conservation have been severely restricted if not completely banned in most conservation landscapes. The case of Shan-Mei, Thailand, discussed by Tang & Tang (2001) also showed the lack of legal rights to enforce the locally effective mechanisms against outsiders as reason for the erosion of the mechanisms. Governing rights granted to local communities can overlap with property rights and consequently provide the right to enforce locally effective use strategies. It can also subsequently grant property rights over resources to a specific part of society. Property rights are generally, however, limited to management, ensuring benefits accrued to local people.

Governing rights provide a legal basis for the layering of institutional arrangements of a local governance system. It provides for rules relating to the powers and functions of the several governance structures that are involved within the hierarchy of local governance. It is then pre-determined how the establishment of rights and restrictions are arranged, who is responsible for the implementation and who has the right and the responsibility to enforce them. Constitutional law can provide this legal basis to formalise the institutional arrangements embedded within such a local governance system.

6.8. Discussion

Incentive-based compliance mechanisms should build on the discussed set of rights in order to achieve a level of law compliance that ensures continuous protection of wildlife species. These rights showed to considerably effect the capacity to benefit from and reduce costs of legal activities, and positively influence perceptions of legitimacy. These rights are therefore crucial to ultimately positively influence morality and self-interest of those people that are subject to specific wildlife laws.

In order to create sufficient capacity to comply with international wildlife laws, the rights that were discussed throughout this chapter also have to be effectively integrated in all levels of governance. Equity

mechanisms are required to ensure a level of equality within local and national governance structures but also to realise a level of equality within the multilateral setting. Use rights, property rights, contract rights and compensation rights can also be integrated within the international setting. Use rights and property rights within the multilateral setting enables individual countries to make their own arrangements over their wildlife, even though limited by international standards. International compensation rights could provide a type of reward system for biodiversity richness.

Ensuring the integration of these rights in national frameworks can be constrained by state sovereignty. International agreements are not mandatory (Khanna & Harford, 1996) and implementation of international agreements can currently only be done by the state (Honoré, 1995). The devolution of power to local communities therefore also depends on state governments' will (Agrawal, 2001). The international community can currently not monitor the implementation of governing rights. The international community is limited in respect to the implementation of such rights. Considerable mechanisms should thus be developed to provide incentives for state authorities to implement these rights.

To achieve law compliance, international pressure should shift from a focus on increasing enforcement of existing restrictions towards the integration and hence establishment and enforcement of rights. The means that are available for conservation should thus be used for implementation of rights, instead of merely increasing enforcement of existing restrictions. Furthermore, market-based mechanisms could be used to stimulate governments, multilateral and national businesses to contribute to successful implementation of these rights. Certification labels could be used not only for sustainable products but moreover for the building of capacity for local governance and the successful implementation of the discussed set of rights.

The integration of these rights in legal frameworks also appears to be considerably costly and therefore constrained by the fact that there are limited financial means available for wildlife conservation. Therefore, substantial funding is required and the development of cost-effective approaches also appears crucial to ensure successful integration of the rights in the several levels of governance.

As discussed, stimulating local governance can be considered a cost-effective tool in conservation. It was shown to significantly increase the perception of legitimacy and influence the potential costs and benefits in favour of compliance behaviour. It is shown that if legitimacy is lacking, transaction costs will be considerably higher (Nielsen, 2003). These transaction costs are referred to as the costs that are related to undertaking management and include decision-making costs, information and monitoring costs, and enforcement costs (Williamson in Nielsen, 2003). By implementing the discussed rights, legitimacy can be increased and costs can thus be reduced.

Local enforcement was also shown to be cost-effective and since local governance provides capacity for local enforcement, costs can, again, be reduced considerably. External enforcement of local rules is extremely costly (Agrawal, 2001) and since external enforcement is likely more vulnerable to corruption than internal or local enforcement, external enforcement is also less efficient. If perceived legitimacy is higher, social sanctions are more easily imposed and local people are more likely to invest time and means in the enforcement and hence less external financial aid is required. Hence, it appears that the integration of the discussed rights itself contribute to the cost-effectiveness of wildlife conservation policies due to the considerable increase of effectiveness and potential to reduce costs elsewhere in the governance system.

Through local governance also better use can be made of valuable local and/or indigenous knowledge to establish, implement and enforce both rights and restrictions (Agrawal, 2001; Kumar, 2002; Lindsey *et al.*, 2006; Nielsen, 2003). Since local people have better knowledge of the conditions and factors that influence law compliance, the use of local knowledge can contribute successfully in achieving law compliance (Nielsen, 2003). The use of local specific knowledge can considerably increase effectiveness of both the rights and restrictions, and reduce the costs of their implementation and enforcement.

Local people are better suited to decide upon local rules and their adaptation since they have a more detailed knowledge and understanding of local site specific circumstances such as ecological, social and political factors (Agrawal, 2001; Kumar, 2002; Lindsey *et al.*, 2006; Nielsen, 2003). Local people likely have a

better knowledge of local flora and fauna, such as population numbers, historical knowledge of the wildlife species and biotic and non-biotic factors within a wildlife species' habitat. It can be expected that local people are better aware of breeding places and might also better understand reasons for specific species' behaviour. Furthermore, local people might also have a better understanding of the changes within an ecosystem such as the meaning of local stock changes or a decline in population numbers. Moreover, it can be expected that local people have a better knowledge and understanding of the social and political setting. Local people can be expected to be better able to establish locally effective rules than external policy makers can.

Locally, specific information has probably always been present and is continuously evolving, but only through local governance this knowledge can be used for conservational purposes (Agrawal, 2001). Wildlife departments often lack the resources to conduct proper research and obtain qualified data which is necessary to provide, for instance, accurate quotas (Lindsey *et al.*, 2006). Successful translation of qualified data into legislative frameworks can significantly reduce the costs of enhancing law compliance (Nielsen, 2003). Besides the use of local knowledge for the establishment of rules, local knowledge can also be very valuable for their implementation and enforcement (from Keane *et al.*, 2008). Since local people are more familiar with the specific local areas, they are likely better able to conduct research, analyse ecological effects, monitor the environmental status and, as discussed, to monitor rule infractions. Local people were shown to be more aware of smuggling routes and are also likely better aware of poacher's behavioural aspects.

The use of local knowledge likely results in more effective use rights, property rights, contract rights, compensation rights and equity mechanisms. As discussed in section 5.3. it is crucial that the standards on sustainable use that are set by criminal law are very accurate and are adaptable to local changes. Accuracy and adaptability can be better realised if local knowledge is used and local people involved in amending these rules. Use rights can then be more accurate since they can be more adjusted to local site specific circumstances. Indigenous property rights can apply or be restored, which are likely more effective than externally imposed property rights. Local people can also be expected to have better knowledge of what is locally the level of marginalization and to analyse the capital that is required to benefit from legal activities and reduce its costs and how to realise this. For compensatory needs, it can be assumed that local people are better able to decide on what exactly has to be compensated for. Local people have a better understanding on the equity mechanisms that could prevent power disparities leading to corruption, elite domination and ruling in favour of elites and multinationals. Participation and representation of local people's interests within local governance structures can, for example, be better realised than within a central setting. For this it is important to note that local governance refers to a layering of institutional arrangements in which lower level governance structures are monitored by higher level governance structures which enables monitoring equity within the several governance structures. It has to be noted, however, that this monitoring is key for success.

Also, using local people for establishment, implementation and enforcement of rules also positively influences the potential costs and benefits of legal activities compared to illegal activities since the establishment of local governance structures can provide legal job opportunities for local people as an alternative to environmentally unfriendly activities (Agrawal, 2001; Keane *et al.*, 2008). In Kumaon in India for instance, forest councils have provided local people with a livelihood for nearly 60 years (Agrawal, 2001).

Local governance is thus a cost-effective tool for conservation and an additional set of rights can be integrated in legal frameworks more efficiently through local governance. Also, the established rights, their implementation and enforcement will be more easily perceived as legitimate due to the use of knowledge on locally specific circumstances. Hence, it appears that means should be focused on implementing governing rights that build capacity for local governance and for ensuring that use rights, property rights, compensation rights and equity rights are successfully integrated in all levels of governance, since this appears to be the most cost-effective tool for wildlife conservation.

In conclusion, a rights-based local governance system should be formalised to ensure cost-effective wildlife conservation policies can be properly established, implemented and enforced. A restriction-based centralised governance system has but limited capacity to positively affect legitimacy and build capacity to increase benefits and reduce costs of legal activities. Laws developed through such a governance system are

not likely to back-up morality and self-interest of local communities and hence achieving compliance with such laws would be extremely difficult and costly. Through a rights-based local governance approach, on the other hand, there is a higher chance that laws are enacted that back-up morality and self-interest. Hence, it appears that conservation efforts should focus primarily on the realisation of rights-based local governance systems, rather than externally setting strict restrictions.

6.9. Conclusion

From the analysis of the role of rights for compliance regarding wildlife conservation, it can be concluded that a rights-based approach is an effective approach to law compliance. Laws do not only aim to impose restrictions but also to grant people specific rights. Legal instruments and incentive-based compliance mechanisms should thus build on a specific set of rights that have considerable capacity to positively influence perceptions of legitimacy and capacities to benefit from and reduce costs of compliance activities. Granting rights is thus essential to provide a basis for backing-up morality and self-interest and hence to achieve compliance with restrictions. Moreover, rights appear crucial to ensure that sufficient capacity is being built to actually comply with wildlife laws.

The core laws as discussed in chapter 3 provide a legal basis for specific rights that could be considered central within wildlife conservation frameworks. These laws can provide a legal basis for a specific set of rights that show to have considerable capacity to achieve compliance with any wildlife-related restriction. This specific set of rights encompasses the following rights:

- use rights;
- property rights;
- contract rights;
- compensation rights;
- equity rights; and
- governing rights.

Use rights are required to provide local people with rights to use local wildlife resources since it provides natural capital for many of these local people. Criminal law provides a legal basis to properly regulate use in such a way that it provides capacity for current use and future use. Criminal law can determine legal use margins and hence what harvest rates and/or methods are considered illegal and what harvest rates and/or methods are legally allowed.

Property rights are essential to ensure that costs for conservation do not have to be borne disproportionately by local communities. Without legal mechanisms to set clear boundaries, resource dependent people will have to bear the costs of either unsustainable use or conservation. Property law can provide a legal basis to ensure that outside use does not jeopardise the potential use by local people. Legal mechanisms should thus be in place to ensure that local people benefit either directly from use or indirectly from outside use. Property rights determine boundaries and ensure.

Contract rights are crucial to provide capacity for marginalized people to gain access to capital that appears crucial to build capacity to actually conduct legal activities. Due to a lack of access to capital, many marginalized people have but limited choice than to continue existing practices. Contract law can enable the facilitation of the establishment of formal agreements between private agents who have access to capital and marginalized people that lack access to capital. Contract law can provide legal basis for rewarding private agents to establish such contracts and to protect marginalized people against the abuse of powers by these private agents.

Compensation rights are crucial to ensure that those who are somehow negatively influenced by the newly established rules, are compensated. Compensation law can provide a legal basis for the implementation

of compensation mechanisms. These compensation mechanisms should relate to compensating: - negative consequences of policy decisions; - unexpected consequences; - damage reimbursement; and - vulnerability and uncertainty. Negative consequences of policy decisions need to be compensated since it is practically impossible to achieve a win-win situation for all parties. Specific decisions can also have negative side effects that have not been accounted for. In cases of wildlife conservation, mechanisms that provide a basis for damage reimbursement could contribute since people who lose livestock to predation can claim compensation and will be less inclined to kill the animals that are responsible. Compensation mechanisms that reduce vulnerability and uncertainty also appear crucial for successful conservation policies. Especially marginalized people that feel vulnerable when complying with laws, are very resistant to comply. Since specific activities are used as safety-nets for critical times, it also appears crucial to provide compensatory mechanisms for these critical times to avoid killing wildlife species as safety-net.

Equity rights appear crucial for achieving a level of equality within the governance processes and equity of the outcome. Equity mechanisms such as participation schemes, conflict resolution mechanisms, formalised decision-making structures and accountability mechanisms can contribute to increasing the level of equality and hence of equity. In order to actually positively affect legitimacy and ensure a positive balance between costs and benefits in favour of compliance behaviour it is crucial that all the discussed rights are legitimately established, implemented and enforced. Effective equity mechanisms can ensure a sufficient level of legitimacy of the discussed rights.

Governing rights are required to grant specific authorities the right to establish, implement and enforce certain rules. Constitutional law provides capacity to determine what the system of governance is to be and hence provides a legal basis for governing rights. The governing rights are also crucial to formalise local governance. Local governance showed to be effective for wildlife conservation, yet, without a legal framework to ensure powers are actually devolved to local government structures, local governance is not a fact. Governing rights can determine the powers and functions of the several governance structures that are involved within the hierarchy of local governance. Constitutional law can provide a legal basis to formalise the institutional arrangements embedded within a local governance system.

Incentive-based compliance mechanisms should build on the rights for local people that can increase the level of law compliance to such a level that it ensures the survival of wildlife species. Furthermore, such legal rights, including local governing rights, could best be integrated in legal frameworks of wildlife conservation. This is, however, not straightforward and is constrained by state sovereignty. However, efforts and the use of the available means for wildlife conservation should be focused on stimulating a rights-based local governance system rather than emphasising on a restriction-based centralised governance system. The latter is both costly and ineffective since laws established through such a system do not back-up morality and self-interest and hence achieving law compliance will be extremely difficult. A rights-based local governance approach shows to be considerably cost-effective in achieving compliance and conservation objectives due to its positive effects on the level of perceived legitimacy and its capacity to increase benefits and reduce the costs of legal activities.

7: Law compliance in respect to tiger conservation

7.1. Introduction

The previous chapters provided an overview of issues relevant for law compliance. This particularly highlighted the relevance of morality and self-interests for compliance behaviour, and respecting human rights. In respect to diverse approaches to law compliance it is concluded that a rights-based approach is more effective than a restrictions-based approach. In this light two additional conclusions are drawn. Firstly, a rights-based local governance approach has more potential to ensure that the established laws back-up morality and self-interest of local people than a restriction-based centralised governance approach. Consequently, with a rights-based approach a higher level of law compliance can be expected. Secondly, incentive-based compliance mechanisms that build on rights for local people are considerably more effective than using punitive mechanisms only. In an incentive-based approach, the main focus is on backing-up and positively influencing morality and self-interests of local communities, thereby taking into consideration the main issues relevant for law compliance. A punitive approach is possibly not realistic, especially if laws are established through a restrictions-based centralised governance system.

In this chapter the relevance of the Compliance Framework is tested in respect to tiger (*Panthera tigris*) conservation. It specifically assesses whether the overall conservation approaches and efforts currently adopted under the international regime of tiger conservation are adequate to prevent a further decline of tiger populations. Due to time constraints, this is a tentative assessment only. The legislative instruments and the tiger conservation programmes in the different Asian countries were not studied in full detail. Nonetheless, the findings serve as a guideline to future studies of compliance with tiger laws.

For this assessment the websites of a variety of Non-Governmental Organisations (NGOs) and Governmental Organisations (GOs) were consulted in combination with scientific literature. Due to time limitations to analyse the data from the NGO websites in full detail, frequently no specific reference is made to the specific source(s). Since specific data is used from these websites to outline the approaches adopted under the regime of tiger conservation, there is reference being made to 'NGO websites'. A list of the consulted websites is presented at the back.

This chapter starts with providing background information on the tiger, such as conservation status and the threats to the tiger. Then, to gain insight into the approaches adopted under the regime it is needed to outline what constitutes the regime; who are the actors of the regime and what international legislative instruments have been developed to protect the tiger. The international regime of tiger conservation is outlined in section 3. In section 4, the main approaches and efforts under the regime are assessed. In section 5, a preliminary assessment is conducted of compliance with poaching laws and trade bans, considering the main features for law compliance indicated in the Compliance Framework. Section 6 provides a discussion of the relevance of poaching laws and trade bans. Section 7 provides an overview of the main conclusions of the empirical part of this study.

7.2. Background on the tiger

Wild populations of the tiger have only persisted in 13 Asiatic Tiger Range Countries (TRCs): Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Russia, Thailand and Vietnam. There are six known subspecies of the tiger. Table 7 provides a list of these subspecies, their conservation status and population trend, and their range, listed in order of abundance. Table 8 provides an overview of mean estimated number of adult tigers per TRC.

Table 7: List of tiger subspecies, their conservation status, population trend and their range, listed in order of abundance (source: IUCN, 2010).

Subspecies	Common name	Conservation status	Population trend	Range
<i>Panthera tigris tigris</i>	Bengal tiger	Endangered	Decreasing	India
	Royal Bengal tiger			Bangladesh
				Nepal
				Bhutan
				Myanmar
<i>Panthera tigris corbetti</i>	Indochines tiger	Endangered	Decreasing	Cambodia
	Corbett's tiger			China
				Laos
				Myanmar
				Thailand
				Vietnam
			Malaysia	
<i>Panthera tigris malayensis</i>	Malayan tiger	Endangered	Decreasing	Malaysia
<i>Panthera tigris sumatrae</i>	Sumatran tiger	Critically endangered	Decreasing	Sumatra, Indonesia
<i>Panthera tigris altaica</i>	Amur tiger	Endangered	Stable	Russia (Siberia)
	Manchurian tiger			
	North China tiger			
<i>Panthera tigris amoyensis</i>	Amoy tiger	Critically endangered	Unkown	China
	Xiamen tiger			

Table 8: Mean estimated number of adult tigers (source: GTRP, 2011).

TRC	Baseline mean estimated number of tigers, adults (range)
Bangladesh	440
Bhutan	75 (67-81)
Cambodia	10-30
China	45 (40-50)
India	1411 (1165-1657)
Indonesia	325 (250-400)
Lao PDR	17 (9-23)
Malaysia	500
Myanmar	85
Nepal	155 (123-229)
Russia	360 (330-390)
Thailand	200
Vietnam	unknown

There are currently only 3,200 to 3,500 numbers of tigers left in the wild (GTRP, 2011) and numbers of wild tigers are drastically declining (Corlett, 2007; IUCN, 2010; Damania *et al.*, 2008; Lynam, 2006). The species is listed as 'endangered' on the IUCN Red List and some subspecies are even 'critically endangered' (IUCN Red List, 2010). Numbers of wild tigers plummeted from over 100,000 to below 4,000 within the last century

(Damania *et al.*, 2008) and decreased by 40 % during the last decade only (GTRP, 2011; NGO websites). Tiger habitat has been reduced to only 7 % of their former range and generally pertain to small fragmented patches of land (Damania *et al.*, 2008).

All tiger subspecies are declining, except for the Amur tiger in the Russian Far East. Most subspecies are endangered, but some are even near the brink of extinction in the wild, such as the Amoy tiger of which only a few tigers are yet alive in the wild. Mean estimated numbers of adult Amoy tigers in China are less than 45 (see Table 8). The Sumatran tiger is also critically endangered of which less than 400 wild tigers survived in the wild (NGO websites).

The main threats to the tiger's survival include the following (Damania *et al.*, 2008; NGO websites):

- Habitat loss, fragmentation, degradation and alteration;
- Killing tigers as a result of human-tiger conflicts;
- Prey depletion; and
- Poaching and illegal trade and trafficking of tigers and their parts for commercial purposes;

These threats are posed by both development and poverty. Development leads to habitat conversion for e.g. agriculture, plantations and mines and to an increase in demand for tigers and tiger products (Damania *et al.*, 2008). Poverty also contributes to habitat conversion. It further correlates with high human-tiger conflicts and high rates of illegal activities.

The tiger's predatory characteristics further strengthens the complexity of its conservation. The tiger is a large carnivore and therefore forms a threat to human settlements. Tigers occasionally attack humans and frequently attack livestock. In particular to human-tiger conflicts it is crucial to acknowledge that local people face the risk to lose livestock to tiger predation (World Bank, 2005; Damania *et al.*, 2008; NGO websites). Many local people depend on livestock to sustain a basic livelihood and consequently risk the loss of livestock to tiger predation. Since the range of the species encompasses a large part of the underdeveloped Asiatic region, losing livestock can severely threaten local livelihoods. Even the loss of just one cattle can cause severe problems for poor households.

Humans thus seem to compete with tigers for livestock but also in respect to ungulates. The tiger's diet is largely made up of large ungulates which are also hunted by humans. Since tiger populations highly depend on dense concentrations of large ungulates, prey depletion by humans forms another threat to the tiger's survival (Damania *et al.*, 2008).

The most prominent threat to the tiger is considered, however, to be the tiger hunt and trade in tigers and their derivatives for commercial purposes (Damania *et al.*, 2008; World Bank, 2005; NGO websites). The tiger is highly valued for its use in the Traditional Chinese Medicine (TCM) but also for its skin which is used as decor or clothing. There is even a growing illegal market for tiger meat as an exotic cuisine (Damania *et al.*, 2008).

It thus seems that there are high costs of tiger conservation due to human and livestock predation, and there are benefits gained from poaching and illegal trade of tigers and their parts. Tiger conservation therefore does not seem to be principally in local people's best interest. It is therefore a complex task to protect the tiger and without adequate efforts to curbe the current situation and solve the complexities of tiger conservation, tiger populations will face a further decline in most places.

Legislation is apparently in place to protect the tiger (Damania *et al.*, 2008). However, since in most places tiger populations are still declining, the legal instruments that have been put in place so far are not effective in protecting the tiger. It thus seems that current approaches and efforts of tiger conservation regimes are currently not able to achieve a level of law compliance that can prevent a further decline of tiger populations. This study addresses the contribution of the international regime of tiger conservation in this regard.

7.3. The international regime of tiger conservation

Regimes are understood as ‘collections of rights, rules, and decision-making procedures governing human actions in specific issues/areas’ and are considered similar to institutions (Young, 2003). A regime is defined as ‘a broad framework of rules and norms that govern a particular issue’ (Calhoun, 2002). An international regime is explained as ‘sets of implicit or explicit principles, norms, rules, and decision-making procedures applicable to specific areas of international relations’ (Keohane, 2001). International regimes are concerned with the ‘theories, discourses, ideologies, or, more generally, patterns of thought that were influential at the time of their formation’ (Young, 2003).

It is essential to acknowledge that international regimes ‘reflect the preferences of actors or interest groups able to exercise power during processes of regime formation’ (Young, 2003). In order to provide an overview of the approaches adopted under the international regime of tiger conservation, it is thus crucial to assess what actors are involved in tiger conservation, and more specifically what their patterns of thoughts or moral opinions are and the consequent efforts and initiatives taken to conserve the species. A clear picture should thus be first gained of the international actors involved in tiger conservation, and the international legal tools, before assessing the overall approaches under the regime relating to law compliance.

The actors involved in tiger conservation are, at least, GOs and NGOs, regional enforcement networks, international forums, and the scientific community. The United Nations (UN) plays an important role through its UN Environmental Programme (UNEP) which administers three wildlife related conventions that might consequently be relevant for tiger conservation. These are:

- the Convention of International Trade in Endangered Wild Fauna and Flora (CITES);
- the Convention of Biological Diversity (CBD); and
- the Convention of Migratory Species (CMS).

CITES establishes rules for international trade in species and prohibits all international trade in endangered species and their derivatives for commercial purposes. These species are listed in Appendix I of the convention. CITES also regulates the trade for species that requires regulation in order to conserve the species in the long run. These species are listed in Appendix II of the convention. The tiger is listed in Appendix I of CITES of which all 13 TRCs are Parties. Hence, all international trade in tiger parts and derivatives for commercial purposes is prohibited.

Furthermore, all 13 TRCs are Parties of CBD. This agreement determines rules to ensure a rich global biodiversity and protects genetic resources. CBD, however, focuses on biodiversity in its widest sense and does not provide any real additional international legal provision for the conservation of the tiger.

CMS establishes legal instruments such as Agreements and Memoranda of Understanding to enable the conservation of migratory species for which international cooperation is crucial for the species’ survival. Even though instruments under CMS are species or family specific, tigers are, at present, not listed in either Appendix of CMS and hence does not provide a legislative mechanism for tiger conservation.

The World Bank, also a GO, has played an important role in recent tiger conservation. Especially through the Global Tiger Initiative (GTI), which was initiated by the World Bank in 2008 in collaboration with others (GTI, 2010). The GTI is an ‘alliance of governments, international agencies civil society, and the private sector united to save wild tigers from extinction’. Members include all TRCs and many global NGOs.

The GTI was highly involved in various recent meetings and workshops that ultimately led to the ‘Tiger Summit’ in November 2010. All TRCs and a broad variety of international organisations attended the meeting. This Summit, or recently called the ‘International Tiger Forum’, endorsed the Global Tiger Recovery Program (GTRP), which is the result of a collaboration among the 13 Tiger Range Countries and the partners of the GTI (GTRP, 2011). The GTRP is built on the foundation of the National Tiger Recovery Programs (NTRPs) and on Global Support Programs to help with actions that individual TRCs cannot do alone. Since the role of the GTI in

recent global tiger meetings, the GTRP and NTRPs are substantial, it appears that the GTI has considerable political influence in the current international regime of tiger conservation.

Another initiative, the Global Tiger Forum (GTF), was launched in 1994 by the first meeting of the TRCs at New Delhi (GTF, 2010). Members of the GTF include seven TRCs, the NGOs TRAFFIC and WWF, and several national NGOs from India and Nepal (GTF, 2010). Even though the GTF is primarily led by the TRCs themselves, it seems only limitedly influential, especially compared to the GTI, which might have to do with a lack of funding capacity.

An important inter-governmental network, active within the international regime of tiger conservation, is the Association of South East Asian Nations' Wildlife Enforcement Network (ASEAN-WEN, 2010). A South Asia Wildlife Enforcement Network (SA-WEN) is also in preparation. These networks are (being) established to ensure 'a regional intergovernmental law-enforcement network designed to combat the illegal wildlife trade, to provide a mechanism by which countries can share information and learn from each other's best practices and to facilitate increased capacity and better coordination and collaboration of law enforcement agencies between Asian countries'.

Various global NGOs play a role in the international regime of tiger conservation. They provide donations, expertise and contribute to the organisation of international meetings. Especially considering the financial contributions, they can be considered to be relatively influential. The main global NGOs active within the field of tiger conservation, include, at least, WWF and TRAFFIC.

The international regime of tiger conservation seems dominated by international legal tools administered by UNEP, and the international NGOs and GOs involved in the GTI, initiated by the World Bank. In respect to NGOs, particularly TRAFFIC and WWF seem highly involved. These NGOs, and additionally a variety of other NGOs further initiated or support various conservation programmes.

Such organisations provide financial and technical means that seem crucial for the tiger's survival. Due to the donor function, these organisations seem relatively dominating the approaches currently adopted under the international regime of tiger conservation. The outcomes of the regime are likely focused primarily on the patterns of thought of these actors. Most of these actors seem international environmental organisations from developed countries (NGO websites). Also, even though the UN is represented by TRCs, it also represented by many non-TRCs. This focus of international organisations dominating the international regime of tiger conservation poses the risk of adopting primarily a 'western view', and basing tiger conservation programmes and legal tools primarily on western perspectives. In a western perspective the tiger has a status of 'exotic animal'.

7.4. Main approaches and efforts under the regime

This section first provides a preliminary assessment of the governance approach used to establish tiger laws. From this assessment it can be concluded whether the international regime of tiger conservation primarily adopts a rights-based local governance approach or rather a restrictions-based centralised approach. To this end, it is required to understand whether the actors of the international regime advocate for strict restrictions set by international and/or national laws, or mainly focus on lobbying for locally governing tiger populations and setting international and/or national standards to tiger conservation policies.

This section further provides a preliminary evaluation of tiger conservation programmes. Analysing the data can provide an insight into the focus of the efforts taken to conserve the tiger and to conclude on whether the focus is primarily laid on incentive-based compliance mechanisms, or that primarily a punitive approach is adopted.

7.4.1. Governance approach

In respect to international legislative tools, the CITES tiger trade ban is considered the most prominent international tool for tiger conservation (NGO websites). Throughout the websites of various NGOs, CBD and other international tools are not made reference to. The CITES agreement further seems to have strong legal notions and developed a guide to CITES compliance procedures, providing concrete guidelines for compliance and enforcement (CITES, 2007). This international trade ban imposes total restrictions on the trade in tigers and their parts and is an international governing body representing many national governments, including many non-TRCs. The legal instrument applies to all TRCs in the same manner, independent of local specific circumstance. It can thus be concluded that the CITES tiger trade ban is a restrictions-based centralised governance instrument.

All TRCs have enacted domestic trade bans (IUCN, 2011) as a consequence of international pressure. CITES Parties are 'urged to improve legislation to prohibit international and domestic trade of tiger parts, derivatives and products, enhance enforcement and destroy stockpiles of tiger parts' (CITES, 2002). Domestic trade bans were a key recommendation because legal domestic trade was considered to jeopardise international trade and stimulate poaching of wild tigers. Even though the enactment of national trade bans is not mandatory and merely an urge, for most TRCs national tiger trade bans seem to be the consequence of international pressure. Either way, national trade bans set strict restrictions on the national trade of tigers and their parts. National trade bans are thus also restrictions-based centralised instruments.

Various authors also seem to advocate for the implementation and enforcement of CITES, and to enact and enforce national tiger laws strictly prohibiting the tiger hunt and trade of tigers and their parts (Corlett, 2007; Damania *et al.*, 2008; Gratwicke, 2007; Lynam, 2006; Ng & Nemora, 2007; NGO websites). Within the scientific community, an overall focus seems to be put on the CITES tiger trade ban and CITES-inspired national tiger laws. Lynam (2006), for instance, argues that even though in the long run increased support from local people is required for tiger protection in Myanmar, in the short term the amending of existing national legislation to international laws should have priority. Such laws seem to have been enacted (GTRP, 2011). Furthermore, various NGOs also advocate for the establishment, improvement or strengthening of national tiger laws, and seem to urge primarily for strictly prohibiting the tiger hunt, increase penalties for poaching laws and increase enforcement efforts in this regard (NGO websites). Based on the consulted websites of NGOs and various scientific articles (cited above), it can be concluded that overall the actors of the international regime advocate for national tigers laws that strictly prohibit the tiger hunt.

Existing international and national legislative mechanisms appear to impose restrictions on local communities only, and a preliminary assessment of the regime does not show any advocacy for legal provisions to be put in place to grant local communities any additional right. Hence, it appears that the international regime of tiger conservation overall adopts a restrictions-based centralised approach for the establishment of tiger laws, rather than a rights-based and/or local governance approach.

7.4.2. Tiger conservation programmes

A variety of tiger conservation programmes have been initiated or supported by specific environmental organisations. Within TRCs national tiger plans and/or programmes have also been initiated. Through the programmes of NGOs and TRCs, various efforts seem to have been taken to protect the tiger. This section provides an overview of a preliminary evaluation of these tiger conservation programmes initiated or supported by NGOs, both in general and on country-level. It also provides an overview of various state initiated efforts that relate to rights-based activities.

NGOs and tiger conservation programmes

Table 9 provides an overview of the various conservation programmes initiated or supported by NGOs. This is not a fully extensive list of all NGOs and/or tiger conservation programmes, but does represent an overall focus of the global NGOs involved in the GTI that are running tiger specific conservation programmes. The data presented in Table 9 serves to provide an overall insight into the general focus of tiger conservation programmes, with specific attention to the characteristics of the programmes relating to either legal and/or technical activities, or to rights-based activities.

Table 9: The nature of tiger conservation efforts of various NGOs (sources: NGO websites).

	Legal and technical practices					Rights-based practices			
	Anti-trade	Anti-poaching	Raising awareness and/or education	Habitat management and/or reforestation	Scientific research	Mitigation of tiger-human conflicts	Livestock compensation schemes	Stimulating livelihood alternatives	Building capacity to conduct legal activities
Born Free Foundation	✓	✓		I	I	I			
Care for the Wild International (CWI)		✓	✓						
David Shepherd Wildlife Foundation (DSWF)	✓	✓	✓					C	C
Environmental Investigation Agency (EIA)	✓								
FREELAND Foundation	✓	✓	✓					T	
Global Tiger Patrol (GTP)	(✓)	(✓)			✓			I	I
International Fund for Animal Welfare (IFAW)	✓								
Phoenix Fund		✓				R	R		
Save the Tiger Fund (STF) - Panthera	✓	✓	✓	✓	✓	✓		✓	
Species Survival Network (SSN)	✓								
Tigris Foundation		✓	R				R		
TRAFFIC	✓		✓						
Travel Operators For Tigers (TOFT)				I				I	I
21st Century Tiger	✓	✓	✓						
WildAid			✓						
Wildlife Alliance	(✓)	(✓)						C	C
World Conservation Society (WCS)	✓	✓			(✓)				
World Association for Zoos and Aquariums (WAZA)			✓		✓				
World Wildlife Fund (WWF)	✓	✓		✓		✓		✓	
Zoological Society London (ZSL)		✓	✓	✓	✓	(✓)		(✓)	

Brackets indicate that the efforts taken might actually be fairly limited. Letters indicate a focus in a specific TRC, with C=Cambodia, I=India, R=Russia, and T=Thailand.

Based on Table 9, it can be concluded that tiger conservation programmes primarily focus their efforts on anti-poaching and anti-trade mechanisms. These do not refer to incentive-based mechanisms that strengthen local people's rights, but rather relate to enforcement efforts only. Many programmes seem to focus, either entirely or partly, on increased enforcement levels of poaching laws and trade bans, e.g. by providing equipment for tiger patrols. A large part of the available financial and technical means are currently primarily used for detection and apprehension of poachers and illegal traders in tigers and their parts.

Raising awareness also seems to receive considerable attention. Awareness raising campaigns and education programmes are also initiated to reduce the demand for tigers and their parts. Scientific research such as population surveys of tigers and their prey is also paid due attention. Whether this provides job

opportunities for local people, is not clear, and hence the financial and technical means attributed to such activities are principally not spend on rights-based activities.

It can be concluded that relatively limited tiger conservation programmes seem to provide incentive-based compliance mechanisms that build on rights for local communities. Nonetheless, some good initiatives have been taken in this context, such as the programmes that are up for funding by TOFT, including micro-financing, stimulating house-stays, ensuring fair wages, and training local guides (TOFT website). Also, DSWF and Wildlife Alliance are offering employment to ex-poacher, and 21st Century Tiger tries to use local staff where possible (NGO websites). An example of effective incentive-based compliance mechanisms comes from the GTP that realised that in Bhadra-Kudremukh landscape, such a high level of local support for conservation was realised that the locals are helping enforcement teams to report poaching incidents (GTP website).

Rights-based activities at country-level

Several efforts have been taken by NGOs in respect to rights-based mechanisms (see Table 9). However, many of such activities take place in specific areas only. To point this out, Table 10 provides an overview of centralising activities of NOGs in the specific TRCs.

Table 10: Overview of activities of NGOs per tiger range country, emphasising rights-based mechanisms (sources: NGO websites).

	Born Free	BLAZA	CWI	DSWF	EIA	FREELAND	GTP	IFAW	Phoenix	STF-Panthera	SSN	Tigris	TRAFFIC	TOFT	21 st Century Tiger	WildAid	Wildlife Alliance	WCS	WAZA	WWF	ZSL		
Bangladesh										3												()	
Bhutan										7													
Cambodia				A		()												()					
China								()								()	A	()					
India	M		()	()			A	()		68				A	()	()		()			AM		
Indonesia						()				33					()			()					()
Lao PDR						()				3								()			M		
Malaysia										9								()			M		
Myanmar				()						5								()					
Nepal										26											AM		
Russia				()				()	MC	72		C			()			()					()
Thailand																		()			M		
Vietnam										2											M		

Letters indicate incentive-based mechanisms, for which A=alternative livelihoods, M=Mitigation of human-tiger conflicts, C=livestock compensation schemes. Numbers in the column of STF-Panthera indicate the number of grants allocated to a specific TRC in the period 1995-2007. '()' indicates a specific focus of activities of an NGO in a specific TRC that do not relate to rights-based mechanisms.

Table 10 shows that even though some efforts are taken in respect to rights-based compliance mechanisms, such activities often focus on specific TRCs only. In India it seems that relatively many efforts have been taken that relate to rights-based mechanisms. Also, many activities are primarily focused on specific tiger landscapes only and do not cover all tiger landscapes of a country *per se* (NGO websites). It therefore seems that not all communities are targeted that directly interact with tigers. NGO activities in respect to livestock

compensation mechanisms that actually provide direct compensation for livestock killed by tigers seem to have focused on Russia only, and perhaps in respect to one or more specific tiger landscapes in India (TOFT website; WWF website).

In respect to state-initiated efforts in TRCs relating to rights-based activities, the GTRP (2011) outlines TRC best practices in ‘engaging with communities’. Table 11 provides an overview of these state-initiated efforts that relate to rights-based activities.

Table 11: State-initiated efforts of TRCs in respect to a rights-based approach, based on TRC best practices (source: GTRP, 2011).

TRC	TRCs efforts in respect to a rights-based approach
Bangladesh	Formed Village Tiger Response Teams, engaging local communities to mitigate tiger-human conflict and poaching. (Compensation rights)
China	Started a pilot program to ensure reasonable compensation for losses caused by key protected wildlife especially by tigers and their prey. (Compensation rights) An insurance policy for local communities in part of tiger range areas is in trial.
Cambodia	Trained communities and employed (former) poachers, loggers and local people who are knowledgeable about the forest as community and forest rangers. (Contract rights) Trained and employed poachers, loggers, and local people who are knowledgeable about the forest to be forest rangers. (Contract rights)
India	Sharing of revenue from conservation and ecotourims activities. (Property rights) Locally-managed eco-tourism enterprises. (Use rights/Contract rights) Trained communities and former poachers, loggers and soldiers as community and forest rangers. (Contract rights) Ecotourism activities with local communities. (Use rights/Contract rights) Using local/tribal people in the Special Tiger Protection Task Force and 30% recruitment of locals has been provided in the creation of the Task Force. (Contract rights) Eco-Development Committees participate in patrolling and intelligence gathering. (Contract rights)
Indonesia	Trained communities and former poachers, loggers and soldiers as community and forest rangers. (Contract rights) Experience in translocating problem tigers. (Compensation rights)
Malaysia	Trained hunderds of local community members residing around protected areas as nature guides licensed by the tourism industry. (Contract rights) Active program of respondig to all human-tiger and wildlife-related conflicts. (Compensation rights)
Nepal	Locally-managed eco-tourism enterprises. (Contract rights) Ecotourism activities with local communities. (Contract rights) Sharing of revenue from conservation and ecotourims activities. (Property rights)
Russia	Specialized units to respond promptly and effectively to incidents of human-wildlife conflict. (Compensation rights) Experience in translocating problem tigers. (Compensation rights)
Vietnam	Pioneering local payments for ecosystem services. (Property rights)

Table 11 shows that several efforts are taken by TRCs in respect to a rights-based approach. However, it also shows that in several TRCs no best practices were identified by the GTRP, which implies that limited or no efforts are taken in respect to rights-based activities. Overall efforts also seem rather limited and per TRC only a few efforts were identified. From Table 10 and Table 11, it can be concluded that various rights-based efforts have been taken on country-levels, but that such efforts are relatively limited, and in some TRCs hardly or no efforts have been taken yet to build on rights of local communities.

7.4.3. Approaches to law compliance

Based on the efforts taken by NGOs in respect to tiger conservation, it was concluded that NGOs focus financial and technical means primarily on the detection and apprehension of violators of poaching and trade laws. Tiger conservation programmes thus seem to focus primarily on punitive mechanisms, rather than on incentive-based compliance mechanisms that build on strengthening rights of local communities.

Several actors of the international regime of tiger conservation do urge for a diversity of efforts that are more in line with developing incentive-based compliance mechanisms. The GTF, for instance, acknowledges a variety of societal issues, such as inadequate schemes for incentive and rewards, identification of substitutes for consumers, and the promotion of eco-development programmes (GTF, 2010). Furthermore, in the article of Damania *et al.* (2008), which is written in request of the World Bank, it is also argued that ‘an exclusive reliance on punitive approaches and planning will not save tigers’. The GTI also acknowledge the need for mitigating human-tiger conflicts and the development of economic incentives and alternative livelihoods for resident communities (GTI, 2010).

However, the international regime at large primarily focuses on putting an end to poaching and illegal trade by adopting a punitive approach. This becomes evident from the efforts taken by the NGOs and the TRCs as discussed in the previous section. To further strengthen this argument, many NGOs even primarily focus on ending the trade in wildlife species or even specifically ending the trade in tigers and their parts. For instance, it seems that the two NGOs that are particularly involved in tiger conservation, WWF and TRAFFIC, primarily focus on ending the tiger hunt and trade. TRAFFIC is ‘a wildlife trade monitoring network’ and focuses solely on issues of the illegal wildlife trade. Even though WWF also puts efforts in mitigating human-tiger conflicts and stimulating alternative livelihoods, it primarily focuses its current efforts on anti-poaching mechanisms (WWF website). According to the website of WWF, its efforts focus on:

- ‘securing emergency funds to halt poaching in the most critical tiger landscapes’;
- ‘securing political will and action to double wild tiger numbers’; and
- ‘protecting tiger habitat at an unprecedented scale, including clamping down hard on the illegal tiger trade’.

The NGOs evaluated in respect to the efforts taken to conserve the tiger, are all members of the International Tiger Coalition (ITC). This is ‘an alliance of 38 organizations united under the common aim to bring back wild tigers by stopping trade in tiger parts and products from all sources’ (ITC website). The ITC focuses solely on ending the tiger trade. Also, the regional enforcement network ASEAN-WEN (and SA-WEN) is a law enforcement networks that focuses solely on ending the tiger trade.

The Global Tiger Recovery Programme

The GTRP showed to be the latest outcome of international tiger meetings and is highly appreciated by various international organisations (NGO websites). Moreover, the GTRP constitutes the various NTRPs and hence provides an overview of priority actions to be taken on country-level. Hence, evaluating these efforts in respect to both punitive mechanisms and incentive-based mechanisms can provide valuable insights.

The goals of the GTRP are (from GTRP, 2011):

- Effectively manage, preserve, protect, and enhance tiger habitats;
- Eradicate poaching, smuggling, and illegal trade of tigers, their parts, and derivatives;
- Cooperate in trans-boundary landscape management and in combating illegal trade;
- Engage with indigenous and local communities;
- Increase the effectiveness of tiger and habitat management;
- Explore and mobilize domestic and new funding; and
- Bring back tigers to their former range.

Table 12 provides an overview of policy and institutional activities to be taken under the GTRP. This is adopted from the GTRP (2011) and provides an insight in the focus of efforts taken per TRC as highlighted in the NTRPs.

Table 12: 'Synthesis of Policy and Institutional Activities from NTRPs' (adopted from GTRP, 2011).

	Bangladesh	Bhutan	Cambodia	China	India	Indonesia	Lao PDR	Malaysia	Myanmar	Nepal	Russia	Thailand	Vietnam
Policy and Institutional Activities													
Policy													
Improved legal protection of critical tiger habitats and/or increasing penalties for wildlife crime.	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓
Stronger legal basis for making critical tiger habitats inviolate.			✓			✓	✓			✓	✓		✓
Improved inter-sectoral coordination, and establishing best management practices for industry and infrastructure development in buffer zones.		✓	✓	✓		✓		✓	✓	✓			✓
Strengthened policies for community participation and sharing of benefits from conservation efforts in buffer zones.	✓	✓		✓						✓		✓	
Develop policies for a captive tiger registration and monitoring system and conservation breeding management plans for the Indochinese tiger.													✓
Strengthened policies for transboundary management of shared landscapes and effective transboundary collaboration in law enforcement.	✓	✓	✓	✓	✓					✓	✓		✓
New policies for sustainable finance to ensure adequate transfer for ecosystem services from tiger landscapes.	✓	✓				✓	✓			✓	✓	✓	✓
Institutional													
Create separate and specialized wildlife conservation and enforcement units.	✓		✓			✓	✓			✓		✓	
Support front-line staff with equipment, infrastructure, training, incentives, and insurance.		✓	✓	✓	✓	✓			✓		✓	✓	✓

Only the activity regarding 'strengthened policies for community participation and sharing of benefits from conservation efforts in buffer zones' relates to rights-based mechanisms, implying a limited focus on such activities. From Table 12 it can also be concluded that such mechanisms seem to gain attention in only a few TRCs. Punitive mechanisms, on the other hand, will receive future attention in all TRCs, except for India (which presumably has taken sufficient efforts in this regard). Here it has to be noted that even though the NTRPs are established in cooperation with the TRCs, they are the result of consultations with the GTI (GTI, 2010).

The GTRP also provides an overview of the distribution of program costs (GTRP, 2011). This shows that the highest proportion of financial requirements for the GTRP is meant for anti-poaching and anti-trade mechanisms. The GTRP requires a total of estimated 350 million US\$. Of these financial requirements, a 32 % (113,8 million US\$) is attributed to 'controlling prey and tiger poaching' and an additional 6 % to 'controlling illegal trade and reducing demand'. Only 8 % (27,6 million US\$) of the financial means are attributed to 'tiger human conflict and community engagement'. It can thus be concluded that the GTRP focuses primarily on a punitive approach, rather than on an incentive-based approach that builds on rights for local people.

The scientific community

Many authors of scientific articles seem to focus on a punitive approach in respect to compliance with tiger laws, rather than an incentive-based approach (Corlett, 2007; Gratwicke, 2007; Ng & Nemora, 2007). Ng & Nemora (2007), for instance, advocate for focusing means on punitive measures to end the sale of tiger parts in Sumatra, Indonesia. Scientific literature on wildlife conservation in general also seem to focus on punitive mechanisms. Hilborn *et al.* (2006) argue that poaching in general can be reduced primarily by increasing anti-poaching patrols. Rowcliffe *et al.* (2004) argue that vulnerable species can only be protected through enforcement and implies only the use of punitive mechanisms for strict restrictions. In the context of ending

tiger trade and hunt, the scientific community also stress the need for demand reduction (Brack, 2004; Milner-Gulland & Leader-Williams; Gratwicke; World Bank, 2005).

In conclusion, the actors of the international regime of tiger conservation primarily focus both policy and programmes on a punitive approach. There is a strong focus on ending the hunt and trade in tigers and their parts. Financial and technical means are consequently primarily used for the detection and apprehension of poachers and illegal traders of tigers and their parts. Even though various efforts have been taken to strengthen rights of local communities, such aspects gain relatively limited attention, especially compared to enforcement of poaching laws and trade bans. Overall efforts that strengthen people's rights are generally only granted in a few TRCs. Since resources for tiger conservation are rare, a bias towards the use of the available technical and financial means for the apprehension and punishment of poachers and dealers of tigers and their parts leads to a relatively limited availability of means for incentive-based compliance mechanisms.

7.5. Compliance with poaching laws and trade bans

As discussed, compliance with poaching laws and trade bans is currently not sufficient to prevent a further decline of tiger populations. In most tiger landscapes the tiger is still excessively being hunted due to high human-tiger conflicts and because of the value of tigers and tiger products for the black market. Many actors of the international regime of tiger conservation attribute this limited level of compliance to weak enforcement of existing legislation, and relate this to limited resources or limited political will for their enforcement (Damania *et al.*, 2008; Ng & Nemora, 2007; NGO websites). However, even though strong efforts have been taken to increase the level of detection, the likelihood of being apprehended remains low and that of a conviction even lower. Even in India, where strong efforts seem to have been taken to increase enforcement levels (see Table 10), and a well-developed institutional structure for conservation exists, a mere 10 poachers and not a single trader were actually convicted in the years before 2008 (Damania *et al.*, 2008). In other areas convictions are also limited (NGO websites).

Hence, it appears that even though the actors of the international regime have strongly advocated for increased enforcement levels and have greatly supported anti-poaching and anti-trade mechanisms, penalisation of poachers and illegal traders remain limited. The actors continue to emphasise financial and technical means on increasing detection levels, whereas so far such an approach showed not to be effective in preventing a further reduction of poaching and trade levels.

This section addresses the elements relevant for compliance with poaching laws and trade bans as indicated in the Compliance Framework. This analysis provides a preliminary evaluation of the relevance of the Framework for tiger conservation, as well as a better understanding of non-compliance behaviour in respect to poaching laws and trade bans. In this respect it is assessed whether the overall approaches and efforts under the international regime of tiger conservation, as outlined in the previous sections, are adequate to achieve a reasonable level of law compliance that can prevent a further decline of tiger populations.

The Compliance Framework integrates three dimensions of law compliance, i.e. - morality and self-interest; - potential costs and benefits and perception of legitimacy; and - the rights granted to local people. The use of the Framework firstly requires an insight into the rights granted to local people. Specific rights impact on the potential costs and benefit and on the perceptions of legitimacy. These two factors showed to build on backing-up and positively influencing morality and self-interests of local people. To ultimately provide an insight into the extent to which morality and self-interest of local people are respected by the international regime, understanding is also needed of the norms and values of the tiger hunt and trade.

This section firstly discusses the rights that have been granted to local communities in respect to tiger conservation. Secondly, it presents an evaluation of the costs and benefits of poaching and illegal trade activities as compared to potential benefits of legal activities. It also presents an evaluation of issues that are

expected to influence perceptions of legitimacy of local people. Thirdly, the morality and self-interest regarding the tiger hunt and trade, respectively regarding tiger conservation are further elaborated.

7.5.1. Local community rights

Poaching laws and trade bans impose strict restrictions. Legal provision for the granting of specific rights in respect to the tiger have not been put in place. Since tiger conservation programmes focus primarily on punitive mechanisms, there are generally relatively limited means available for incentive-based compliance mechanisms that strengthen the rights of local people. Even though a few efforts have been taken that build on rights for local people, such rights remain relatively limited and for a few tiger landscapes only.

Table 13 provides the results of a preliminary assessment of rights granted to local people in respect to tiger conservation. To this end, the data as presented in Table 10 and Table 11 is used. It has to be noted that this overview is not based on an extensive assessment of all tiger conservation efforts, nor on all state-initiated tiger conservation activities, rather it presents various tiger conservation programmes and TRC best practices. The overview of granted rights is indicative only since tiger conservation programmes have not been studied in full detail, and therefore it is not always clear whether such rights are actually granted. For instance, whether actual contract rights are granted or that merely use rights have been build on and *vice versa*, is sometimes difficult to conclude. Table 13 serves to provide an overview of rights that so far have been paid attention to.

Table 13: Rights granted in respect to tiger conservation, per TRC.

	Use Rights	Property Rights	Contract Rights	Compensation		Governing rights
				scheme	mitigate	
Bangladesh					✓	
Bhutan						
Cambodia	✓		✓			
China				✓		
India	✓	✓	✓		✓	
Indonesia			✓			
Lao PDR					✓	
Malaysia			✓		✓	
Myanmar						
Nepal	✓	✓	✓		✓	
Russia				✓	✓	
Thailand					✓	
Vietnam		✓			✓	

Results are based on tiger conservation efforts by various NGOs and the best practices in TRCs regarding rights-based mechanisms as outlined by the GTRP (2011). Compensation rights are divided in livestock compensation schemes and mitigation of human-tiger conflicts.

Due to the restrictions-based centralised governance approach no capacity is provided for local governance of tiger populations. Consequently, rules cannot be adapted to locally specific circumstances. Rather, all hunt and trade is strictly prohibited. In respect to the CITES tiger trade ban the legal provisions apply to all areas in the same manner, even though in some places numbers of tiger and/or tiger subspecies are extremely limited, whereas in other areas population numbers are considerably higher (see Table 7 and Table 8). Governing rights in respect to tiger conservation seem not to be granted to local people in any way.

Due to the focus on punitive mechanisms there are relatively limited financial means available for activities that build on use rights, contract rights, property rights, equity rights and/or compensation rights. Overall use rights in respect to the tiger are limited to the potentials of use in the eco-tourism industry. Even though there are several proponents of tiger farming to provide legal products for the market, the international community is highly opposing tiger farming (NGO websites). At the 14th Conference of the Parties to CITES it was called for an end to tiger farming for commercial purposes and for China to phase out tiger farming and destroy stockpiles (CITES StC, 2007).

The eco-tourism industry in TRCs is largely underdeveloped and under managed (Damania *et al.*, 2008). In most countries it is not realized or is inadequately managed. Hence, it appears that even though a variety of efforts have been taken to stimulate eco-tourism, these appear not to be sufficient and not all tiger range areas have been targeted. In some TRCs stimulating eco-tourism has hardly gained any attention.

So far, various efforts have been taken to grant some contract rights; to build capacity to benefit from legal alternatives such as eco-tourism and enforcement activities. Contract rights thus seem to have been paid some attention to. Some good efforts have been taken in this regard such as training (ex)poachers and micro-crediting. Nonetheless, due to the relevance of the capacity to ensure alternative livelihoods that are sufficient to sustain in a basic income, more attention to contract rights is needed. Especially considering that not all people that are directly impacted by poaching laws and trade bans have actual capacity to conduct alternative practices.

Effective revenue sharing mechanisms, either from eco-tourism or other types of tiger-friendly activities, have only been put in place in a few TRCs. The accruing of benefits to local communities through the granting of effective property rights is thus generally limited. Consequently, local people's capacity to directly benefit from participation in the eco-tourism industry or from other alternative practices, and indirectly benefiting through revenue sharing schemes has received limited attention. Hence, it appears that overall property rights and contract rights that specifically ensure that marginalized people can benefit either directly or indirectly from eco-tourism or tiger conservation have not been sufficiently built.

Overall equity rights in respect to tiger conservation are limited or not granted at all. In general, it can be assumed that benefits derived from the eco-tourism industry only favour wealthier households who have access to capital required to participate in this industry, especially without effective contract rights. Equity rights in respect to tiger conservation seem not to have gained any attention yet in any TRC. Even where revenue sharing mechanisms are in place, it can be questionable whether these revenues are actually distributed on an equal basis. Kumar (2002) and Thoms (2008) conducted research in India, respectively Nepal, and showed that revenues frequently benefit elites rather than marginalized people. Equity mechanisms that ensure the equal distribution of e.g. revenues were not found during the preliminary assessment.

Livestock compensation mechanisms that provide direct compensation for livestock kills are currently only in place in the Russian Far East. China has started a pilot programme for losses caused by key protected wildlife, especially by tigers (GTRP, 2011). Around the Corbett Tiger Reserve, India, WWF-India and the Corbett Foundation is running an interim cattle compensation scheme (WWF website). In this area it seems that retaliatory killing has become almost nil. Such schemes thus appear very effective. Direct compensation for losses of livestock to tiger predation is crucial considering the high costs of losing even one animal to tiger predation, particularly for impoverished households. However, even though human-tiger conflicts are highly acknowledged and do receive attention, it is generally mostly dealt with by mitigating efforts in terms of tiger response teams or relocating problem tigers (GTRP, 2011; NGO websites). Compensation schemes are considered too expensive (GTI, 2010). Yet, those who kill tigers to protect their livestock and/or a basic income are currently primarily targeted for punishment only, whereas the process of detection is also inherently costly (Brack, 2004; Hayes, 2007; Holmern *et al.*, 2007; Keane *et al.*, 2008).

The granting of sufficient rights to local people of TRCs are a necessity to ensure that the costs of tiger conservation do not have to be borne disproportionately by local people or more particularly by marginalized people. These rights are needed to ensure that local people, including marginalized people, can benefit either directly or indirectly from alternative practices in an equal manner. Also, they are crucial for reasonable

compensation of negative consequences of tiger conservation policies. However, in respect to tiger conservation overall efforts that build on local communities' rights are limited. The consequences of this overall lack of rights are illustrated in the next section by examples and/or expectations in respect to the potential costs and benefits and perceptions of legitimacy.

Table 14 provides an overview of the activities that are to be taken through the GTRP. This shows that through implementation of the GTRP in the future, it can be expected that more rights will be granted to local communities. Nonetheless, it also shows that even with successful implementation of the GTRP, specific rights will still be lacking, especially in several TRCs. In Myanmar it even seems that no rights are currently granted to local communities and even implementation of the GTRP will not build on these rights. It further has to be noted that these rights are not yet granted and Table 14 merely serves as an overview of rights granted to local people if the NTRPs can actually be implemented as expected.

Table 14: Possible future rights granted to local communities based on activities to be taken through the GTRP (source: GTRP, 2011).

TRC	Rights	Activities to be taken through the GTRP
Bangladesh	UR	Alternative income generation projects.
	PR	Benefit sharing programs.
	CompR	Compensation funds, insurance support.
Bhutan	UR	Community-based eco/nature tourism.
	PR	Revenue-sharing from hydroschemes.
	ContrR	Micro-credit scheme and micro-enterprise projects.
	CompR	Community-based livestock insurance programs.
China	UR	Explore and demonstrate tiger-friendly economic development models for local better livelihoods.
	CompR	Compensate injury to human and property losses from tigers and their prey, adopt proactive measures to prevent injury and losses.
Indonesia	CompR	Enhancing human-tiger conflict mitigation.
Nepal	ContrR	Integrated/alternative livelihood programs.
	PR	Payment for conservation of ecological/environmental services.
	CompR	Effective, proactive human-tiger conflict mitigation program.
Thailand	UR	Wildlife-based ecotourism.
	PR	Concrete benefit sharing.
	GR	Empowering local communities.

UR=Use Rights, PR=Property Rights, ContrR= Contract Rights, CompR= Compensation Rights, GR=Governing Rights

7.5.2. Costs and benefits

The enactment of poaching laws and trade bans led to an illegal status of the tiger hunt and trade, and consequently an increase in prices and an increase of illegal gains. Annually 10 billion US\$ are made from the trade in tigers and their parts (NGO websites). Up-listing a species in CITES generally results in a major increase in prices (Rivalan *et al.*, 2007). Rivalan (2007) shows the increase of prices of rhino horn on Korean markets by more than 400% within two years of its up-listing in CITES and a corresponding major increase in poaching and illegal trade. In respect to poaching laws and trade bans, penalties are very high, i.e. 5-12 years of prison terms (GTRP, 2011). In practice, penalties are hardly ever provided (Damanian *et al.*, 2008). As discussed, imposing such high fines can be morally questionable (Keane *et al.*, 2008; Sutinen & Kuperan, 1999). Also, strictly enforcing laws can be strongly opposed by society that can ultimately lead to denunciation of authorities if they would actually impose such high fines.

In respect to social sanctions, it appears that negative social sanctions are hardly imposed. The scale on which such activities are conducted implies an overall acceptance of the activities. In Sumatra, for instance, at least 10% of the retail outlets showed to sell tiger parts (Ng & Nemora, 2007), which suggest that a large part

of the Sumatran community is somehow involved in the illegal tiger trade. In Indonesia and many other places, it can therefore be assumed that social sanctions are not imposed to deter the tiger trade. Social sanctions might even be positive due to a certain social status. According to the World Bank (2005), the popularity of Traditional Chinese Medicine (TCM) increases which seem partly supported by the rise in personal wealth and 'the status gained by consuming rare and exotic species'. Hence, it appears that instead of negative social sanctions, it is more likely that positive social sanctions are provided in respect to the hunt, trade and use of tigers and their parts. In respect to the tiger hunt and sale, benefits are high, whereas legal sanctions are limited, possibly relating to confiscation only.

Conducting legal activities is, in most places limitedly beneficial. As outlined, only a few efforts have been taken to increase the capacity to participate in the eco-tourism industry, which have certainly not been taken in all TRCs (see Table 10 and 11). Also, limited efforts have been taken to increase capacity to participate in other legal activities such as enforcement activities. Even though efforts have been taken, these are still limited. Costs of participating in the eco-tourism industry are currently high and capacity to benefit limited. Participation in the eco-tourism industry requires a specific set of capital, such as venues and skills. In order to benefit from eco-tourism one needs venues such as hotels or kiosks, language skills for being a tourist guide or host, access to specific social networks or specific experience. Benefits might be limited due to the lack of such capital. Inexperience and the lack of capital can make participating in the eco-tourism industry uncertain, and the capacity to benefit and reduce costs vulnerable. Also, local people might even have limited bargaining power in respect to international tour operators, which further reduces the potential benefits from such practices. Hence, it appears that net benefits of the tiger hunt and sale largely outweigh the potential costs and benefits of legal practices.

7.5.3. Legitimacy

As previously discussed, a centralised approach is not likely perceived as legitimate. Most legal instruments appear to be restrictions-based centralised instruments, in particular the CITES tiger trade ban. National trade bans and poaching laws are also often the result of international pressure. Poaching laws and trade bans are therefore unlikely perceived as legitimate by local people inhabiting TRCs. Even though in some specific areas, perceptions of legitimacy might have been increased considerably due to e.g. compensation schemes or micro-credit schemes, overall, limited efforts seem to be taken to increase local people's perceptions of legitimacy due to the primary focus on punitive mechanisms.

The Compliance Framework integrated four factors relating to perceptions of legitimacy, i.e. equality, accountability and local effectiveness. Since costs of tiger conservation are generally borne disproportionately by local people, whereas benefits are for the larger community, equity in respect to tiger conservation is limited. Moreover, costs of tiger conservation include human attacks and livestock predation and citizens of TRCs thus have to bear high costs for tiger conservation. Equity at a more local level is also limited since marginalized people generally pay higher costs for tiger conservation than wealthier households. Poor households have very limited capital to benefit from eco-tourism or other legal activities, and are more vulnerable to the negative consequences of tiger conservation such as losing livestock to tiger predation. In conclusion, costs of tiger conservation have to be borne disproportionately by local communities, and in particular by marginalized people.

The level of equality in governance processes is also limited. Not only does it appear that developing countries have little bargaining power compared to western countries, the interests of local communities and especially the interests of local hunters and dealers or retail outlets, seem not to be represented in the international decision-making process. Due to the centralised governance approach and the lack of capacity for local governance, the implementation of equity mechanisms is difficult if not impossible. The international authority is consequently not directly accountable to local communities.

In respect to local effectiveness, poaching laws and trade bans strictly prohibit the hunt and trade and do not provide any legal right to locally adaptable harvesting rules. The CITES tiger trade ban, for instance, applies to all regions in the same manner. Poaching laws and national trade bans also strictly prohibit the tiger hunt and sale. Hence, it appears that even though many spatial differences exist, rules cannot be adapted to the diversity of local constraints, functions of tigers or other locally specific circumstances.

Considering the difference in population numbers, values of the tiger for local people or potentials of eco-tourism for the different regions, a specific focus of tiger conservation programmes and/or priorities could suit a specific region. For instance, values of the tiger can range from deriving benefits primarily from poaching and trade to a better developed eco-tourism industry, requiring a different focus of the financial and technical means. Malaysia, Indonesia and Myanmar are most subject to poaching and most smuggling routes go through Thailand and Vietnam (ASEAN-WEN, 2010). In these countries, eco-tourism is not realised or is inadequately managed (Damania *et al.*, 2008). For the local people in these countries the tiger might be worth more dead than alive, even though eco-tourism might theoretically have more potential for income generation as is often claimed (NGO websites). In India and Nepal, quite some effort have been made to stimulate eco-tourism. Nepal is considered to be most advanced in respect to eco-tourism development (Damania *et al.*, 2008), and hence a punitive approach could perhaps be the primary focus. The Russian Far East does not provide suitable conditions for eco-tourism due to the low numbers of tigers (Damania *et al.*, 2008). The Russian Far East is, however, also one of the most sparsely populated areas in the world (Wikipedia, 2010) and tiger conservation might consequently be a less complex task compared to other regions.

These varieties imply a difference in either legislative instruments or focus of tiger conservation programmes. Nonetheless, various tiger landscapes that appear to be in need of programmes that build on local people's rights do not seem to be sufficiently targeted by conservation programmes, whereas they are nonetheless expected to achieve compliance with poaching laws and trade bans that imposes strict restrictions.

In respect to effectiveness in general, it seems that since tiger populations are still declining, poaching laws and trade bans are currently not effective in preventing a further decline of tigers. In light of effectiveness of a wildlife ban in general, it is even debated whether such a trade ban can actually be effective (Khanna & Harford, 1996; Lindsey *et al.*, 2006; Rivalan *et al.*, 2007).

7.5.4. Morality and self-interest

Morality and self-interest in respect to the tiger hunt and sale and tiger conservation are influenced by external factors, i.e. the perception of legitimacy and the potential costs and benefit. They are also triggered by more or less internalised factors. A good insight is needed regarding the extent to which the international regime of tiger conservation ultimately respects morality and self-interests of local communities. To this end, an understanding is required of the self-interest relating to tiger conservation and moral opinions towards the tiger hunt and sale as well as tiger conservation, viewed from situations in which no external efforts are taken that specifically back-up or positively influence morality and self-interest of local people.

As was shown, the costs of tiger conservation in respect to human and livestock predation is high. Capacities to sufficiently benefit from tiger conservation through e.g. eco-tourism, showed to be limited. Hence, it appears that without interventions, either initiated by governments or the international community, tiger conservation is in most places not in the best interest of local communities.

In respect to morality, the role of norms and values was highlighted. It is therefore important to gain an understanding of the norms and values regarding the hunt and trade of tigers and their parts. Such an understanding provides a better insight into the extent to which the international regime of tiger conservation respects the moralities of local communities. To this end, norms and values of the tiger hunt and trade is discussed below.

Norms and values of the tiger hunt and trade

The tiger has been hunted for centuries due to its predatory characteristics and as game (NGO websites). In many places, tigers were considered pests up until a century ago (Corlett, 2007; Lynam *et al.*, 2006). Hunting wildlife species in Asia in general has proven to be sustainable for centuries and tropical mammals have been hunted for at least 40,000 years (Corlett, 2007). Yet, regional declines in population numbers of most wildlife species have only occurred within the last 50 years. Unsustainable hunt of the tiger seems to be occurring since the early 20th century and drastic declines in population numbers seem to be occurring at an accelerated rate ever since (NGO websites). It can therefore be assumed that the tiger hunt has long had normative roots within many Asiatic countries. Since poaching still takes place on a massive scale, in many places it still might be more or less the norm to hunt tigers and trade in their parts.

The tiger has high values within the TCM which dates back at least 3000 years and is an 'indispensable part of China's cultural heritage' (World Bank, 2005). The tiger hunt and sale seems to be strongly embedded in the culture of the Asiatic region and the use of tiger parts has a long history of medicinal and cultural values. Since these values are deeply integrated in people's daily lives, externally imposing a shift in moral opinions, is not a real option and is a rather complex task. Even governmental influence in respect to these aspects might be limited. Awareness campaigns and education are indeed needed to positively influence morality towards tiger conservation. Accountability of the scientific community might, however, be limited to local communities. In many places people are still convinced of the medicinal capacities of tiger products and thus the present value of tiger products within the TCM needs to be respected, even in international law.

High spatial varieties in morality towards the tiger hunt and sale seem to exist. As discussed above, the tiger might have different values for local communities in the different regions. For some countries the value of the TCM is higher than for other countries (NGO websites). In other countries the tiger might have relatively high values for the eco-tourism industry and tigers are worth more alive than dead. Hence, morality towards the tiger hunt and trade can thus differ among TRCs.

Moral opinions regarding the tiger hunt and sale also vary between TRCs and non-TRCs. People living in TRCs are faced with the risks of loss of livestock and human predation by tigers, whereas elsewhere these costs do not have to be borne. For non-TRCs and international environmental organisations, the tiger is often considered an exotic species. They do not have to pay the price for tiger conservation and can afford to have a strong moral reasoning towards strict protection of the tiger. In respect to a wildlife ban in general, western developed nations are considered 'the most ardent proponents of the ban' whereas they provide relatively limited aid to the implementation of such a ban (Khanna & Harford, 1996). Funding organisations are mostly from non-TRCs (NGO websites). A CITES resolution is also adopted by the COP representing all Parties to CITES, which includes more non-TRCs than TRCs.

In conclusion, within many TRCs and consuming countries, the tiger hunt and trade have strong normative roots within society and tiger products have high values within the TCM. It might therefore be considered a morally right thing to do or at least not a morally wrong thing to do. For many environmental organisations the tiger is an exotic animal and these organisations can afford to have strong moral reasoning towards strictly protecting the species.

Hence, it appears that without measures that enable specific integration of the interests of local people directly interacting with tigers, there is a chance of over-representing morality and interests of non-local actors. Since the interests and moral opinions of local people do not seem to be backed-up or positively influenced by the international regime of tiger conservation, it appears that the regime seems to be primarily backing-up morality and interests of the non-local actors. The varieties in morality between TRCs and the international community might consequently be a crucial factor of the flaws of tiger conservation policies. Moreover, the international community seems reluctant to sufficiently pay for the tiger's survival and thus to build on sufficient rights for local communities (NGO websites), but TRCs are often faced with impoverished households that can also not incur the high costs of tiger conservation.

7.5.5. Compliance with poaching laws and trade bans

Economic, cultural and medicinal values of the tiger hunt and trade are high and costs of conservation are considerable due to human and livestock predation. Hence, granting people specific legal rights and providing effective incentive-based compliance mechanisms that build on right for local people are a prerequisite to ensure that poaching laws and trade bans are sufficiently backed-by morality and self-interest of local people.

The international regime of tiger conservation adopts a restrictions-based centralised approach to establish poaching laws and trade bans. These legal provisions, such as the CITES tiger trade ban, relate to strictly prohibiting the tiger hunt and sale. The international regime also primarily adopts a punitive-based approach and relatively limited attention is given to incentive-based compliance.

Consideration of the main features of law compliance as indicated in the Compliance Framework concludes the following. First, the international regime of tiger conservation does not seem to make sufficient attempts to develop legislative instruments that grant local people legal rights relating to the tiger. Second, the regime focuses financial and technical means primarily on punitive measures and only a few programmes have been build on rights for local people. Consequently, the rights of local communities in respect to tiger conservation is limited.

Even though some programmes build on the capacity to benefit from legal alternatives such as eco-tourism and enforcement, such programmes are only limitedly initiated and supported. Also, such programmes are not initiated in all tiger landscapes. The potential net benefits of legal activities are low, especially compared to the net benefits of the tiger hunt and sale. Whereas illegal gains are high, penalties are hardly imposed.

Programmes that compensate livestock killed by tigers are very limited and are certainly not implemented in all tiger landscapes. Equity mechanisms that increase the level of equity are also not in place. Hence, it appears that the costs of tiger conservation are paid disproportionately by the local communities, whereas benefits are generally for the larger community.

In conclusion, the limited rights granted to local people lead to perceptions of legitimacy and potential costs and benefits that are currently not backing-up or positively influencing morality and self-interest of local people regarding tiger conservation. Hence, it appears that the approaches currently adopted under the international regime of tiger conservation are not adequate to protect the tiger. Also, the efforts taken under the regime to build on rights for local people are not sufficient to achieve a level of compliance with poaching laws and trade bans to prevent a further decline of tiger populations.

7.6. Discussion on relevance of poaching laws and trade bans

7.6.1. Potential of regulated hunt and trade for wildlife conservation

Based on the findings of this study, well managed regulated tiger hunt and trade that is embedded within a rights-based local governance system will have considerable positive effects on tiger conservation. The effectiveness of well managed regulated hunt and trade in respect to wildlife conservation as opposed to a total ban has been stressed by a variety of authors (Lindsey *et al.*, 2006; Milner-Gulland & Leader-Williams, 1992; Stiles, 2004). Empirical data provided by a study of Lindsey *et al.* (2006) supports the argument that well managed trophy hunt can increase the effectiveness of conservation efforts. They illustrate this in respect to the recovery of the white rhinoceros (*Ceratotherium simum*) in South Africa where trophy hunt contributed

successfully to conservation. Milner-Gulland & Leader-William (1992) also argue that 'it is more practical for management authorities to keep hunting at sustainable levels than to attempt to stop it altogether'. Stiles (2004) argues that 'conservation and public welfare are better served by legal trade than a ban' if monitoring and regulation measures are effective.

If the trophy hunt is well managed, it allows for benefits accruing to local communities (Lindsey *et al.*, 2006). Trophy hunting can therefore even be considered crucial for revenue generation. There is a significant market for conservation friendly hunt and people are willing to pay for trophy hunt, which can only contribute to conservation if regulated trade is allowed. A hunting ban, however, pushes the trade underground (Lindsey *et al.*, 2006). With a total ban on hunt and trade, the profits from the hunting and trade industry are only made within the illegal circuit and only a few people gain from such activities such as corrupt government officials, wealthy importers and a few middle-men (Corlett, 2007; Hemley, 1995). Also, studying incentives to hunt is but a by-product of studies and is unlikely to provide qualitative data due to the illegal status (Keane *et al.*, 2008).

Furthermore, well managed regulated hunt and trade can provide an incentive to the people that are involved in the industry to ensure sustainable use since it provides capacity for the continuation of the practice. Incentives for conservation could thus increase if hunt and trade are allowed. If population numbers increase, more use could be made in the hunting and trade industry and hence it is in the beneficiaries' best interest to ensure larger population numbers.

A legal hunting industry also allows for the potential of the industry to pay for conservation. Hemley (1995) argues that a broad variety of costs are increasingly paid by the user industry. Without a legal hunting industry, however, these costs cannot be covered by the hunting industry and illegal revenues cannot be used for conservational purposes.

Furthermore, rules within a legal framework of regulated trade can encompass rules for selective hunt. Methods that ensure selective hunt are often more effective than introducing quotas (Lindsey *et al.*, 2006). Illegalising the hunt diminishes incentives for selective hunt and frequently results in detection avoidance behaviour (Gibson & Marks, 1995). In case of a total ban, both types of hunting, selective and non-selective, will be as illegal and punished as severely. Since selective hunt is considerably costlier and less beneficial than non-selective hunt, for instance because it does not require specific selectivity tools or reduced times of hunting, it is likely that selective hunt will not occur. Selective hunt is then not in people's self-interest since the continuation of the practice is, at least at the time of the ban, prohibited. By introducing and implementing specific regulations that provide capacity for legal use rights in the hunting and trade industry within certain limits, can thus increase effectiveness of conservation.

In respect to the rights as discussed in this report, regulated hunt can provide considerably more capacity for use rights, property rights and governing rights. Also, less compensatory mechanisms would be required since negative consequences will be less. The level of equity can also be more easily perceived as sufficient since costs for conservation do not have to borne as disproportionately as with a total ban. As a result, regulated hunt and trade as compared to a ban can result in higher perceptions of legitimacy, and the capacity to benefit from legal activities is higher. Consequently, regulated hunt and trade has considerably more potential to back-up morality and self-interest than a total ban, and ultimately to achieve law compliance.

Hence, it appears that regulated hunt and trade can be more effective for wildlife conservation than a total ban. The specific set of rights, and in particular contract rights and equity rights, do appear crucial to ensure that local people, including marginalized people, have sufficient capacity to participate in the industry and can actually benefit and reduce the costs of such participation, or ensure sufficient indirect benefits through granting property rights. A constraint to successful trophy hunt relates to the complexities of distribution of hunting revenues (Lindsey *et al.*, 2006). Sufficient rights are thus a prerequisite for the success of regulated hunt and trade.

7.6.2. Regulated hunt and trade in respect to tiger conservation

Arguing for regulated hunt and trade in respect to tiger conservation will meet major resistance by the international community. It is being argued that because the number of tiger populations has decreased considerably and only a few tiger populations survive today, hunt and trade bans are absolutely necessary for the species' survival. Moreover, due to the drastic decline of wild populations, a punitive approach is often considered the only suitable approach for the tiger's survival (NGO websites). Even authors that do provide empirical data to suggest the effectiveness of legal trade, do not suggest for lifting, for instance, a CITES ban in general. Stiles (2004), for instance, argues that elephant conservation can be more effective with a legal ivory trade than with a trade ban, but before effective regulations and monitoring mechanisms are in place to ensure sustainable hunt, it is premature for CITES to permit ivory sales.

Another reason for advocating for total restrictions on the hunt and trade of tigers and their parts, relates to the argument that a legal market provides opportunities for laundering illegally derived products (e.g. TRAFFIC website and WWF website). This assumingly jeopardises conservation efforts. However, according to Stiles (2004) 'there is little evidence to support claims that the 1999 southern African ivory auctions stimulated ivory demand or elephant poaching'. Moreover, if a legal market exists, prices for illegal products decreases and incentives for illegal activities consequently reduces.

Furthermore, the immorality of international organisation and non-TRCs towards the tiger hunt and sale is considerable. Allowing regulated hunt and trade or lifting the CITES tiger trade ban will not be supported by the international community. Such a proposition will meet major resistance within the international regime of tiger conservation. Since international organisations provide a substantial part of the funds for tiger conservation, the influence of these NGOs appear to be considerable and their contribution is crucial. Since there are limits to moral suasion, the moral opinions of the international community will have to be taken into account to ensure the tiger is being successfully conserved. Policies should therefore not only be in line with local people's morality and self-interest, yet also with morality and interests of global organisations in order to be funded. Allowing for regulated trade and hunt is thus unlikely to be a realistic solution. Nonetheless, it seems that poaching laws and trade bans currently only back-up morality and interests of the 'western' actors of the international regime, rather than those of local actors.

Drastic measures are needed to prevent the tiger from going extinct in the wild since only a few tiger populations survived and numbers are drastically declining. However, incentive-based tiger conservation should have been a first response to the decline of numbers of tigers, and introducing poaching laws and trade bans a second response. Considering the basic social principles of law and particularly considering the high costs of tiger conservation and limits on the use of punitive measures, rights-based policy seems crucial for the protection of the tiger.

This study provides a guideline for environmental organisations to improve their contribution and gain a better understanding of the aspects that play a role for compliance behaviour in relation to tiger conservation. The understanding should go beyond simply mitigating tiger-human conflicts and raise awareness of the ecological consequences. Awareness should primarily be raised of the social constraints faced by TRCs, and the consequent necessity of finances for the success of tiger conservation. Even though the development of alternative livelihoods receives attention, this is too limited, especially compared to enforcement activities. Moreover, contract rights, property rights and equity rights in respect to these alternative practices should also receive considerably more attention. Compensation rights are also crucial to compensate the negative consequences.

Most important now is to shift primary focus from a punitive approach to the development of effective incentive-based compliance mechanisms that build on local communities' rights in respect to tiger conservation. Additionally, legislative mechanisms that ensure a rights-based governance system could further contribute to successful tiger conservation. Thus, instead of using means and funds primarily for punitive mechanisms for existing tiger laws, these means could better be used in respect to a rights-based approach.

7.7. Conclusion

In this chapter, the theoretical findings of previous chapters are further tested in respect to tiger conservation. Numbers of wild tigers are drastically declining and the tiger is listed as endangered on the IUCN Red List. To test the relevance of the Compliance Framework, it is assessed whether the overall approaches currently adopted under the international regime of tiger conservation, are adequate to prevent a further decline of tiger populations.

The international regime of tiger conservation is primarily constituted by global GOs and NGOs active in the field of tiger conservation. Outcomes of the regime are primarily based on the interests of the international actors that have certain influence on regime formation. International legislative mechanisms are administered by UNEP. Particularly the CITES tiger trade ban is a prominent legal tool for the protection of the tiger. This also resonates in national legal tools, i.e. national tiger trade bans and poaching laws. Another major actor of the current regime is the GTI, which represents many global environmental organisations. As a consequence of the relative influence of 'western' actors of the international regime, the regime is mostly viewing tiger conservation from a western perspective in which the tiger has gained a status as 'exotic species'. Consequently, the actors of the regime have been strongly advocating for poaching and trade bans that strictly prohibit the tiger hunt and trade.

From the assessment of the primary approaches adopted under the international regime of tiger conservation, it can be concluded that a) poaching laws and trade bans are established through a restrictions-based centralised approach, and b) primarily a punitive approach is adopted to achieve compliance with the legal provisions. Consequently, poaching laws and trade bans only impose restrictions and do not provide a legal basis for rights for local people. Also, effective incentive-based mechanisms that build on local people's rights have only limitedly been put in place. Those efforts that have been taken relating to rights-based mechanisms are generally primarily focused on specific areas, thereby excluding several tiger range landscapes.

As a consequence of the lack of rights, the potential net benefits of illegal activities relating to the tiger hunt and trade outweighs that of legal activities. Furthermore, due to the high costs of conservation in terms of human and livestock predation, costs of tiger conservation have to be borne disproportionately by local communities and in particular by marginalized people. The perceived level of equity is low and perceptions of legitimacy therefore limited. Furthermore, norms and values of tiger hunt, sale and use are generally not in favour of tiger conservation. The tiger hunt and sale has in most places for local people higher economic values than of its potential use in the eco-tourism industry. Tiger products have also high cultural and social values, and are highly valued for the TCM.

Based on these findings it is concluded that poaching laws and trade bans and the efforts taken to achieve compliance are currently not sufficiently backing-up and/or positively influencing morality and self-interest of local people. Rather, the legislative instruments and their enforcement are based on the interests and moral opinions of the non-local actors of the international regime. The approaches currently adopted under the international regime of tiger conservation, and the efforts taken to conserve the species are not adequate, nor sufficient to prevent a further decline of tiger populations.

Regulated hunt and trade would be more effective measures for conserving wildlife species than setting and enforcing strict restrictions. A further adaptation of the existing legal framework for tiger conservation and approaches to law compliance is therefore more effective than emphasising financial and technical means on punitive mechanisms for the enforcement of poaching laws and trade bans. However, simply lifting tiger trade bans and introducing regulated tiger hunt is not a practical solution. Such measures are contrary to the morality of the international public as represented in the activities of the large donors, whose funds are crucial for tiger conservation. Nonetheless, more attention should be given to supplement the punitive mechanisms with the development of incentive-based compliance mechanisms that ultimately positively influence morality and self-interest of local communities. Additionally, legislative instruments that strengthen a rights-based governance system could further contribute to the protection of the tiger.

8. Reflection on research approach

Reiterative research approach

The research started from a concern that many wildlife species are threatened with extinction. From an academic background, knowledge was gained in respect to social and legal complexities of wildlife conservation in developing countries. This showed that without mechanisms that solve the complex problems, the tiger and many other wildlife species are likely to go extinct. Yet, many environmental NGOs focus primarily on conservation and the social and legal complexities of developing countries are often only limitedly addressed. The report of TRAFFIC South East Asia (Ng & Nemora, 2007) that urges to close down retail outlets that sell tiger parts was quite alarming due to its appeared negligence of considering local people's needs and possibly limited capacity to actually comply with tigers laws.

The tiger is an endangered species facing a decline in population numbers and its range encompasses a large part of the underdeveloped Asiatic region. Conservation of the species is a rather complex task, particularly since the species is subject to excessive hunt due to its market value and its threat for livestock and human predation. Moreover, since the species is considered an umbrella species for the Asian tropical ecosystem and an indicator of ecosystem health, tiger conservation appeared suitable to be subject of a study in respect to non-compliance behaviour in developing countries.

Originally, the intention of this study was to assess issues relating to law enforcement and the capacity to comply with laws protecting the Sumatran tiger in Indonesia, particularly in response to the TRAFFIC report. Such a case study was expected to provide data applicable to tiger conservation in other areas and endangered wildlife conservation in general. A conceptual framework was to be elaborated in respect to issues relevant for law enforcement and for gaining an understanding of non-compliance behaviour in respect to tiger conservation, applicable to studying compliance with laws protecting the Sumatran tiger. To this end, the legal instruments in place to protect the Sumatran tiger and the tiger conservation programmes were to be assessed against the theoretical framework of law compliance.

For the elaboration of the theoretical framework specific attention was given to the social constraints of tiger conservation in developing countries. At the start of this study laid the hypothesis of poverty limiting capacity to comply with laws strictly protecting tigers. In this respect, it was further hypothesised that rights granted to local people in respect to tiger conservation would play a considerable role for law compliance. Ultimately, for the elaboration of the theoretical framework specific attention was given to the relevance of legal issues such as basic social principles and basic human rights in respect to wildlife conservation.

Reviewing the conservational literature in respect to the elaboration of such a framework showed a substantial gap between theory on legal issues such as social principles of law and the practice of wildlife conservation to the ground. In respect to rights, scientific literature showed to address property rights and the need for decentralisation. A systematic attempt to address a bundle of specific rights, however, could not be found.

To elaborate the conceptual framework of law compliance as presented in this study, an extensive literature study was conducted of legal issues that were relevant for compliance with wildlife laws, and that could be tested in respect to tiger conservation. During this process, much more attention than originally anticipated was given to theoretical underpinnings, such as social legal principles and the relevance of a bundle of rights. An important step in this study was, for instance, to analyse whether a specific set of laws showed suitable to provide a legal basis for the integration of a bundle of core rights in frameworks of wildlife conservation. The integrative research design made such an analysis possible.

As a consequence, the objective of this study turned away from conservation of the Sumatran tiger towards the conservation of the tiger in general. Moreover, due to the expected potentials of such a framework to improve policies and efforts taken to achieve law compliance, the focus of this study shifted even further away towards wildlife conservation in general and less on tiger conservation *per se*. Studying compliance with tiger laws eventually attained relatively limited attention. Due to time constraints only a preliminary assessment of the adequacy of approaches under the international regime of tiger conservation could be done. Consequently, only the emergent characteristics of tiger conservation programmes were studied, rather than studying the programmes in full detail.

Also, the initial review of the literature showed a close link between compliance and enforcement. Since this study originally related to enforcement and the capacity to comply, an analysis was conducted of the concept of law enforcement and the capacity of law compliance, and their relevance for this study. Based on this analysis, the focus shifted away from enforcement towards various issues relevant for law compliance.

Reflection on Compliance Framework as analytical model

An important feature of this study was the elaboration of the Compliance Framework. Although this framework was presented in the beginning of this process as a structuring element for data presentation, it forms a major outcome of the theoretical study. A strong attempt was made to provide a comprehensive framework representing relationship between the various dimensions and issues for law compliance.

In respect to the relations between the concepts of the Framework, more additional linkages could be drawn between the boxes of the schematic overview of the Framework. For instance, linkages could be drawn between equality of the process and equity of the outcome, or equity rights and the other types of rights. Also, additional concepts could be integrated in the framework such as the relevance of norms and values. Integrating additional linkages between the concepts and/or adding additional concepts, however, reduces the comprehensiveness of the framework.

Testing the conceptual framework

As illustrated by the initial case-study, the Compliance Framework provides a promising tool to study law compliance. It can be used to a) assess the existing approaches towards achieving law compliance and to gain a better understanding of either compliance or non-compliance behaviour in respect to wildlife conservation, and b) assess the adequacy of legal instruments and develop new legal instruments. Thus, the Framework can provide useful information to policy makers and environmental organisations to develop effective legislative policies and mechanisms, and to adopt effective implementation approaches for achieving improved law compliance in respect of endangered wildlife conservation.

The Compliance Framework can best be used from bottom to top to analyse the extent of influence of issues identified in the several dimensions of the framework. Even though the potential costs and benefits and perception of legitimacy are within the same dimension of the framework, it is best to analyse the potential costs and benefits first. Equity as factor of legitimacy is, at least partially, related to the capacity to benefit from and reduce costs of legal activities. Even though morality and self-interest would then become last in the assessment, these concepts have to be considered a central intrinsic factor at all times.

A first attempt was made to categorise the tiger conservation programmes as relating to the specific rights as discussed in this study. This revealed some gaps between theory and practice for which time was too limited to address. For instance, whether use rights only relate to stimulating legal use of the wildlife resource in question, or whether it should also relate to stimulating legal activities in general could be further evaluated. Criminal law does relate to drawing the line between what is legal and what is not. Nonetheless, eco-tourism is,

at least in respect to tiger conservation, the only practice that can provide an actual stimuli to ensure large numbers of tigers due to the need for continuous use rights.

Categorisations of tiger conservation programme as either contract rights, use rights, property rights also showed doubtful from time to time. Even though such difficulties were primarily embedded in the context of lack of information regarding the conservation programmes, it became clear that the bundle of legal rights were basically related to legal aspects and practical aspects could be further evaluated. In the context of this study, use rights related to the stimulation of eco-tourism and property rights to benefit-sharing mechanisms and the right to manage. Contract rights were granted if capacity was actually being built for local people to participate in alternative livelihoods, such as programmes that provide job opportunities to (ex)poachers or micro-credit schemes relating to eco-tourism. In respect to compensation mechanisms a clear distinction was made between actually providing compensation for livestock kills or merely mitigating human-tiger conflicts by eradicating or relocating problem animals. The latter is likely less impacting on morality and self-interest of local people than livestock compensation schemes. The relevance of these and schemes such as compensating families for tiger caused injuries could be further evaluated. Equity rights and governing rights in respect to tiger conservation were not actually found but might be less tiger specific than the other rights. Substituting tiger conservation programmes with additional programmes would thus be required to gain a detailed insight in the granting of such rights.

The preliminary assessment of the approaches and efforts adopted under the international regime of tiger conservation provides a significant first step in respect to understanding non-compliance behaviour relating to tiger conservation. Initially, the tiger conservation programmes were to be studied in full detail but due to time constraints, this could not be done. Supplementing this study with a full analysis of tiger conservation programmes, can provide more reliable data in respect to cost-effective approaches to law compliance in general and in the various TRCs specifically.

Also, a further assessment could be conducted of the various theoretical issues emerging from this study in respect to tiger conservation. Time was too limited to address all theoretical findings. The full analysis of tiger conservation programmes could thus be further supplemented with a full analysis of all the issues indicated in this study. This can provide a better understanding of non-compliance behaviour in all specific tiger range landscapes. Such an analysis can also provide a clear guideline for policy related to tiger conservation and an extensive overview of priority actions for the specific tiger range areas.

9. General conclusions

Limited efforts have been made to gain a systematic understanding of non-compliance behaviour in respect to wildlife conservation in developing countries. Basic social principles of law and law compliance receive little attention by conservationists. Reviewing social principles of law shows that lacking a consideration of these principles can lead to inadequate legislative mechanisms and ineffective approaches in respect to law compliance.

Considering law compliance, three basic social principles of law can be distinguished as being central to most legal systems, i.e. a) laws are established to back-up morality and self-interest; b) law aims to impose restrictions but also to grant people specific rights; and c) governing authorities are subject to the rule of law, relating to mechanisms that impose limits on governments' powers, and expressing that authorities are generally bound to govern in favour of morality and self-interests of local communities and respect basic human rights. These principles should gain further attention in studies of law compliance in wildlife conservation.

Particularly the relevance of issues relating to the rule of law should be systematically evaluated in respect to compliance with wildlife laws. Aspects relating to the rule of law, such as differences in subjection to laws, limits of government's powers and limits of punitive mechanisms, have not received any attention yet in the context of international regimes of wildlife conservation. At present, many conservationists simply advocate for increased levels of penalties and increased efforts to detect violators of wildlife laws, without systematically addressing the issues relevant for the success of enforcement. The actual constraints towards the imposing of severe penalties in respect to violations of restrictions-based wildlife laws have not been systematically studied yet. The fact remains, however, that even though efforts are increased to detect law violators, in practice penalties might only be limitedly imposed. Contextualisation of the reasons for not imposing penalties has currently received only limited attention.

Evaluating the relevance of issues relating to the basic social principles of law and law compliance should gain further attention in order to gain a better understanding of non-compliance behaviour regarding wildlife conservation. Instead of attributing the ineffectiveness of conservation policies to limited political will of government authorities to enforce wildlife laws, as is often implied within conservational settings, the ineffectiveness of wildlife laws and lack of enforcement might be primarily related to social principles of law. Knowledge gained in disciplines of law and law compliance should be further extended towards international governance of wildlife species.

From the theoretical analysis of the issues relevant for law compliance, it is concluded that a rights-based approach is an effective approach for wildlife conservation. This main conclusion can be elaborated into two additional conclusions. Firstly, a rights-based local governance approach is considerably more effective for wildlife conservation than a restrictions-based centralised governance approach since it is more likely that laws are established that back-up morality and/or self-interest of local people. Achieving law compliance with such laws can be considerably less costly and less complex than achieving compliance with restrictions-based centralised laws. Secondly, an incentive-based approach that builds on rights for local people is considerably more effective than a punitive approach. In an incentive-based approach, the main focus is on backing-up and positively influencing morality and self-interests of local people, thereby taking into consideration the main issues relevant for law compliance. In this approach, the use of punitive mechanisms remains important but as an additional tool only. A punitive approach only influences the willingness to comply by negatively influencing self-interest of non-compliance behaviour, and is inconsiderate of factors relating to the capacity to comply.

The theoretical analysis resulted in the identification of a Compliance Framework in which the main issues impacting on law compliance are identified. This Framework was used to assess whether it can be

expected if the approaches currently adopted under the international regime of tiger conservation can achieve a reasonable level of law compliance. The analysis indicated that the international regime of tiger conservation does not seem to be sufficiently considerate of the full range of the basic social principles of law and principles of law compliance. Poaching laws and trade bans are primarily embedded in a restrictions-based centralised governance system, and primarily a punitive approach is adopted in respect to law compliance. Limited efforts are taken to grant local people specific rights that could subsequently increase the extent to which the regime backs up local people's morality and interests.

Since non-local actors of the international regime of tiger conservation are the largest donors and their finances are a prerequisite for the conservation of the species, their morality and interests seem to dominate the regime's outcome, rather than the morality and interests of local people directly interacting with tigers. The moral opinions of the international public-at-large should be considered. There is, however, currently a strong focus on their concerns, which are reflected in law enforcement approaches stressing financial and technical means for detecting and punishing hunters and traders, often without respecting some basic human rights of local people. The impoverished local communities of Asiatic TRCs are consequently expected to bear the high costs of tiger conservation, e.g. as resulting from human and livestock predation, without sufficiently being compensated or aided in building capacity to benefit from alternative livelihoods.

Considering the extreme decline of tiger populations, radical measures are necessary to ensure their conservation. Nonetheless, a shift is required from punitive mechanisms only, towards stronger efforts to develop effective incentive-based compliance mechanisms in all tiger range landscapes. This should be initiated in order to realise more effective law compliance as well as to properly respect the rights of local communities. Within this context, legislative instruments should be put in place too that provide a legal basis for rights for local communities in relation to tiger conservation.

As illustrated by this explorative case-study, the Compliance Framework provides a promising tool to study law compliance. It can be used to a) assess the existing approaches towards achieving law compliance and to gain a better understanding of either compliance or non-compliance behaviour in respect to wildlife conservation, and b) assess the adequacy of legal instruments and develop new legal instruments. Thus, the Framework can provide useful information to policy makers and environmental organisations to develop effective legislative policies and mechanisms, and to adopt effective implementation approaches for achieving improved law compliance in respect to endangered wildlife conservation.

The overall conclusion of this study is that in order to establish international legislative instruments that are effective for wildlife conservation on the ground, morality and self-interest of local people should be more seriously considered within wildlife conservation policy making. Even though it is difficult to ensure that international laws back-up morality and self-interest of such a broad variety of stakeholders, more attention needs to be given to a rights-based governance approach. A multi-level governance approach in which international law functions primarily to set restrictions and rights to state laws, which subsequently sets restrictions and rights to local laws is highly more considerate of this high variety of moral opinions and interests. A prerequisite for such an institutional level is checking that human rights are actually being respected and that local benefits are justly distributed.

To ensure a rights-based local governance system and developing effective incentive-based compliance mechanisms, substantial funds will still be a prerequisite. Since developing countries have limited financial and technical means to conserve wildlife species on their own, the international community will have to provide the crucial means to adopt a rights-based approach. Without the willingness of the international community to pay for wildlife conservation, many endangered wildlife species, such as the tiger, will face a further decline in population numbers and regional extinctions of wildlife species in the wild will continue to occur.

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Consulted websites of NGOs

List of NGO websites, accessed between 01-04-2011 and 28-07-2011:

Born Free Foundation, www.bornfree.org.uk.
British and Irish Association of Zoos and Aquariums (BIAZA), www.biaza.org.uk.
Care for the Wild International (CWI), careforthewild.org.
David Shepherd Wildlife Foundation (DSWF), www.davidshepherd.org.
Environmental Investigation Agency (EIA), www.eia-international.org.
FREELAND, freeland.org.
Global Tiger Patrol (GTP), www.globaltigerpatrol.org.
International Fund for Animal Welfare (IFAW), www.ifaw.org.
International Tiger Coalition (ITC), www.endtigertrade.org.
Phoenix Fund, www.phoenix.vl.ru.
Save the Tiger Fund (STF) – Panthera, www.panthera.org.
Species Survival Network (SSN), www.ssn.org.
Tigris Foundation, www.tigrisfoundation.nl.
TRAFFIC, the wildlife trade monitoring network, www.traffic.org.
Travel Operators for Tigers (TOFT), www.toftigers.org.
21st Century Tiger, www.21stcenturytiger.org.
WildAid, www.wildaid.org.
Wildlife Alliance, www.wildlifealliance.org.
World Conservation Society (WCS), www.wcs.org.
World Association for Zoos and Aquariums (WAZA), www.waza.org.
World Wide Fund (WWF), wwf.panda.org.
The Zoological Society of London (ZSL), www.zsl.org.