



NATURAL RESOURCE TENURE: KEY POINTS FOR REFORMERS IN EASTERN EUROPE, CAUCASUS, AND CENTRAL ASIA



EAP Task Force

**NATURAL RESOURCE TENURE:
Key Points for Reformers in Eastern Europe,
Caucasus, and Central Asia**



ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The Commission of the European Communities takes part in the work of the OECD.

EAP TASK FORCE

The Task Force for the Implementation of the Environmental Action Programme for Central and Eastern Europe (EAP Task Force) was established in 1993 at the “Environment for Europe” Ministerial Conference in Lucerne, Switzerland. Its Secretariat was established at the OECD. Since its creation, the EAP Task Force has proven to be a flexible and practical avenue for providing support to environmental policy reforms and institutional strengthening in the countries of the region. More detailed information about Task Force activities can be found on its website at: www.oecd.org/env/eap

This report is also available in Russian under the title:

ОСНОВЫ СИСТЕМЫ ПРАВ СОБСТВЕННОСТИ НА ПРИРОДНЫЕ РЕСУРСЫ: ПАМЯТКА РЕФОРМАТОРАМ В СТРАНАХ ВОСТОЧНОЙ ЕВРОПЫ, КАВКАЗА И ЦЕНТРАЛЬНОЙ АЗИИ

© OECD (2011)

No reproduction, copy, transmission or translation of this publication may be made without written permission. Applications should be sent to OECD Publishing: rights@oecd.org or by fax (+33-1) 45 24 13 91. Permission to photocopy a portion of this work should be addressed to the Centre Français d'exploitation du droit de copie, 20 rue des Grands-Augustins, 75006 Paris, France (contact@cfcopies.com).

INTRODUCTION

This paper provides a brief overview of key aspects of natural resource tenure, and lessons learned from reforms of this element of the institutional framework that is central to any natural resource policy. The paper's main messages are targeted at economic, finance, and environmental protection and natural resource management ministries. Other stakeholders may also find it useful, particularly local-level authorities and the NGO community. Being mainly addressed to a very specific group of countries – the Eurasian transition economies, this overview, however, may be of interest to policy-makers in any developing country.

The paper discusses the following issues: the economic, social and environmental significance of property rights; terminology and global trends in this area; needs and process of a property rights reform and the issue of decentralisation; environmental conditions linked to tenure; and the implementation challenge. Besides a general understanding of modern tenure arrangements, the paper equips policy-makers with a checklist of major points for discussion as part of national-level stakeholder dialogues on tenure reform.

Because of tenure specifics during the Soviet period, when the state was the main (though often “absent”) owner of natural resources, the Eurasian transition economies have been facing a number of “typical” challenges of tenure reforms. These have included, for instance, the difficulty of deciding on the extent and process of privatization, management of concession contracts, setting environmental conditions for the new owners, the enforcement of property rights, etc.

The pressing need to address such challenges stems from the environmental and economic significance of natural resource sectors in these countries. The economic dependency upon natural resources in particular is very high compared to OECD countries: for instance, the share of income generated by natural resources (largely linked with exports of raw materials) may be as high as 35% of the Gross Domestic Product (GDP). Even in cases when the contribution to GDP of natural resource-related sectors is lower, their importance for employment and livelihoods of the poor remains high.

More generally, an adequate management of natural resources is of fundamental importance for an environmentally sustainable and socially oriented growth. If natural resources are degraded economic growth can slow down or even be negative. Natural resources are important assets that can underpin the development of local communities due to their revenue-generation potential and provide a basis for sustainable livelihoods. Beyond economic growth, a sound use of natural resources prevents high costs of measures to compensate the loss of ecosystem services, for instance an impaired resilience to natural disasters and climate change.

The raising demands to establish institutions that reconcile economic and environmental objectives of natural resources use in a way that does not marginalise the poor was the starting point for developing this document. Its preparation was part of a project in Georgia though the results of work on synthesising international experience will clearly benefit other Eurasian countries in transition.

The paper is one of the outcomes of the OECD work to support the integration of environmental and economic policies in the Eurasian transition economies, which is carried out under the umbrella of the Task Force for the Implementation of the Environmental Action Programme (EAP Task Force). It draws from several OECD publications, including, most importantly, two OECD Environmental Outlooks, and the “Natural Resources and Pro-Poor Growth” book, published as part of the OECD’s Development Assistance Committee’s “Guidelines and Reference” series.

The paper was drafted by Ms. Gunilla Ölund Wingqvist and Mr. Olof Drakenberg from the University of Gothenburg, with inputs from, and under the overall management and editing of, Ms. Angela Bularga from the OECD secretariat.

Financing for this work was provided by the government of Norway, as part of their support to governance and environmental reforms in Georgia.

TABLE OF CONTENTS

SUMMARY OF KEY POLICY MESSAGES	9
INTRODUCTION	11
CHAPTER 1. BASICS OF NATURAL RESOURCE TENURE	11
1.1 Significance and definition of tenure	11
1.2 Four major types of natural resource tenure	13
1.3 Four groups of resources.....	15
1.4 The importance of tenure’s security.....	16
1.5 Major international trends in the evolution of tenure.....	17
CHAPTER 2. PROPERTY RIGHTS REFORM.....	19
2.1 Drivers behind property rights reform	19
2.2 Factors that determine reform strategies.....	20
2.3 Principles for effective reform process organisation	21
2.4 Needs to address market and policy failures.....	23
2.5 Necessary legal and governance changes	23
2.6 Need to duly manage the reform process.....	25
CHAPTER 3. ENVIRONMENTAL CONDITIONS FOR USING DIFFERENT RESOURCES.....	26
3.1 Forests	26
3.2 Surface water	27
3.3 Mineral extraction	29
3.4 Coastal resources	29
3.5 Wetlands	30
CHAPTER 4. DECENTRALISED APPROACH IN RESOURCE TENURE	31
4.1 Decentralisation	31
4.2 Community-based natural resource management	32
CHAPTER 5. THE IMPLEMENTATION CHALLENGE.....	34
5.1 Good governance as an essential element of effective implementation.....	34
5.2 Use of policy instruments	35
5.3 Compliance assurance systems	36
5.4 Organisational capacity and stakeholder cooperation.....	39
REFERENCES AND SELECTED BIBLIOGRAPHY.....	41

Tables

Table 1.	Classification of the bundles of rights	12
Table 2.	Grouping of natural resources based on their characteristics	16
Table 3.	Comparison of different forms of land tenure reform	20
Table 4.	Externalities related to unregulated or inadequate management of some natural resources	23
Table 5.	Diversity of environmental and natural resource policy instruments	35
Table 6.	Examples of policy instruments for natural resources management	35
Table 7.	Actors and tools for compliance monitoring	37

Figures

Figure 1.	Percent of respondents who do not agree that privatisation has been beneficial for the country	14
Figure 2.	Number of privatisation transactions between 2000 and 2008 in Eastern Europe and Central Asia.....	17

Boxes

Poorly explored links between land tenure and water rights regimes.....	12
Tenure security and access to water.....	17
Key principles for a successful policy design.....	22
Lessons from land tenure reform in Estonia	22
The application of the prior appropriation doctrine in the Western states of the United States.....	27
Riparian responsibilities in England and Wales	28
How illegal logging has been reduced in Serbia.....	34
Example of the EU fisheries policy	37
Successful control system in Serbia.....	38
Successful partnership to promote forest law enforcement	39

SUMMARY OF KEY POLICY MESSAGES

Tenure arrangements should promote sustainable use of natural resources, and be supportive of economic growth:

Unclear or weakly enforced property rights can hinder investments, lead to depletion of resources and reduce prospects for economic growth. A secure tenure provides incentives to make long term investments to improve productivity or to manage commons, e.g. fishing waters, sustainably. Imposing liability for environmental damages is extremely difficult unless tenure is well defined. While secure tenure is a critical condition for a sustainable use of natural resources, it is not sufficient and needs to be complemented with sound regulatory and non-regulatory measures.

Privatisation can bring efficiency gains in natural resource use but is not a panacea:

The optimal form of tenure will largely depend on the country's traditions, characteristics of the resource, and the design and functioning of formal and informal institutions. The conditions for privatisation are most favourable when markets are genuinely competitive and the government has high capacity to address market failures such as environmental externalities through various policy instruments. These conditions are frequently lacking in transition economies. Common property rights or government ownership may be preferred in such situations but also when natural resources or ecosystems contain many non-market values, or where privatisation may affect vulnerable groups, or where distributional effects are unknown. At the same time, this does not preclude private sector involvement in the use of natural resources under clear, performance-based concession conditions.

Tenure reforms should be transparent, participatory and context specific:

Tenure reform is a political process involving multiple stakeholders and diverging interests. Its success depends not only on a fair distribution of costs but also on a participatory, integrated and transparent organisation that includes various ministries, business, and civil society. The reform's inclusiveness can reduce risks for elite capture.

Well-designed incentives and duly implemented policies are critical for sustainable use of natural resources:

Natural resources tenure rights should be complemented with relevant conditions, rules and regulations that address the problem of market failures to improve the efficiency of the economy. Examples include taxes, obligations for reforestation, revenue transparency, environmental impact assessments and emission standards.

Enforceable regulations, efficient and independent regulators, and full accountability can reduce risks of corrupt behaviour and illegal activities:

High-value natural resources (*e.g.* minerals, timber and fisheries) are often prone to corrupt behaviour and unsustainable management practices. The efficiency of policy incentives and the legal system at large, including independent audit institutions, impact the sustainability of natural resources use. Better information, increased transparency, regulatory and enforcement capacity in combination with simpler, streamlined legislation and legal procedures lower the likelihood of corruption. Establishing and enforcing regulatory requirements should be institutionally separate. Even more importantly, regulatory functions should be separate from direct government support to, or participation in, economic activities. Also overlapping of functions and responsibilities of public institutions should be avoided to minimise problems with conflict of interest.

CHAPTER 1. BASICS OF NATURAL RESOURCE TENURE

1.1 Significance and definition of tenure

Natural resource tenure¹ includes mostly rights over land, but it encompasses other natural resources as well. The property may be farm land, grazing land, forest land, a water body, a fishery, wildlife or some other resource, including minerals.

Any policy shaping up tenure rights “potentially plays a major role in promoting or inhibiting economic growth, equity of resource distribution, empowerment of resource users and the sustainability of the resource base, environment and climate”².

From an environmental perspective, adequate tenure arrangements are at the core of the incentive framework required to ensure sustainability of natural resources use. Lack of clarity in such arrangements can lead to exacerbated levels of resource extraction. Well-defined tenure is also a corner stone in environmental policy aiming at controlling pollution, including past pollution. If tenure is not well defined, environmental liability regimes will not be effective. The impact of climate change makes proper natural resource tenure even more important as management of forests, lands and water will be a critical element of both adaptation and mitigation measures in many countries.

Property rights are often highlighted as one of the most important institutions³ for economic growth. This is primarily due to the fact that secure tenure provides strong incentives for long-term investments, including by protecting citizens against expropriation by government or powerful elites.

It has to be noted that tenure arrangements in a society develop in a manner that entrenches the power relations between and among individuals and social groups⁴. Tenure thus has enormous political implications and tenure issues are likely to be politicized. Furthermore, social stability may depend on whether or not there is a broad consensus on the fairness of the tenure system.

Legally, “tenure” means the right to hold property; it defines property and what a person or group can do with it – their property rights. Commonly, tenure is a “bundle of rights” (see Table 1). All of these rights can be held by single individuals, groups, or the public (state). Ownership usually refers to holding the full bundle of rights.

¹ In this paper, tenure is used synonymous with property rights.

² Ghezae, 2009, p 18.

³ Acemoglu and Johnson, 2005. Property rights institutions include formal institutions (political, judicial and economic rules) and informal (norms, conventions etc.).

⁴ United Nations Food and Agriculture Organisation (2009), Towards Voluntary Guidelines on Responsible Governance of Tenure of Land and Other Natural Resources: Discussion Paper. FAO, Rome.

Table 1. Classification of the bundles of rights

1.Right of access	The right to enter a defined physical property; to use the property in a non-consumptive way.
2.Right of withdrawal	The right to obtain benefits of a resource; to use the property productively for profit.
3.Right of management	The right to regulate internal use patterns and transform the resource by making improvements; to set up and modify rules for the use of a property.
4.Right of exclusion	The right to determine who will have an access right; to exclude some users and set rules for access to a property.
5.Right of alienation	The right to sell, lease, or inherit property with the Rights 1-4.

Source: Schlager et Ostrom, 1992.

Because of their particular role, e.g. in securing ecosystem services, rights to use natural resources, including land, cannot be unrestricted. An obligation not to use them in a way that harms others comes together with these rights (see Chapter 3 for specific environmental conditions that need to be established for different resources).

Linkages between resources (*e.g.* land and water) and between areas (*e.g.* rural and urban areas) require coherence in tenure arrangements and policy⁵. Allocating land rights, for instance, may achieve little if done without considering access to water sources. Similarly, water programmes raise issues as to the distribution of land rights. In the past, failure to take these issues into account resulted in resource conflict and degradation. Coherence and coordination of various tenure systems are key to addressing this interdependence.

Box 1. Poorly explored links between land tenure and water rights regimes

Notwithstanding a growing recognition of the importance of the relationship between land and water resources there are few, if any, formal links between land tenure regimes and water rights regimes. An understanding of the relationship between water rights regimes (and their inherent planning processes) and land use planning and permitting regimes is necessary to move toward integrated land and water management. In developing countries and economies in transition modern water legislation either does not exist or it is not implemented. A lack of security as regards water rights will inevitably impact negatively on the worth and security of land tenure rights and the livelihoods of those attempting productive engagement with land and water.

Source: Hodgson S., (March 2004) Land and Water – the rights interface. Food and Agriculture Organization of the United Nations (FAO), Livelihood Support Programme Working Papers 10, Access to Natural Resources Sub-Programme. "FAO Legal Papers Online #36" <http://www.fao.org/legal/prs-ol/lpo36.pdf>

Finally, by their very nature, some of the natural resources (such as rivers or fisheries) require tenure agreements that transcend administrative boundaries. Cooperative inter-regional and transboundary management of natural resources can protect ecosystems, prevent conflict and improve the livelihoods of the poor. This includes: harmonising and coordinating national rules and institutions; establishing or strengthening institutions that manage shared resources, and defining and applying international rules on transboundary natural resources, such as international watercourses.

⁵ Swedish International Development Agency (2007), Natural Resource Tenure: A Position Paper for Sida.

1.2 Four major types of natural resource tenure

Generally, four types of resource tenure are identified:

- *Public/state property* – rights held by the state in which the public sector exercises rights over the resource.
- *Private property* – rights held by an individual, or legal entities such as corporations.
- *Common property* – rights held jointly by a group of people (two or more), such as a user group or a community.
- *Open access* – no specific rights exercised by anybody. Nobody has the power or legitimacy to enforce rules of law. If the resource is under pressure, open access will result in depletion of the resource, as no one has defined rights and everyone has unrestricted use of the resource.

In OECD countries, a majority of agricultural land and about 35-40% of forests land are privately owned⁶. Governments generally hold the rights to mineral and petroleum resources, while granting exploitation licenses to companies. Marine fish resources generally belong to governments and fishing licenses can be given out where companies or individuals have the right to fish certain volumes. Water is most often a public resource but can also be private. Over the last century, there has been a trend towards publicly owned forested and other land and water resources, for nature reserves or recreation, where mining and harvesting of natural resources is limited or forbidden. In recent years, community-based natural resource management is becoming more common.

Whether in OECD or non-OECD countries, governments have often performed poorly as direct owners and managers of natural resources. Even if governments are “bad” owners (too distant to provide constructive management, prone to corruption, or inability to develop resources efficiently), the government may have reasons to maintain ultimate responsibility of natural resources, even if some rights are privatized. According to Sterner (2003), bundles of rights “are not and should not necessarily be identical across social contexts” and different types of natural resources.

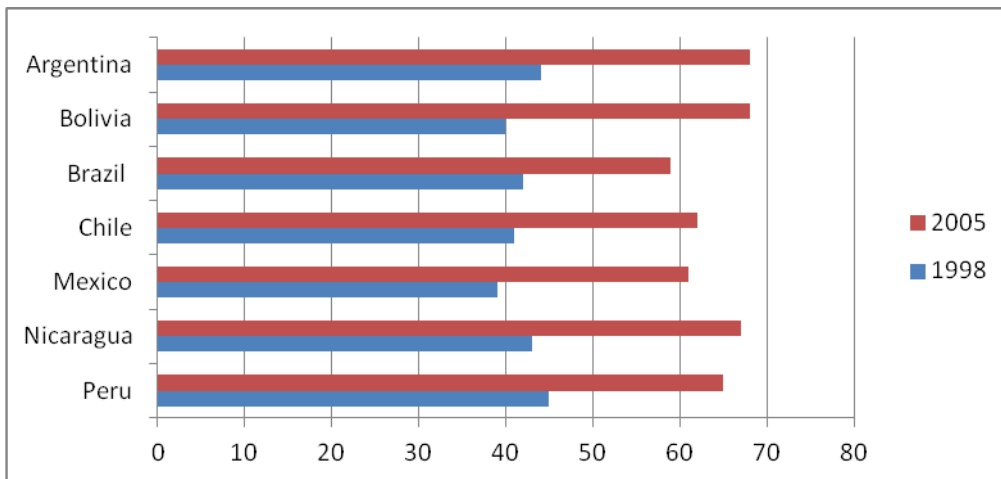
Private allocation of property is often a good option to increase productivity or optimise resource use. However, private tenure does far from always provide an appropriate solution. Natural resources and ecosystems contain many values that currently are difficult to put an economic value on, for instance regulation of water run-off, or resilience to climate change. These “nonmarket values” are often difficult to price and trade.

Furthermore, little is known about the distributional effects of natural resource privatisation, which has implications on welfare and will affect how people perceive privatisation. In regions where massive privatisations have been conducted over the past decades, the perception of their results was negative among a considerable part of population and growing. Figure 1 shows the level of dissatisfaction with privatisation (not only of natural resources but all types of state owned property and companies) in Latin America for the years 1998 and 2005. In 1998, negative opinion averaged 40% and seven years later, after the privatisation had peaked in the region, more than 60% of all respondents in 18 countries were negative.⁷

⁶ OECD (2001), Sustainable Development: Critical Issues”. OECD, Paris.

⁷ Bourguignon et Sepúlveda, 2009.

Figure 1. Percent of respondents who do not agree that privatisation has been beneficial for the country



Note: The dominant sectors for privatisation in developing and transition economies during the period 1998-2005 were infrastructure, finance, and energy.

Source: Bourguignon, F., and C. Sepúlveda, 2009. "Privatization in Development, Some Lessons from Experience", Policy Research Working Paper 5131. The World Bank, November 2009.

If state-ownership is often accompanied by low management efficiency, and privatisation involves too much social dissatisfaction because of negative distributional effects, common property rights might be a solution. This type of tenure shows to be positive (though not universally) from distributive and environmental points of views but effects on productivity remains unclear. Poor people often have little property other than common property resources or open-access properties. In this perspective, privatisation or enclosure is likely to exacerbate their poverty and may thus be violently opposed.

As demonstrated by some researchers⁸, *de facto* institutions are much more important than the *de jure* property rights, *e.g.* in the field of forest management. McKean (2000), among others, argues that common property rights may reduce uncertainty of production by pooling resources, internalise some possible negative consequences of resource use, increase administrative efficiency and, more generally, allow for a better preservation of natural resources.

⁸ See, for example : Gibson C. et al. (2002), Does Privatisation Protect Natural Resources? Property Rights and Forests in Guatemala. *Social Science Quarterly*, Volume 83, Number 1, March 2002. <http://sobek.colorado.edu/~hunterlm/SOCY5007/Wk15PopEnvDev/Gibson02.PDF>

1.3 Four groups of resources

Two major characteristics⁹ of natural resources, which are closely related to tenure, will shape up their management arrangements:

- **Feasibility of exclusion:** Is it feasible to fully control access to the resource and exclude some users?
- **Rivalry in consumption:** Can an agent use the resource without reducing everyone's individual utility?

Based on these characteristics, natural resources are commonly divided into four groups (see also Table 2):





- **Private goods** are resources for which exclusion is feasible and there is rivalry in consumption, such as for private lands, forests or mines. Consuming the resources (cultivating the land, logging the timber, extracting the minerals), will leave less resources available to others, but it is possible to exclude others from accessing or utilising the resource. A private good need not be in private hands: resources owned by the state would also fall into this category, provided the state actually enforces its right to exclude unauthorised users from access to the resource;
- **Common pool resources** imply a rivalry in consumption but no feasibility to exclude users from accessing them. The non-excludability can cause over-utilisation of the resource since an individual can improve its own welfare without bearing the costs. Typical examples are some fish stocks and grazing land;
- The **club good** is non-rivalrous in consumption and feasible to exclude others from use. Club goods can be consumed jointly without reducing the benefit of each single user. Examples are natural parks, natural reserves, or game reserves. Normally, users pay an entrance fee or buy a licence, which give them the right to use the resource. There will be often a limit to the non-rivalry of consumption and a need to restrict the total number of access licences awarded or sold.
- A **public good** is non-rivalrous and non-excludable. One example of a public good is the air that we breathe; it is not possible to hinder people to breathe (non-excludability), but the breathing of one person does not affect the total amount of air available for other people (non-rivalrous). The incentives to adequately manage or protect these goods are very low without adequate regulatory provision. The public goods' contribution to economic welfare is frequently undervalued and hence investment in managing them will appear to be sub-optimal.

Many natural resources provide the basis for a multiplicity of "private", "public" and "club" goods and services simultaneously. Natural forests, for example, provide marketable timber and non-timber products, and non-marketed watershed protection services, which are shared by all communities in a given watershed, as well as biodiversity conservation and carbon capture which are global public goods.

The interdependences between these different goods and services have to be taken into account when elaborating tenure and complementary governance regimes aimed at ensuring the sustainability of resource use. In some cases, competition between alternative uses (*e.g.* pastures *versus* agriculture) creates difficult trade-offs.

⁹ In addition to these, some other special characteristics of natural resources have important implications for their management, including: location in remote places, location across national and/or administrative boundaries, sharp spatial and temporal variations in productivity (*e.g.* of water flows or fish stocks), time lag between action and reaction.

Table 2. Grouping of natural resources based on their characteristics

		Feasibility of exclusion	
		Yes	No
Rivalry in consumption	Yes	<p>Private goods</p> 	<p>Common pool goods</p> 
	No	<p>Club goods</p> 	<p>Public goods</p> 

Source: Ostrom, 1990, modified. Photos by A.Bularga.

The effective management of “private good” resources depends largely on how well market mechanisms and associated institutions (such as those ensuring, for example, that information about prices is publicly available or that property rights are enforceable) work in practice. Generally, the parties holding property rights to private goods resources have direct incentives to use them in a sustainable way and to invest in their maintenance. Unclear or non-enforced access rights restrictions can, however, directly undermine these incentives. In many countries, for example, natural forests owned formally by the state are often *de facto* “open access”, a factor that can lead to poor management.

The management of common pool resources, public goods resources and club goods resources, for which market mechanisms are highly imperfect or completely absent, depends crucially on the existence and effectiveness of the rules and institutions (whether formal or informal) to govern their use.

1.4 The importance of tenure security

A well functioning tenure system requires certainty. Insecure tenure means that a person cannot trust that one’s resource rights will be respected over time. People and businesses that live without secure tenure will be reluctant to make investments.

Security of tenure translates into that no one can interfere with the landholder’s possession or use of land. Tenure security also usually implies a long duration, which relates to the time needed to recover the cost of an investment.¹⁰ A secure tenure provides incentives to make long-term investments to improve the productivity

¹⁰ Bruce, 1998.

of the property. For instance, a person with the right to use an agricultural field for decades or a lifetime may invest in an irrigation system whereas a farmer leasing a field for only a year will not.

Box 2. Tenure security and access to water

Case studies in Ghana, Namibia, Mozambique and Zambia illustrates the correlation between high water access levels and a government credibly committed to secure land tenure. Despite being an arid country, Namibia has been able to half the proportion of people without access to water since 1990, largely through a tenure reform where communal and individual tenure security based on e.g. customary rights encouraged private and municipal infrastructure investments.

Source: Sjöstedt, 2008.

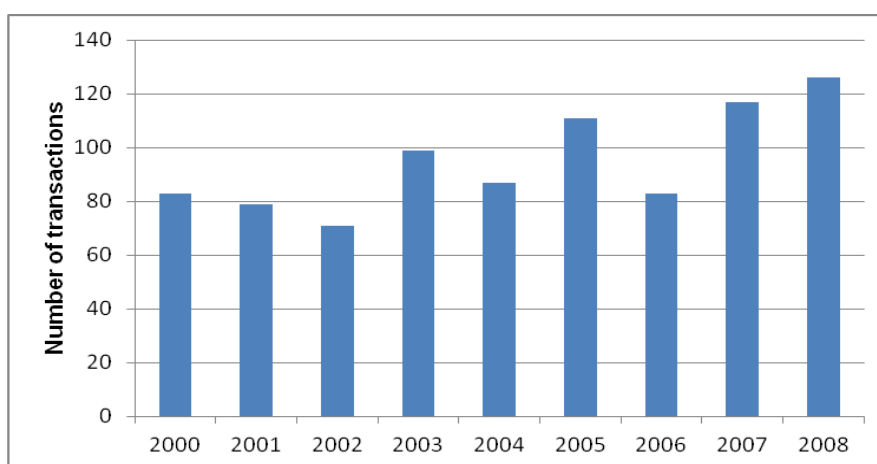
The law must enforce tenure rights and the governments play a vital role to guarantee these rights. Thus, a strong state is necessary. However, a state that is strong enough to protect property rights is also strong enough to violate those rights. In order for citizens or national and international businesses to invest, they must feel certain that the government will not use its confiscatory powers arbitrarily.¹¹

1.5 Major international trends in the evolution of tenure

Currently, there is a shift in the way that people and institutions think about natural resource tenure. Who benefits from the natural resource assets? Who controls them? Who has the power to make decisions over them? The World Resources Institute (2005) has identified two global trends related to natural resource tenure, stemming from globalisation and decentralisation.

Globalisation, or the growing economic integration of countries and societies, is leading to increased trade and foreign interests in a country's natural resources. Private or state owned companies are increasingly investing in other countries to gain access to natural resources. These foreign interests provide opportunities for a country but also highlight new challenges for governments related to e.g. tenure rights, licensing, control, and enforcement. These global trends have been accompanied by a stream of privatisations. Figure 2 shows the increasing trend of privatisation transactions in Eastern Europe and Central Asia between 2000 and 2008.

Figure 2. Number of privatisation transactions between 2000 and 2008 in Eastern Europe and Central Asia



Source: The World Bank Privatization Data Base: <http://rru.worldbank.org/Privatization/QueryResults.aspx?rid=2> ; the number of transactions you can find on: http://rru.worldbank.org/images/Privatization/Graphs/Region/eu_asia_number_trans.gif

¹¹ Sjöstedt, 2008.

Privatisation, or the process of shifting an activity or a resource from the state to the private sector, has led to an increase in private property and private responsibility, with private sector and civil society playing a more important role, while governments play a lesser role. Increasingly, power over resources is transferred to corporate interests through privatisation or the granting of resource concession.¹² The goal of privatisation is often economic efficiency, and conditions for privatisation are most favourable when markets are genuinely competitive and the government has high capacity to address market failures through regulation. The regulatory environment has a large impact on the outcomes of privatisation¹³.

At the same time, there is a trend towards strengthening community rights in relation to natural resource management, with local or community management of local resources. Also this community-right trend has important implications for resource tenure, for instance with minority groups pressing their ancestral claims to lands they inhabit but to which they lack formal title.

¹² WRI, 2005.

¹³ Beecher, 1997.

CHAPTER 2. PROPERTY RIGHTS REFORM

2.1 Drivers behind property rights reform

There may be many different reasons for tenure reforms, for instance to:

- Change economic or governance system, for instance the transformation from planned to market economy;
- Facilitate economic development, for instance desire to attract national or foreign investors;
- Correct historical inequities and resolve social conflicts, including recognition of the need to secure rights for vulnerable groups;
- Address environmental inefficiencies, such as over-exploitation or degradation of natural resources and ecosystems;
- Enhance productivity and efficiency of natural resource sectors *e.g.* to increase food production and improve food security;
- Improve water security and, more generally, and effective climate change adaptation, etc.

In the case of the formerly planned economies of EECCA, the tenure reforms were catalysed by the process of transition to a market-based economy, *i.e.* by economic needs. In many of these countries, natural resources sectors have been seen as important engines of growth, and reforms have been necessary to attract investments. In some transition countries, tenure reforms have been associated with restitution of land and land tenure reform more generally. Historic and social factors influenced those reforms. Environmental inefficiencies, on the contrary, have rarely been a driver for reform in EECCA.

In fact, it is quite common that natural resource tenure rights are closely associated with land rights (except for marine, off-shore, or sub-terrestrial resources). The types and characteristics of land tenure reform (see Table 3) will therefore need to be understood, including registration, redistribution, restitution, or recognition.

Table 3. Comparison of different forms of land tenure reform

	Type of reform			
	Registration	Redistribution	Restitution	Recognition
Strengthening existing or transfer rights	Strengthen existing rights	Transfer from large landowners to landless	Transfer land to original holders	Strengthen existing rights
Tenure context	Customary or informal tenure	Highly unequal landholdings	History of expropriation or conflict	Indigenous people, others using forests, rangelands, etc.
Individual/collective	Usually individual	Usually individual	Usually individual	Usually collective
Typical bundles of rights	Ownership	Ownership	Ownership	Use, some management rights

Source: Meinzen-Dick et al., 2008.

Tenure reform is a political process and it is likely that the consequences (positive and negative) will be long-term. Changed tenure arrangements are more than a change in laws and procedures: they may result in fundamental shifts in the power structure of families, communities, and nations.

2.2 Factors that determine reform strategies

Without a clear blueprint and with little evidence of the best ways to do it, the process of natural resource tenure has shown difficult in the majority of formerly planned economies, but particularly in the former Soviet republics. It has to be mentioned that there is no single form of tenure or particular pattern of property rights, associated with the most effective management of natural resources. Based on the analysis of specific country conditions, decisions will have to be taken on the direction, but also the *speed* of reform, and the process organisation.

The appropriate reform strategy will, amongst others, depend on the following factors that will be detailed below:

- History of the country and the existence of different “layers” of tenure arrangements;
- Characteristics of the natural resource;
- Existing formal and informal institutions, and the governance structure;
- Understanding of the needs of the public, including reforms’ impact on livelihoods; and
- Implementation costs.

Historic aspects will inform the strategy process including specificities deriving from a history of feudalism, colonisation, occupation or conflict, previous forms of tenure rights, and historic ownership patterns. There may for instance be different layers of tenure rights, such as customary rights parallel to legally registered rights or previous and current right claimants to the same property.

The characteristics of the natural resource are important for deciding on tenure rights: does the resource provide a public good, private good, common pool good, or club good? For some natural resources, ownership (enjoying the full bundle of rights, see table 1) could be granted to private right holders or collectives, individuals or groups, but for other resources only some of these right ought to be given out. Forests, for example, do not only relate to the right to harvest timber for commercial purpose, but also collecting fire

wood, food, or building materials. Rights to utilise some of these forest resources could be granted to local groups. Another example is that coastal waters may be state property, but local fishers could be granted rights over customary, near shore fisheries, or fishing certain species (but not others), at a specific time of the year.

Another important factor relates to the institutions, both formal (political, judicial and economic rules) and informal (norms, conventions etc.), and possible gaps between the law and local practice. It is important to have a good understanding of behaviours, norms, and current practices related to natural resources.

It is critical to have a thorough understanding of the needs of the public. For instance, many of the poor households utilise fuel wood as their main energy source, although fuel wood collection is typically considered as an illegal activity. An analysis should be made of the correlation between formal and informal institutions; are the current or proposed tenure rights in accordance with social norms and behaviour, and will it be accepted by local population? This will be an input to the strategy, and it will affect the legitimacy of the reform.

Another factor affecting the success of a tenure reform is the governance system; the rule of law must be respected. The design of rules, structures and procedures related to land tenure must consider how to minimise the risk of e.g. discretionary authority, patronage or rent-seeking. Public scrutiny and disclosure of information is crucial. A legal and regulatory framework should be adopted, clearly defining rights and obligations of each institution. Policy roles should be separated from service provision to minimise problems with conflict of interest. Overlapping of functions and responsibilities should be avoided.

As already mentioned, the speed of the reform process is of importance. The reform is most successful when the process is incremental rather than of the “big-bang” type of reform. The reform should not be quicker than the time it takes to develop adequate and appropriate institutions required to manage the transformation and excerpt control over the resource. On the other hand, the reform process should not be too slow or too shallow either, as the public may lose confidence in the process and the political will.¹⁴

A lesson from transition economies is that the transformation itself provides significant opportunities for rent seeking and illegal activities. Natural resource sectors like mining and forestry are particularly vulnerable to corruption. Adequate oversight during the transformation process is vital to avoid chaos and having the process captured by vested interests.

Last but not least, implementation costs should be taken into account already in the planning phase, as the costs involved in establishing new structures and procedures can be very substantial.

2.3 Principles for effective reform process organisation

According to international practice, the reform process should be participatory, integrated, and transparent (summarised in Box 3 and further described below). It should also be acknowledged that it is a long-term process. The success of a policy depends not only on a fair distribution of costs but also on respecting due process, which means following the traditional procedures for collecting information, engaging in debate, ensuring representation and participation in decision-making.¹⁵

¹⁴ World Bank, 2005; Ahas, 1999.

¹⁵ Sterner, 2003.

Box 3. Key principles for a successful policy design

- Promote a participatory approach;
- Promote an integrated, inter-ministerial process;
- Promote transparency and accountability during the process;
- Acknowledge that reforms are a long-term process, with long-term consequences;
- Be thorough – the “devil is in the detail”.

Source: EU, 2004.

Stakeholder participation is particularly important when there are many different groups and individuals that will be affected by a change of resource tenure. Governments need to listen to different actors and natural resources user groups (also stakeholders with less voice such as women and minority groups) and understand the issues at hand, and provide a platform for dialogue. The people concerned must be involved, have a voice, and feel a part of the process, to get the strong political support that is needed.

Box 4. Lessons from land tenure reform in Estonia

Estonia has had two major phases in the forest sector development between 1991 and 2000: the first phase included decentralisation and privatisation, with restitution as the main objective; and the second phase introducing a participatory policy-formulation procedure. During the first phase a neo-liberal forest policy stance was introduced and “the authorities became increasingly unable to fulfil their responsibilities” (Kallas, 2002). The problems that followed included a tremendous increase of harvesting rates, illegal logging, and timber-related tax fraud. It is estimated that 50% of the felled timber was harvested illegally. The combination of land with unclear ownership and minimal regulation was a breeding ground for illegal logging activities.

Stakeholder discontent initiated the second phase of reform and policy formulation that has been participatory to a certain extent. The policy formulation was partly successful, but the policy implementation had only limited results. According to Kallas (2002) the reasons for this were that stakeholders were not invited to participate in the final policy formulation - some decisions were different from what the negotiations had proposed - and a government-focused policy implementation. However, the forest policy subsequently led to the 1998 Forest Act which fundamentally restructured public forestry administration, e.g. through efforts to implement management plans, and enabling the introduction of forestry certification programs.

Source: Ahas et al., 2006; Kallas, 2002; Ahas, 1999.

The impact of a reform will not come from the legal text only, but from changes in practices. Ultimately, however, it is the duty of the government to balance the different needs and take the necessary political decisions. Participation is important, but it is not entirely easy to manage.

An integrated approach is also necessary, as a tenure reform is multi-disciplinary. Many different ministries will be affected and should be involved in the process. Inter-ministerial work should be promoted as natural resources often involve several economic sectors, and the process should be based on in-depth analysis of current situations. The rules and tools are important and should be carefully discussed, designed and tested.

Transparency forms an important part of accountability and a fundamental aspect of good governance and the rule of law, necessary for democratic decision making. Transparent decisions related to natural resource, tenure rights, concessions and extraction rights of minerals, public disclosure of revenues and budget allocations, etc., are crucial for legitimacy, the fight against corruption, and an effectively implemented reform. Information should be disseminated widely.

There are many different types of skills and knowledge needed to prepare and implement a tenure reform. Besides subject matter expertise related to the different types of resources and their sometimes competing uses and users, process management skills are needed. A single organisation is not likely to have all the necessary skills and knowledge required to develop and implement a rights-based and economically sound reform. Therefore, the reform process will benefit from a multi-disciplinary and participatory approach, to gain access to knowledge and experiences existing outside the own organisation.

2.4 Needs to address market and policy failures

The different ways natural resources are used often have impacts not only on the owner or user but also on third parties that may be public or private actors within or beyond national borders. Poor forest management may for instance lead to massive soil erosion and siltation that reduce the water storage capacity at a downstream hydropower plant. Similarly a non regulated or poorly managed common pool resource such as fishing water may lead to unsustainable harvest and depletion of the resource. These un-intended effects are often referred to as externalities, caused by market failures (see Table below).

Table 4. Externalities related to unregulated or inadequate management of some natural resources

Type of problem	Sectors				
	Forestry	Water	Wetlands	Coastal resources	Mineral extraction
Soil erosion	■	■	■	■	■
Siltation	■	■			■
Flooding or droughts	■	■	■	■	
Loss of biodiversity	■	■	■	■	■
Loss of resilience to climate change	■	■	■	■	
Landscape alteration	■		■	■	■
Pollution		■		■	■

Source: Based on Mitchell (2006)].

Therefore, natural resources tenure rights are often complemented with specific conditions (see Chapter 3), specified in legal or regulatory acts that help to address market failures and externalities. This has an important role from an environmental perspective, but also for a proper functioning of the economy and the social system.

2.5 Necessary legal and governance changes

Changing tenure arrangements require reforms at the political, legislative, and institutional level. These will be translated into practice through changes in Constitution and primary legislation, the enactment of decrees, rules and regulations, including those governing the institutions that are established to manage natural resources, changes in organisational structures, etc.

As concerns governance structures, functions for policy making, legislation and regulation, and enforcement of the legal framework must be in place, and responsibilities should be separated in order to avoid conflict of interests. It is of utmost importance that the institution that is overseeing the resource is independent and totally void of commercial interest, in order to be able to guarantee transparency, equity and

fairness in the distribution and enforcement of rights. Unclear and overlapping functions of different institutions should be avoided.

A clear understanding of all parties of the preconditions and obligations associated with the tenure rights is critical, especially for investors, who need to know and trust the rules of the game before making any investment decision (see also chapters 3 and 5). In countries where there has been a long tradition of state ownership of land and natural resources, the law needs to explicitly state that private or community-based natural resources is allowed, in order for investors to feel secure.

Recent years has seen a shift from reliance on general rules, hierarchal decision making and fixed policy instruments to a more strategic approach in which governments emphasise the process of formulating environment and natural resource visions with concrete goals and then rely on decentralised decision-making and flexible instruments for implementation with double dividends.¹⁶ For example, voluntary certification schemes like Forest Stewardship Council is one example where legal compliance and good forest management practices opens up opportunities for premium pricing. Though Russia, Belarus, Estonia and Poland have the largest areas of certified forests, most transition countries today have some certified parts of their forests.¹⁷

There are some common issues that may be addressed by the law, albeit national differences. Modern laws often lay out the objectives of the natural resource management. For example, concerning forestry, the law could give directions for sustainable use or to assure stability of local communities. There may also be direction on classification of the land, for instance if the land should be classified as a natural reserve or similar.

Exploitation of natural resources is primarily allowed through concessions (generally long-term and large volumes) and licenses (generally short-term or lesser volumes), but it can also be called contracts, agreements, sales or permits. Concessions and licenses are usually granted to a business entity rather than to an individual. Exploitation categories can be based on: characteristics of the natural resource, duration, geographic scope, management of infrastructure obligations, exclusivity, eligibility and nature of payment. The type of natural resource will determine the duration of such arrangements though most often ensuring a sustainable use requires a long-term management horizon.

Specific *obligations* could be stated, for instance that:

- Environmental legislation must be adhered to and the Environmental Impact Assessment (EIA) requirements in particular must be fulfilled;
- The tendering process should be fair and transparent and follow internationally accepted procurement regulations;
- Communities must be involved in negotiating the contracts; or that
- Management plans¹⁸ are developed, submitted, and approved by a government agency;
- Specific performance indicators should be included in contracts and their achievement monitored and enforced.

¹⁶ Sterner, 2003.

¹⁷ Forest Stewardship Council website.

¹⁸ Especially related to forestry, long-term management plans are important for sustainable management due to the long life-cycle of the trees.

The concessionaire may be obliged to maintain infrastructure such as roads for the right to exploit resources. In turn, the concessionaire may be granted different levels of exclusivity. An example, related to forestry, is that concessionaires are allowed to harvest timber, but that local communities maintain the right for recreation, or non-commercial use of non-timber forest products.

Payment to the government can be measured on the area or the volume or value of the extracted resource. There can also be provisions for payment to local communities, provision of local employment, or creation of assets for public use such as schools, clinics or recreational facilities.

When natural resources are managed through concessions, the law may provide that licenses must be consistent with a national plan for licensing decisions, or that no licenses will be issued unless such a plan is in place. As planning is the stage where fundamental decisions are taken, this should be open for stakeholder participation. The law may require public participation, and laws that promote community-based natural resource tenure may call for the planner to adopt a plan in agreement or close consultation with local groups.

Information on the activities and performance of service providers should be made available to clients and policy makers. Thus, an important trend related to natural resources exploitation is the focus on transparency and in particular revenue transparency where the private sector, civil society organisations and government have complementary roles. An example is the Extractive Industries Transparency Initiative (EITI), which require private companies to report taxes and royalties paid to government and governments publish what they receive from private companies *e.g.* mining companies.

2.6 Need to duly manage the reform process

Lessons learned from past tenure reforms point to the need to carefully manage the transition process to avoid unwanted outcomes. The process of reforming institutions has been subject to the risk of being co-opted by intertwined political and economic interests, sometimes undermining long term objectives of sustainable natural resource management. The often chaotic situation that followed the collapse of the Soviet Union created a kind of institutional vacuum, which provided lots of opportunities for rent seeking, especially in the forest sector. The outcome has in some countries been highly asymmetric situations where the private sector has in effect cartelized itself or established monopoly or monopsony positions well before civil society or government has been able to react. Therefore, oversight during the transition process is crucial.

CHAPTER 3. ENVIRONMENTAL CONDITIONS FOR USING DIFFERENT RESOURCES

3.1 Forests

Forests provide a range of amenities, including various products such as timber or pulp for paper, environmental services, and social benefits such as employment or recreational opportunities. Policies to ensure the preservation of forests value are needed since forest quality is degrading in many OECD and non-OECD countries. Inadequate tenure arrangements are in part responsible for this situation. Schemes to compensate forest owners for carbon sequestration are being developed which is likely to add attention to forest management and forest tenure at large.

The long-term trend in many European countries has been the expansion of public forest as a result of acquisition and afforestation. However, the share of privately owned forest varies between 23 and 93% in the European Union countries. In North America, 7% of Canadian forests are in private hands compared with 73% of privately owned forests in the United States¹⁹. Thus, almost one-third of forestland in OECD countries is privately owned. On a global scale, forests are generally owned and managed by governments.

In some countries public ownership has been effective in protecting and managing forests, but quite often the state has been an absentee thus unsuccessful forest manager. In the latter cases, state-owned forests are in practice open-access areas and subject to degradation and deforestation. Furthermore, state ownership may lead to a failure to incorporate local demands on the forests and poor collection of revenues. Therefore in recent decades there has been a shift towards increasing access and ownership for minority groups, communities, individuals, and firms. The effect of the transfer of rights is to decrease the cost of protecting land use rights and thus increase forest cover because local management is generally less expensive²⁰.

At the same time, privatisation is no panacea to poor forest management. For instance, the restitution and privatisation process in some of the Central European countries, with returning forests to private ownership after the communist rule, has sometimes led to rapid deforestation. One alternative to privatisation is to transfer some or all tenure rights to local communities (see Chapter 4).

To eliminate or reduce negative impacts stemming from inadequate forest management, the right to exploit a forest typically includes requirements regarding reforestation, construction and maintenance of roads, planning and protection of biodiversity, and submission of management plans. Harvesting conditions may include the ban to harvest wood close to waterways or in slopes. The duration of forest contracts for public forests varies from concessions with a duration of more than 20 years to short term logging permits.²¹

Allocation of forest concessions may also require consultation with affected communities and stipulation of non timber forest rights, public access and rights of fishing and hunting. A general trend has been to establish detailed legal provisions on how contracts are awarded, what should they contain, and how to increase their transparency.

¹⁹ OECD, 2001

²⁰ Sterner, 2003.

²¹ FAO, 2001.

Transparency on the allocation of concessions may not be sufficient, monitoring at all relevant stages of the production and marketing chain is important for overall effectiveness.²² The main arguments for this include; increase transparency and accountability, provide a level playing field for contractors, ensure that decisions are based on technical criteria.²³

3.2 Surface water

Water is different from many other natural resources, due to its fluidity, dynamic flow, and the multiple and often overlapping uses and users. The mobility of water makes rights to it more difficult to define. In most countries, water (within the national boundaries) is the property of the state. Who has the right to use those waters is often determined by either the prior appropriation doctrine or the riparian doctrine. Under any of the two doctrines, understanding the difference but also the interface between land and water rights is important. While land tenure often equals with full ownership, for water as a natural resource generally only use rights (right of access and withdrawal) are recognised to individuals.

The *prior appropriation doctrine* foresees that the superior right is given to the first person to put water to a beneficial use, in a “first come, first served” kind of way. Subsequent appropriators are allowed to use water only to the extent that they do not impede the use of those who have prior rights.²⁴

Box 5. The application of the prior appropriation doctrine in the Western states of the United States

While each Western state of the United States has slightly different provisions and administrative arrangements, all have systems based on the doctrine of prior appropriation. Priority is based on seniority: senior rights holders are those who established a pattern of water use, as recognised in an administrative permit or judicial decree, earlier than others. When necessary, a senior water right holder may place a “river call” requiring junior right holders upstream to cease diversions until senior users receive their full entitlements. In the marketplace, senior rights are much more valuable than junior rights, since they can be relied upon in drier years when junior rights may prove worthless.

To obtain a water right through appropriation, a water user must identify unclaimed (i.e. unappropriated) water in a stream, develop a structure or system to divert the water physically and put the waters to a beneficial use. All appropriation states consider household, agricultural, municipal and industrial uses beneficial. In some recent cases, in-stream and minimum stream flows for environmental and recreational purposes have been included. Once the diverted water is put to a beneficial use, the right becomes absolute and cannot be defeated by later uses even if the latter are considered more valuable. In other words, the first party to divert water and put it to a beneficial use obtains the right to use that water in perpetuity. In dry years there is no rationing among users; the party with the oldest right gets the entire amount of water historically put to beneficial use.

Source: OECD (2005), Environmental Performance Review of United States, OECD Publishing, Paris.

The *riparian doctrine* foresees that the rights to use water are determined by ownership of adjacent land. These rights cannot be sold or transferred other than with the adjoining land, and water cannot be transferred out of the watershed. The riparian doctrine is the most common one.

Under both doctrines, the use rights are established through permits or licenses. Individual transactions are generally subject to prior approval of the water administration, primarily to protect third parties from adverse impacts. In common water rights, water can be used by people in the ways specified by the community or user group. Regarding the duration of water rights there is a trend towards time limits ranging from 15-20 years in respect of ordinary activities and up to 50 or even 70 years in respect of major investments such as the construction of a new hydro-power dam.²⁵

²² FAO, 2005.

²³ Christy et al, 2007.

²⁴ Sterner, 2003.

²⁵ Hodgson, 2004.

The allocation of use rights should be subject to specific environmental conditions that help eliminate or reduce negative impacts stemming from inadequate water management. Several aspects of water use are regulated, including quantities allowed for withdrawal, permissible extent of disruption of water flows, discharge quality and quantity, practices used for the extraction of gravel and other minerals from water course or adjacent lands, fishing and aquaculture practices, to name a few. When water supply and wastewater treatment is privatised, environmental standards must be a part of the institutional framework, and there is a need for “environmental accountability” alongside a robust regulatory system to sustain or improve environmental performance and public health.²⁶ The use of performance-based contracts for water concession is a good practice contributing towards this endeavour.

Box 6. Riparian responsibilities in England and Wales

In England and Wales, riverside property owners, owning land adjoining a watercourse (any natural or artificial channel through which water flows, such as a river, brook, beck, or mill stream), have certain rights and responsibilities. Some of these responsibilities include:

- o Maintaining river beds and banks;
- o Allowing the flow of water (and fish) to pass without obstruction;
- o Controlling invasive alien species such as Japanese knotweed.

There are also activities for which riverside property owners will need permission from a third party - such as your local authority or the Environment Agency. These can include bank protection works and the construction of culverts, bridges or outfalls to the watercourse.

Source: Environment Agency of England and Wales (2007). Living on the Edge: A Guide to the Rights and Responsibilities of Riverside Occupation. Third Edition, April 2007. <http://publications.environment-agency.gov.uk/pdf/GEHO0407BMFL-e-e.pdf>

The use of tradable water rights is emerging in OECD countries though its potential remains largely unexploited. This approach can help to allocate limited water resources to their most productive uses. For example, Australia has been reforming its water policies since 1994 to introduce a fully market-based system for apportioning the amount of water available. In Mexico, water trading is possible between irrigators and other users. Also in the arid west of the United States, trade of abstraction rights for surface water is well established.

The US experience shows that water trading requires clearly defined property rights and institutional structures to facilitate trading and protect third parties. The extent and magnitude of regulations governing water transfers may depend on the circumstances. Most water transactions involve annual leases rather than permanent transfers of rights, partly because of the flexibility thus provided. Most transactions are arranged directly between neighbouring rights holders and thus do not involve change in use or long-distance transport, though public bodies may make more complex transactions. Traders become involved when there is a need to group several small sellers and put them in contact with remote buyers.

Another international trend is the shift towards an integrated approach to water resource management. This approach recognised that other natural resource uses (such as agriculture, mining, forestry or aquaculture) are interlinked with the water resource and should be dealt with in an integrated manner. River basins (national or international) are the most appropriate geographical level for addressing the need of integrated water resources management. International basin organizations play an important role in harmonising and reconciling the interests of riparian countries, including monitoring and enforcing agreements.²⁷

²⁶ Beecher, 1997.

²⁷ Dublin Statement on Water and Sustainable development, 1992.

There are also cases of open access use, where no rights or management regime operates; when water is used without a recognised claim. As water becomes scarcer, open access is likely to lose out most rapidly, unless the users are able to establish their claim based on long-term use or other means.²⁸

3.3 Mineral extraction

Mineral extraction is associated with social and environmental impacts. In most countries mineral resources are owned by the state, but resource development is mostly performed by private or public companies on the basis of agreements or licenses with the state. The license holder must fulfil pre-established conditions to be granted and maintain their rights over the area.

For the mining company, secure tenure is regarded as the most important criteria – after geological potential – for investment decisions. Examples include that the license or mineral rights cannot be suspended or revoked except on specific grounds, and a certainty that exploration rights are transferred into a mining license. Exploration licenses can be granted either through auction or on a “first come, first served” basis. Mining rights, including exploitation rights are typically granted for periods up to 25-50 years and can be renewed one or several times²⁹

To eliminate or reduce negative impacts, mining operations typically have to comply with environmental regulations that relate to operations before, during and after mining (including payments for the legacy post closure). Key features include Environmental Impact Assessment and requirement of having an environmental management plan in combination with obligations in relation to environmental laws on pollution, protection of biodiversity etc.

Giving citizens access to environmental information including legal requirements on mining companies can improve compliance. Large international mining operators often subscribe to voluntary business codes of conduct such as the International Council on Mining and Minerals Sustainable Development Framework or the Extractive Industries Transparency Initiative. The rationale for business to adhere to such voluntary schemes includes improved access to risk capital, loans, brand value management and improved access to concessions.

3.4 Coastal resources

The coastal zone is comprised of terrestrial and aquatic ecosystems that provide a range of goods and services. They host the world's prime locations of human habitation. They support commerce and recreation. They provide agricultural products, fish, shellfish, and seaweed for both human and animal consumption. Also they are a considerable source of fertilizer, pharmaceuticals, consumer products, and construction materials.³⁰ Conflicts over coastal resources can involve both renewable (*i.e.* fish, freshwater) and non-renewable (*i.e.* land, oil and gas reserves), natural resources and sensitive ecosystems.

Regulations for extractive coastal resources are similar or equivalent to those for terrestrial extractive resources, impact assessment, management plans and can include limits for various emissions. To eliminate or reduce negative impacts on fish stocks regulations may stipulate size and type of catch, size of boats and technical equipment, where to fish and when. Fishing quotas may be transferable or not and may be for a fixed period *e.g.* one year or held permanently.

²⁸ Ghezae, 2009.

²⁹ Girones, et al, 2009.

³⁰ FAO, Terrestrial Ecosystem Monitoring Sites.

3.5 Wetlands

Wetlands provide socially and economically important ecosystem services, such as breeding grounds for fish, fibre, protein sources, coastal protection, water purification, climate- and flood regulation, recreation and, increasingly, tourism. Wetlands are being degraded, often due to expanding agricultural activities or urban sprawl. While coastal resources (fisheries) often are characterized by open access and lack of appropriate tenure systems, wetlands tend to be characterized by conflicts between different tenure systems (*e.g.* land tenure and water resource tenure) and different users.

Wetlands are in many countries classified as state property and water legislation often fail to provide security of tenure and access for local people or ethnic minorities.³¹ The non-territorial or migratory nature of many aquatic resources make clearly defined property rights difficult, and management issues such as exclusion, enforcement, and monitoring pose special problems.

Regulatory measures are used to control and set standards for activities damaging to wetlands. Under a permit system, the competent authority may demand that an Environmental Impact Assessment is undertaken, prohibit a proposed activity or authorise it either unconditionally or subject to conditions for mitigation or restoration. Legal and institutional frameworks vary widely from one country to another. They may span a wide range of approaches from an emphasis on regulation and public ownership and control of most wetlands to voluntary approaches and community-based wetland management. The appropriate mix of measures will depend inter alia on the geography, socio-economic conditions and cultural characteristics of the country concerned, its legal and institutional system and the rules applicable to ownership and use of wetlands and wetland products.³²

³¹ Hodgson, 2004.

³² This whole section is built on the Ramsar Convention Secretariat, 2007

CHAPTER 4. DECENTRALISED APPROACH IN RESOURCE TENURE

4.1 Decentralisation

Decentralisation is currently one of the most commonly pursued institutional changes in many nations. Decentralisation is a process where the central government transfers mandates or functions to local institutions, such as:

- Local government line offices (referred to as deconcentration or delegation),
- Locally elected government bodies (political decentralisation), or
- User groups (devolution).

Each of these bodies has different types of incentive structures and accountability, which will affect the outcome of the reform.

Advocates of decentralisation refer to the potential for increased efficiency, equity and accountability, when decision making is brought closer to the people. The poor are often seen as the main beneficiaries. However, results in practice have been mixed and the benefits for the poor often remain unrealised, mainly due to imperfect implementation of the reform.

According to Ribot (2004) the decentralised institutions come up short mainly in two areas:

- (i) The reform does not create accountable, representative local institutions; and
- (ii) Meaningful powers are not transferred to local levels.

Decentralisation is a process driven by strong political and economic interests. The combination of firms seeking profits and governments seeking revenues has often led to loss of land and livelihoods, especially for the poor and marginalised. According to Meinzen-Dick et al. (2008), there are three factors that will have a particularly large impact on the outcome of the decentralisation process:

- The technical and financial capacity of the body responsible for service delivery and regulation: it is crucial that not only responsibilities but also powers, capacities, and financial resources are delegated to the local level.
- The degree of economic and social inequality: decentralised governance may be less effective in an unequal society, due to potential elite capture or lack of bargaining power of weaker communities.
- The inclusiveness and accountability of the local institutional context to ensure that everyone's voice is heard. Programs to simplify procedures and strengthen capacity of local groups are likely to increase the transparency.

The central government typically has a coordinating role, and for the more politically challenging reforms (redistribution, restitution, and recognition) the central government needs to show commitment and

firm political will. The role of the local bodies may vary depending on the type of land tenure reform, for instance it may include³³:

- Identification of right holders and creation and maintenance of a local registry (registration);
- Identification of recipients (redistribution);
- Identification of rightful claimants and conflict resolution (restitution); and
- Identification of claimants and resource management (recognition).

4.2 Community-based natural resource management

Community-based natural resources management (CBNRM) is a form of natural resource management that is controlled and authorised from within a community. It can relate to different types of tenure rights and resources, for instance when a resource is utilised simultaneously and serially by multiple users in a community, such as grazing rights or fishing rights. It also applies to tenure arrangements where the ownership is vested in the community, which in turn allocates land or other resources to the community members.

Thus, community-based tenure rights could encompass common good resources as well as private good resources. Examples include rights to agricultural or grazing land, wildlife, forest products, fish, marine resources, etc. As any other tenure rights, they may vary in time, for instance the right to hunt a certain species during a specific time of the year.

CBNRM can be seen as the ultimate form of decentralisation as it relates to community control over natural resources. The benefits of CBNRM can range from job creation, sustainably managed natural resources, and long-term revenue-generation. However, CBNRM can suffer from the same flaws as other forms of decentralisation; delegating decision making powers to local levels does not automatically guarantee the poor a role in the process. It is most successful at benefitting the poorer segments of society when it empowers them to play a full decision-making role in resource management.

In contrast to Hardin's thesis about "the tragedy of the commons"³⁴, where it was assumed that natural resources held in common inevitably would lead to overuse and degradation, it is now widely acknowledged that communally owned or managed resources are in fact not open-access areas. With open-access resources, such as ocean fisheries in international waters or the state forests where government presence is weak or absent (which in practice is the same as open-access), all potential users have access and none can be excluded. In the case of CBNRM, however, the community may indeed exclude outsiders from using the resource. The community may, also, enforce regulations on its own members, for instance related to limited withdrawal of the resource. Community property may, in fact, be as secure as private property.

Ostrom (1990) has developed seven criteria that are important for the successful community-based natural resource management:

- There is a clear definition of who has the right to use the resource and who does not, and clearly defined boundaries of the resource;
- Users feel that their obligations for managing and maintaining the resource are fair in light of the benefits received;

³³ Meinzen-Dick et al., 2008.

³⁴ Hardin, 1968.

- Rules governing when and how the resource is used are adapted to local conditions;
- Most individuals affected by the rules can participate in setting or changing them;
- Use of the resource and compliance with rules is actively monitored by the users themselves or by parties accountable to the users;
- People violating the rules are disciplined by the users or by parties accountable to them, with penalties imposed in accordance with the seriousness and context of the offense;
- Local institutions are available to resolve conflicts quickly and at low cost;
- Government authorities recognize users' rights to devise their own management institutions and plans.

Generally, these criteria are valid for any type of natural resource management although often stated in legal tenure documents or included in criminal law. CBNRM is different in the sense that many people are involved. Communities as well as authorities need to clearly understand the rights, obligations and limitations, and these needs to be defined and explicitly stated.

CHAPTER 5. THE IMPLEMENTATION CHALLENGE

5.1 Good governance as an essential element of effective implementation

Institutions that regulate the ownership and use of natural resources are part of bigger intuitional frameworks and the degree of their implementation mirrors the effectiveness of the entire framework. Therefore good governance conditions are of great importance. A basic framework of good governance is characterised by the following:

- The rule of law whereby legal requirements are fully enforced;
- Respect and protection of basic human rights;
- Checks and balances between the executive, legislative, and judiciary branches;
- Auditing and accountability mechanisms to review government action;
- A degree of autonomy for local government;
- An independent (and active) civil society.

A particular governance problem is exposure of high-value natural resources, such as minerals, forests, and land, to corruption (see Box 7), which lies at the heart of “bad” governance. Corruption should be combated through transparency, accountability, efficient independent audit institutions, and by reducing the incentives for corrupt behaviour and illegal activities.

Box 7. How illegal logging has been reduced in Serbia

The forestry sector in Serbia is still of economic and social significance, although declining. The state owns slightly more than half of the forests (56%), the remaining is in private ownership. Illegal logging and corrupt practices in the forestry sector is a problem both in state and privately owned forests. Theft and corruption are the main causes in state-owned forests, and overharvesting, underreporting, and weak control, appears to be the main problem in private forests, although the information related to the latter is very scarce. It is estimated that disrespect of laws is a bigger problem than the low quality of laws.

After democratic changes in October 2000, Serbian authorities took several measures to combat illegal logging by combating corruption. These included development of comprehensive anti-corruption strategies; formalising the grey economy and implementing a tax reform package; establishing an effective public procurement regime; and developing reliable statistics. A broad, cross-sectoral strategy was put in place, which greatly facilitated the necessary reforms in individual sectors as forestry.

Unfortunately, the forest sector has not entirely benefitted from these initiatives and problems remains for instance regarding conflict of interest of public officials, and free access to information. Illegal logging remains but it is clearly decreasing in state-owned forests: the volume of illegally logged timber in 2004 was 88% of that in 2003 and only 29% of the recorded volume in 2000.

Source: Savcor Indufor, 2005.

5.2 Use of policy instruments

In order to implement natural resource policies, government can choose between different types of instruments, including: *instruments of direct regulation* (command-and-control); *economic instruments that create price signals*, *information-based instruments* and, as a complementary tool, *voluntary approaches*. Often, a mix of instruments is required to enhance environmental results while reducing compliance and administrative costs.

Table 5. Diversity of environmental and natural resource policy instruments

Instruments of direct regulation	Instruments that correct or create markets (indirect regulation)	“Information” regulation and voluntary approaches
Ambient or emissions standards	Property rights	Public consultations
Process or product standards	Tradable permits	Information disclosure
Prohibition bans	Removing perverse subsidies	Education campaigns
Land use planning	Environmental taxes and charges	Eco-labelling
Zoning and EIA	User charges	Diffusion of technical information
Permits and quotas	Deposit-refund systems	Social advertising
Mandatory self-monitoring	Liability and penalties	Voluntary agreements
Damage compensation and compulsory insurance	Performance bonds	Public-private partnerships
Extended producer responsibility	Resource pricing and payment for ecosystem services	Environmental management
	Green procurement	Audit schemes

Source: Based on Sustainable Development: Critical Issues (OECD, 2001) and Geo-4 (UNEP, 2007); and Policy Instruments for Resource Efficiency” (GTZ, 2006).

Table 6. Examples of policy instruments for natural resources management

Types of instruments	Examples
Technical standards and bans	Regulation of fishing (e.g. dates or equipment) Bans on ivory trade
Performance standards	Water quality standards
Using or correcting markets (taxes, fees, or charges)	Water tariffs Park fees Fishing licenses Stumpage fees
Creating markets (tradable quotas or rights)	Individually tradable fishing quotas Transferable rights for land development or forestry
Information regulation	Labelling of forest products

Source: Based on Sterner T. (2003) Policy Instruments for Environmental and Natural Resources Management.

While there is no rule to define an “optimum” policy mix, several criteria can guide the choice of instruments, most importantly:

- **Environmental effectiveness:** the extent to which instruments will achieve their specific environmental objectives;
- **Efficiency:** achievement of policy goals at a minimum cost to society and provision of incentives for continuous improvement;
- **Flexibility and reduced transaction costs:** allowing the choice on ways to comply with requirements and minimization of costs (monitoring, licensing, enforcement, etc.);
- **Simplicity of operation:** guarantees that the instrument will not result in poor compliance, fraud, and excessive administrative and compliance costs.
- **Minimisation of regressive distributive effects:** policy instruments may have unintended regressive impacts, for example by increasing the price of certain commodities.
- **Adherence to international practice:** conformity with international agreements and trade rules;
- **Economic impacts:** assessment and consideration of economic effects (e.g. effects on prices, employment, competitiveness, economic growth).

The acceptance of a given instrument by the public-at-large is strongly related to the degree of awareness of the specific problem that the instrument seeks to address. Internationally, it is becoming more important to share “good practice” experiences in the search for low-cost policies that contribute to both environmental protection and economic development.

5.3 Compliance assurance systems

Compliance assurance includes the following functions: (i) identification and profiling of the regulated community; (ii) compliance assistance; (iii) detection of non-compliance, and (iv) non-compliance response. Commonly, public authorities implement these functions, though the role of indirect enforcers (such as banks, non-government organisations, or even industry associations) is increasing. Failure to curtail non-compliance and its most dangerous manifestation – crime – leads to environmental and human health damage; erodes the rule of law; undermines the level playing field and – quite often – reduces tax revenues. Though in many cases enforcement is perceived as a companion of direct regulation, it also preserves the viability of policy instruments that use or create markets.

Violation of regulations can either be unintentional, e.g. negligence, or it can be intentional. Companies that comply with legislation are at competitive disadvantage vis-à-vis non-compliant firms, which are successful in profit maximisation because of a lack of enforcement. In the case of forestry, illegal loggers do not pay taxes for the standing wood, bear costs for forest management and post harvest operations or spend administrative resources on monitoring and reporting. In the case of water, rights holders, such as farmers, may have an obligation to keep a record of abstracted water. The accuracy of such records can vary according to climatic conditions where a drought could create large incentives to cheat.

Ensuring compliance with environmental regulation is challenging for a number of reasons that are likely to be relevant also for natural resources sectors. These are: i) unfeasible or unenforceable legal requirements, ii) the complex character of monitoring compliance, iii) the costs of monitoring and taking action against non-compliance, and iv) having sufficiently strong and independent institutions.³⁵ Competitive advantages for non-compliant firms, unclear demands, unclear property rights and lack of information about good practices contribute to increased likelihood for non-compliance and illegal activities in natural resources sectors. However, the strongest determinant is typically the political will to design and enforce legislation.

³⁵ OECD, 2009.

An argument for compliance despite low risk of detection could be that managers and owners are averse to these kinds of (partly private) risks of being monitored and prosecuted. For some firms *e.g.* listed transnational firms, reputational risks affecting the trustworthiness of the company in the eyes of shareholders, banks, staff and authorities are likely to be significantly larger than the official fines paid for non compliance. Conversely, domestically owned private companies involved in natural resources in transition countries might not run the same reputational risks as international firms and thus have lower incentives to comply with regulations.

Compared with point source pollution from industries, monitoring natural resource use and enforcing regulations is relatively more difficult as they are typically spread out over vast, often sparsely populated areas, and where the consequences are complex, evolves slowly and are difficult to attribute to a certain actor. Verification of compliance can take various shapes including gathering data primarily through inspections, self reporting or civil society *e.g.* private complaints (see Table 4).

Table 7. Actors and tools for compliance monitoring

Actors	Tools
Inspectorate	Inspections, collection and analysis of compliance data
Private sector associations	Sector-specific data collection and analysis
Licencee	Self monitoring (data collection) and reporting
Public, neighbours	Citizen complaints, social pressure
Non-governmental organisation	Data gathering, use of GIS

Source: Based on OECD (2007a)

There is ample evidence of the fact that both inspection and threat of an inspection are useful in order to improve compliance³⁶. Self reporting has a number of advantages including reducing monitoring costs and the incentives for corruption; however the welfare effects have been ambiguous.³⁷ Box 8 describes EU’s fishery control system, which includes a combination of self reporting and unannounced inspections.

Box 8. Example of the EU fisheries policy

Fishery rules and control systems are agreed at EU level and implemented nationally. There is a system for self reporting. Checks are done at sea but focus is on checking in ports, during transport, in fish processing industry and markets where fish is sold. The Commission has its own inspectors that unannounced can check that national authorities are implementing EU rules. Non compliance is dealt with in a uniform way across the EU with predetermined sanctions.

Source: EU website http://ec.europa.eu/fisheries/cfp/control/index_en.htm.

Social pressure can be an important driver for compliance. The demand for environmental quality is typically higher in countries with high incomes. But the demand may be affected by the level of access to environmental information and awareness of health, social and economic impacts. Sterner (forthcoming) suggests that by collecting and disseminating information, authorities responsible for natural resource

³⁶ Macho-Stadler et Perez-Castrillo, 2006.

³⁷ Sterner, forthcoming.

oversight and management, can achieve several important goals: creating a baseline for future action; encouraging transparency so that individual inspectors can at least not secretly agree to unreasonable extraction or resource use; building relationships with the concessionaires that are not purely adversarial; and encourage pressure from civil society, communities, customers, workers, investors, neighbours, and other involved parties.

Also technologies such as Geographic Information Systems (GIS), remote sensing and Global Positioning Systems (GPS) significantly increase opportunities for efficient monitoring for forestry (see Box 9).

Box 9. Modern system for controlling illegal logging in Serbia

The local Forest Administration has introduced a system to control illegal logging in the National Park 'Fruska Gora', Serbia. The system is based on electronic devices including sensors for movement and temperature, which are placed on the approach to the ramp on forest roads and warehouse. With this system, the administration is able to monitor day and night, from one centre, the entire surface covered with sensors. The main advantage of the system is that illegal logging activities can be detected immediately and the police can be called in quickly, even when the illegal activities are still underway. After the system was introduced, the efficiency of detection and enforcement has increased substantially.

Source: Savcor Indufor, 2005.

In spite of all preventive efforts, environmental harm does occur, sometimes through intentional or negligent conduct, sometimes by accident. In such cases, enforcement will be necessary. Enforcement mechanisms may be designed to achieve one or more objectives: (i) return violators to compliance; (ii) punish and deter violators, and so prevent violations; (iii) remove the wrongful gains from non-compliance and so maintain fair economic competition; (iv) require that specific actions be taken to test, monitor, or provide information; and (v) correct environmental damages and company's environmental management problems. In order to deter wrongful conduct and remedy violations that take place, the law must determine appropriate enforcement actions and remedies. Legal systems must also indicate who should bear the loss when accidental harm occurs. Without such action, unfair economic competition from "dirty" enterprises will force "clean" competitors to go out of business, in addition to eroding the rule of law and bringing environmental degradation.

A good way of achieving an optimum mix of persuasion and coercion is through the implementation of a regulatory enforcement pyramid. Under this approach regulators start at the bottom of the pyramid assuming that business is willing to comply voluntarily. However, they also make provision for circumstance where this assumption will be disappointed, by being prepared to escalate up the imposed sanctions. For example, an enforcement pyramid might begin with the provision of advice and formal directions, move to the issuing of administrative notices, and on-the-spot fines, and then escalate to prosecutions with increasingly serious consequences. The signalled capacity and readiness to escalate sanctions channels most of the action to the base of the pyramid where more informal measures are taken. In a majority of cases penalties will be based both on the harm to society and the gain to the offender. In addition, further criteria such as the blameworthiness of the offender, his cooperativeness or his ability to pay also impact the level of penalty.

Third-party enforcement is an important element of modern enforcement systems. Increasingly, citizens and private groups are empowered by law to bring enforcement actions against violators. Insurance companies and financial institutions may require facilities to comply to be eligible for insurance or a loan. The public may choose to boycott certain products if they believe the manufacturer is harming the environment. In general, social norms can become an effective method of ensuring compliance in societies where there is strong social sanction for non-compliance.

Frequent non compliance could either signal a need to reform existing legislation, to increase compliance promotion activities such as information or to improve monitoring and enforcement capacity (including the judiciary). Incentives for illegal activities are reduced if bureaucracy is minimized, legal procedures are

streamlined and regulations are simplified. Environmental authorities may have a perverse incentive not to prosecute non-compliance or enforce regulations as this may require scarce financial and human resources and crowd out other activities.

5.4 Organisational capacity and stakeholder cooperation

Organisational capacity needs to be available both at central, regional and local levels, at line ministries, as well as planning and financial ministries. Responsibilities for natural resources (water, mines, land, etc) are often divided between different ministries, which make coordination and policy coherence a challenge. While the ministry of environment may be responsible for overseeing and coordinating environmental issues, line ministries are often responsible for actually implementing environmental concerns. Production-oriented ministries, such as agriculture, mining or forestry ministries, often lack incentives and capacity to drive the environmental agenda. The environmental ministry, which in many countries have a weak position both financially and human-resource wise, must have adequate resources to effectively safeguard environmental matters.

In many countries environment and natural resources agencies lack human capacity, and have limited technical training, equipment, and legal authority. However, training, dedication, and other factors are probably more important than sheer numbers. Also the role of the judiciary system is important. In some countries (*e.g.* the United States) judicial institutions are responsible for interpreting the laws. They may also impose requirements on the executive institution, for example, by requiring that it uses certain rulemaking procedures if it wants those rules to be upheld in court. Courts provide a forum for taking enforcement action, for prosecution, and for enforcing administrative orders (if the court is so authorised). Courts can also play a significant role in assessing sanctions.

Non-governmental organisations can play an important role as watch dogs, providing information about malpractice to media and the broader public. They may also work together with government agencies; see the example from Ecuador in Box 10.

Box 10. Successful partnership to promote forest law enforcement In Ecuador

Vigilancia Verde (Green Surveillance) was created in Ecuador in 2000 by a coalition involving the National Police, the Defence Ministry, the Ministry of Environment and five NGOs. Vigilancia Verde is a supervising body responsible for controlling the transport of timber between forests and processing and marketing locations. Thirteen fixed road checkpoints and seven mobile control points are established, each one of them formed by a representative from the forest authority, one from civil society and two from the police. The system is funded by a trust that receives 50% of the sale value of timber that is detected, confiscated and auctioned. In its first year the volume of timber seized was nearly 600% more than that seized by the government during the previous year.

Source: FAO, 2005.

Besides NGOs, other non-governmental actors become involved in environmental management. Industry or trade associations track and publicise developments that may affect their members. They may try to influence laws or regulations as they are being developed. They may also serve as valuable channels for disseminating information on regulatory requirements, methods of complying, and compliance activities. In theory, insurance companies that end up paying the cost of the environmental damage should have an incentive to educate their clients about relevant requirements and assist them in compliance. These companies are therefore a potential ally for government agencies. Trade unions or other organisations that represent workers at a regional or national level may become involved in development of requirements and policy for enforcement. Individual workers may also report violations by their companies to authorities.

ISSUES FOR CROSS SECTORAL POLICY DIALOGUE ON NATURAL RESOURCE TENURE REFORMS

Policy-makers may wish to use the following checklist to accompany the process of natural resource tenure reform in their countries:

- What kind of negative consequences (economic, fiscal, social, or environmental) has the current regime of natural resource tenure?
- What benefits can a better functioning tenure system bring?
- What are the greatest sources of tenure insecurity, particularly for local communities and the poor, and how can they be addressed?
- Which are the winners and losers of a better functioning tenure system/tenure reform?
- Is there a political will for change? Who will lead and manage the reform process? Are the implementation costs clear?
- What type of tenure reform is suitable for different types of natural resources?
- What are the constraints to a successful natural resource tenure reform? How can these be overcome? How can ethical and social aspects be taken on board?
- Is the pace of reforms adequate?
- Are the environmental conditions of natural resource tenure well-defined? Are concession contracts awarded in a transparent way, with full respect of environmental criteria?
- Are various rights and conditions attached to them sufficiently enforced?
- Would a higher degree of decentralisation be good from a sustainable resource management and poverty perspective? Will it be appropriate to adopt or extend the community-based natural resource management?
- What capacities need to be developed in order to pursue a tenure reform?
- Are measures in place to prevent corruption?

REFERENCES AND SELECTED BIBLIOGRAPHY

- Acemoglu, D. and S.Johnson, (2005), “Unbundling institutions”, *Journal of political economy*, 113 (5), 949–995.
- Ahas, R.(1999), *Impact of Land reform on the nature conservation system in Estonia*, Tartu, 1999.
- Ahas, R., H.Hain, , andP.Mardiste, (2006), “Forest Certification in Estonia” in Cashore, B.,ed, *Confronting Sustainability: Forest Certification in Developing and Transitioning Countries*, Yale school of Forestry and Environmental studies, pp. 171–202.
- Åkerlund, U. (2006), “Urban and peri-urban forestry and greening in west and Central Asia. Experiences, constraints and prospects”, *LSP Working Paper*, No. 36, FAO, <http://www.fao.org/es/esw/lsp/cd/img/docs/LSPWP36.pdf>
- Auty, R. (2001), “Transition reform in the mineral-rich Caspian region countries”, in *Resources Policy*, Vol.27, Issue 1, March 2001, pp. 25-32. <http://www.sciencedirect.com/science/journal/03014207>
- Baumann, P. (2006), “Forest - poverty linkages in West and Central Asia: The outlook from a sustainable livelihoods perspective”, *LSP Working Paper*, No. 34, FAO, <http://www.fao.org/es/esw/lsp/cd/img/docs/LSPWP34.pdf>
- Baumann, P. (2002), “Poverty and access to natural resources: insights from a sustainable livelihood perspective”, LSP briefing notes, Access to natural resources, N 1, FAO, http://www.fao.org/sd/dim_pe4/docs/pe4_040501d1_en.pdf
- Baumol, W.J. and W.E. Oates (1975, 1998), *The theory of environmental policy*, Cambridge Universtiy Press, 2nd edition.
- Beecher, J. (1997), “Water Utility Privatization and Regulation: Lessons from the Global Experiment”, *Water International*, Vol.22, No.1, 54-63.
- Biggs, S. D. and D. Messerschmidt (2003), “The culture of access to mountain natural resources. Policy: processes and practices”, *LSP Working Paper*, No. 7, FAO, <ftp://ftp.fao.org/docrep/fao/006/ad686e/ad686e00.pdf>
- Bohn, H. and R.T.Deacon(2000), “Ownership Risk, Investment, and the Use of Natural Resources”, *The American Economic Review*, Vol. 90, No. 3, pp. 526-549.
- Bruce, J.W. (1998), “Review of tenure terminology,” *Tenure Brief*, No. 1, Land Tenure Center.
- Bourguignon, F., and C. Sepúlveda (2009), “Privatization in Development, Some Lessons from Experience”, *Policy Research Working Paper*, No. 5131,the World Bank.
- Buttoud G., and I. Yunusova (2002), “A ‘mixed-model’ for the formulation of a multipurpose mountain forest policy. Theory vs. Practice on the example of Kyrgyzstan”, *Forest Policy and Economics*, No. 4, pp.149-160.

- Christy, L., et al.(2007), “Forest Law and Sustainable Development”, *Law, Justice, and Development Series*, the World Bank.
- De Soto, H. (2000), *The Mystery of Capital: Why Capitalism Triumphs in The West and Fails Everywhere Else*, NY: Basic Books, New York.
- DFID (UK Department For International Development)(2007), *Policy - Land: Better access and secure rights for poor people*.
- Earnst and Young(2010), *Fraud and corruption in mining and metals- focus on business ethics*, Earnst and Young.
- Ellsworth, L.(2004), *A Place in the World – A Review of the Global Debate on Tenure Security*,Ford Foundation.
- Environment Agency of England and Wales (2007). *Living on the Edge: A Guide to the Rights and Responsibilities of Riverside Occupation*. Third Edition, April 2007. <http://publications.environment-agency.gov.uk/pdf/GEHO0407BMFL-e-e.pdf>
- EU (European Union)(2004), *EU Land Policy Guidelines – Guidelines for support to land policy design and land policy reform processes in developing countries*, EU Task Force on Land Tenure, November 2004.
- FAO (Food and Agriculture Organization of the United Nations) (2009), “Towards voluntary guidelines on responsible governance of tenure of land and other natural resources”, *Land Tenure Working Paper*, No. 10, <ftp://ftp.fao.org/docrep/fao/011/ak374e/ak374e00.pdf>
- FAO (2005), “Best practices for improving law compliance in the forestry sector”, *FAO Forestry Paper*, No.145, Rome, <ftp://ftp.fao.org/docrep/fao/008/A0146e/A0146E00.pdf>
- FAO (2001), “Governance principles for concessions and contracts in public forests”, *FAO Forestry Paper*, No. 139, Rome, <http://www.fao.org/DOCREP/005/Y1398E/y1398e.htm>
- Fiedler, J. and E. Artim (2005), *Targeting the Environmental Investment Challenge in South Eastern Europe*, The Regional Environmental Center for Central and Eastern Europe, Szentendre, Hungary.
- Ghezae, N. (ed.) (2009), “Natural Resource Tenure – a crucial aspect of poverty reduction and human rights”, *Sida studies*, N 23.
- Ghezae, N. (2007), *Natural Resource Tenure*, Sida.
- Gibson C, F.E. Lehoucq and J.T. Williams (2002), “Does Privatisation Protect Natural Resources? Property Rights and Forests in Guatemala” in *Social Science Quarterly*, Volume 83, Number 1, March 2002. <http://sobek.colorado.edu/~hunterlm/SOCY5007/Wk15PopEnvDev/Gibson02.PDF>
- Girones, E.O., A. Pugachevsky, and G. Walser(2009), “Mineral Rights Cadastre. Promoting transparent access to mineral resources”, *Extractive Industries for Development Series*, No.4, the World Bank.
- Gorodhichenko, Y. P. K.(2007), “Public sector pay and corruption: measuring bribery from micro data”, *Journal of public economics*, Vol. 91, pp. 963-991.
- GTZ, CSCP, and Science Centre North Rhine-Westfalia (2006), *Policy Instruments for Resource Efficiency – Towards Sustainable Consumption and Production*.
- Hardin, G. (1968), “The tragedy of the commons”, *Science*, Vol. 162, No. 3859, pp. 1243 – 1248.

- Hodgson, S. (2004), “Land and water-the rights interface”, *FAO legislative study*, No. 84, FAO, Rome, <http://ftp.fao.org/docrep/fao/007/y5692e/y5692e00.pdf>
- Kallas, A. (2002), “Public forest policy making in post-Communist Estonia”, *Forest Policy and Economics*, 4, pp. 323–332.
- Knuth, L. (2006), “Greening cities for improving urban livelihoods: Legal, policy and institutional aspects of urban and peri-urban forestry in West and Central Asia (with a case study of Armenia)”, *LSP Working Paper*, No. 37, FAO, <http://www.fao.org/es/esw/lsp/cd/img/docs/LSPWP37.pdf>
- Macho-Stadler, I. and D. Perez-Castrillo (2006), “Optimal enforcement policy and firms’ emissions and compliance with environmental taxes”, *Journal of Environmental Economics and Management*, Vol. 51, Issue 1, pp. 110-131.
- McKean, M. (2000), “Common Property: What is it, What is it good for, and What makes it work?” in Gibson C., M. McKean and E. Ostrom (eds.), *People and Forests: Communities, Institutions and Governance*, MIT Press, Cambridge.
- McKean, M. (2000), “Common Property: What It Is, What It Is Good For, and What Makes It Work?”, in Gibson C. et al (Ed.), *People and Forests: Communities, Institutions, and Governance*. Cambridge: MIT Press.
- Meinzen-Dick, R., M. di Gregorio, and S. Dohrn (2008), “Decentralization, Pro-poor Land Policies and Democratic Governance”, *CAPRI Working Paper*, No. 80, CGIAR and UNDP.
- Meinzen-Dick, R. et al. (1997), “Gender, Property Rights, and Natural Resources”, *World Development*, Vol. 25, No. 8, pp. 1303-1315.
- Millennium Ecosystem Assessment (2005), *Current State and Trends Assessment*, Island Press, Washington, DC.
- Mitchell, R. (2006), “Property rights and environmentally sound management of farmland and forests”, In Bruce, J.W., et al (Ed.), “*Land reform – achieving development policy objectives*”, Washington DC, World Bank.
- OECD (Organisation for Economic Cooperation and Development) (2009), *Ensuring environmental compliance trends and good practices*.
- OECD (2008), *Conducting Sustainability Assessments*, *OECD Sustainable Development Studies*, OECD Publishing, Paris.
- OECD (2008b) *OECD Environmental outlook to 2030*, OECD Publishing, Paris
- OECD (2008c) *Natural resources and pro-poor growth – the economics and politics*, DAC Guidelines and Reference Series OECD publishing, Paris.
- OECD (2007a), *Translating environmental law into practice-progress in modernizing environmental regulation and compliance assurance in Eastern Europe, Caucasus and Central Asia*.
- OECD (2007b), *Institutionalising Sustainable Development*, OECD Publishing, Paris.
- OECD (2007c), “Applying Strategic Environmental Assessment. Good practice guidance for development co-operation”, *DAC Guidelines and Reference Series*, OECD Publishing, Paris.
- OECD (2005), *OECD Environmental Performance Reviews. United States*, OECD Publishing, Paris.
- OECD (2001), *Sustainable development – Critical issues*.

- OECD (2001b) *OECD Environmental outlook*, OECD Publishing, Paris
- OECD (2000), *Frameworks to Measure Sustainable Development*, OECD Publishing, Paris.
- Ostrom, E. (2005), *Understanding Institutional Diversity*, Princeton University Press.
- Ostrom, E. (1990), *Governing the commons: The evolution of institutions for collective actions*, Cambridge University Press, Cambridge. Ramsar Convention Secretariat (2007), *Laws and institutions: Reviewing laws and institutions to promote the conservation and wise use of wetlands*.
- Ribot, J.C. (2004), "Waiting for Democracy. The Politics of Choice in Natural Resource Decentralization", *WRI Report*, World Resources Institute, Washington, DC.
- Riddell, J. (2000), "Contemporary Thinking on Land Reform", SD-Dimensions, FAO, Rome, <http://www.fao.org/sd/ltdirect/ltan0037.htm>
- SAVCOR INDUFOR (Finnish consulting company) (2005), *Ensuring sustainability of forests and livelihoods through improved governance and control of illegal logging for economies in transition: Serbia*.
- Schlager, E. and Ostrom, E. (1992), "Property Rights Regimes and Natural Resources: A Conceptual Analysis", *Land Economics*, Vol. 68, No. 3, pp. 249-262.
- Shimizu, T. (2006), "Assessing the access to forest resources for improving livelihoods in West and Central Asia countries", *LSP Working Paper*, No. 33, FAO, <http://www.fao.org/es/esw/lsp/cd/img/docs/LSPWP33.pdf>
- Shimizu, T. and M. Trudel (2006), "Methodology and case studies on linkages between poverty and forestry: Afghanistan, Iran, Kyrgyzstan and Turkey", *LSP Working Paper*, No. 35, FAO, http://www.mountainpartnership.org/common/files/pdf/3_Methodology.pdf
- Sida (Swedish International Development Cooperation Agency), (2007), "Natural Resource Tenure", *Position paper for Sida*.
- Sjöstedt, M. (2008), "Thirsting for Credible Commitments. How Secure Land Tenure Affects Access to Drinking Water in Sub-Saharan Africa", Dissertation, No. 10, Göteborg Studies in Politics, Department of Political Science, University of Gothenburg.
- Sterner, T., *Policy Instruments for Environmental and Natural Resource Management*, Earthscan, London. Forthcoming.
- Sterner, T. (2010), "Voluntary pledges and green growth in the Post Copenhagen climate", *Key note speech at the World Bank ABCDE conference, Stockholm*, http://www.hgu.gu.se/Files/nationalekonomi/personal/Thomas%20Sterner/ABCDE_Sterner_v6_2_11.pdf
- Sterner, T. (2003), "Policy Instruments for Environmental and Natural Resource Management", *Resources for the Future*, the World Bank and Sida, Washington, DC. Strange, T. and Bayley, A. (2008), « Sustainable development: Linking economy, society, environment », *OECD Insights*, OECD Publishing, Paris.
- Tanner, C. *et al.* (2006), "Making rights a reality: Participation in practice and lessons learned in Mozambique", *LSP Working Paper*, No. 27, FAO, <http://www.fao.org/es/esw/lsp/cd/img/docs/LSPWP27.pdf>
- United Nations Environment Programme (UNEP, 2007), *Global Environment Outlook GEO-4*.

- United Nations Food and Agriculture Organisation (2009), *Towards Voluntary Guidelines on Responsible Governance of Tenure of Land and Other Natural Resources*: Discussion Paper. FAO, Rome
- Wehrmann B. (2010), “Governance of land tenure in eastern Europe and commonwealth of independent states (CIS)”, *Land Tenure Working Paper*, No. 16, FAO, <http://www.fao.org/docrep/012/al378e/al378e00.pdf>
- White, A. and A. Martin (2002), *Who owns the world’s forests? Forest tenure and public forests in transition. Forest Trends*, Washington, DC.
- World Bank (2005), *Forest Institutions in Transition. Experiences and Lessons from Eastern Europe*, Europe and Central Asia Region ECSSD, February 2005.
- WRI (World Resources Institute) in collaboration with United Nations Development Programme, United Nations Environment Programme, and World Bank (2005), *World Resources 2005: The Wealth of the Poor—Managing Ecosystems to Fight Poverty*, WRI, Washington, DC.
- Zhllima, E., and D. Imami (2007), *Land redistribution in Albania, its impacts and the challenges of a post-reform*.

Internet sources

- 1992 Dublin statement On Water And Sustainable Development (accessed 4th October 2010): <http://www.cawater-info.net/library/eng/l/dublin.pdf>
- Estonian land reform Taiga Rescue Network (accessed 26th September 2010): http://www.taigarecue.org/ru//index.php?view=taiga_news&tn_ID=804
- EU system for fisheries controls (accessed 4th of October 2010) http://ec.europa.eu/fisheries/cfp/control/index_en.htm
- Riddell, J. (2000), “Contemporary Thinking on Land Reform,” SD-Dimensions, FAO, Rome (accessed 26th September 2010): <http://www.caledonia.org.uk/land/fao.htm>.
- FAO, Terrestrial Ecosystem Monitoring Sites (accessed 4th October 2010): www.fao.org/gtos/tems/mod_coa.jsp?COASTAL_PAGE=Coastintro.htm
- Forest Stewardship Council, Facts and Figures (accessed 28th October 2010): <http://www.fsc.org/facts-figures.htm>
- World Bank Privatization Data Base, (accessed 28th October 2010): <http://rru.worldbank.org/Privatization/>
- World Bank, World Governance Indicators website (accessed 28 October 2010): <http://info.worldbank.org/governance/wgi/index.asp>

NATURAL RESOURCE TENURE

Key Points for Reformers in Eastern Europe, Caucasus, and Central Asia

This paper provides a brief overview of key aspects of natural resource tenure, and lessons learned from reforms of this element of the institutional framework that is central to any natural resource policy. The raising demands to establish institutions that reconcile economic and environmental objectives of natural resources use in a way that does not marginalise the poor was the starting point for developing this document. Its preparation was part of a project in Georgia though the results of work on synthesising international experience will clearly benefit other Eurasian countries in transition. Being mainly addressed to a very specific group of countries, this overview, however, may be of interest to policy-makers in any developing country.

Environmental Performance and Information Division
Environment Directorate, OECD
E-mail: env.contact@oecd.org
www.oecd.org/env/eap

