

**ENSURING SUSTAINABILITY OF FORESTS
AND LIVELIHOODS THROUGH IMPROVED
GOVERNANCE AND CONTROL OF ILLEGAL
LOGGING FOR ECONOMIES IN TRANSITION**

**DISCUSSION PAPER
FOR
THE WORLD BANK**

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Helsinki
31 May 2005**

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ABBREVIATIONS AND ACRONYMS

%	percent
AAC	Annual Allowable Cut
AI	Annual Increment
ALB	Albania
ARM	Armenia
AZE	Azerbaijan
BEEPS	Business Environment and Enterprise Performance Survey
BIH	Bosnia Herzegovina
CBD	Convention on Biological Diversity
CCA	Cluster Competitiveness Activity (
CCD	Convention to Combat Desertification
CEPF	Critical Ecosystem Partnership Fund
ECA	European and Central Asian
EMSAC	Economic Management Structural Adjustment Credit
ENA FLEG	Europe and North Asia Forest, Law Enforcement and Governance
EU	European Union
EUR	Euro
FAO	Food and Agricultural Organization
FISP	Forest Institutional Support Project
GDP	gross domestic product
GEF	Global Environment Facility
GEO	Georgia
GTZ	German Society on Technical Cooperation
ha	hectare
IDA	low-income
ILAP	Illegal Logging Action Plan
IMF	International Monetary Fund
KGZ	Kyrgyz
m ³	cubic meter
MDA	Moldova
MEPNR	Ministry of Environmental Protection and Natural Resources
NFP	National Forest Program
NGO	Non-governmental organization
NRMPRP	Natural Resources Management and Poverty Reduction Project
PIU	Program Implementation Unit
PRSC	Poverty Reduction Support Credit
RFDF	Reforestation and Forest Development Fund
SCEPF	State Committee of Environmental Protection and Forestry
SER	Serbia
SFM	Sustainable Forest Management
SIDA	Swedish International Development Agency
TACIS	European Union's Technical Assistance to CIS Countries
TI	Transparency International
TJK	Tajikistan
UK	United Kingdom
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
USD	United States Dollar
USSR	Former Soviet Union
UZB	Uzbekistan
WB	The World Bank
WTO	World Trade Organization
WWF	World Wide Fund for Nature
YBC	Yerevan Brandy Company

EXECUTIVE SUMMARY

Context and Status of Illegal Logging

Illegal logging is a significant problem in all European and Central Asian (ECA) countries in transition, but its impact depends on the nature of illicit activities. Commercially motivated activities often receive most attention because of the large economic interests involved, but illegal procurement of fuel-wood is also a major concern in many countries.

To assess the situation regarding illegal logging and related governance issues, and to identify possible reform strategies, the World Bank commissioned a study from Savcor-Indufor Oy, covering the following countries: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, the Kyrgyz Republic, Moldova, Serbia, Tajikistan, and Uzbekistan. The study was carried out between January and May 2005, and combined elements of analytic work with dialogue with a broad group of stakeholders.

Forestry is not a major sector of the national economy in any of the countries involved in the study, but employment and fuelwood supply have (local) importance in rural areas. The countries can be grouped according to forest use into three distinct categories, (i) countries where commercial forestry is being practiced in significant amounts but where forest also have a major role in providing fuelwood and other products to the rural poor (Bosnia and Herzegovina, Serbia), (ii) countries where forests serve primarily a social and environmental function but also some commercial forestry is practiced (Albania, Armenia, Azerbaijan, Moldova, Georgia), (iii) countries where almost all commercial forest products are imported and the forests serve only social and environmental function (Uzbekistan, Tajikistan, the Kyrgyz Republic).

Most of the countries suffer from a chronic imbalance in the legal domestic supply and demand for fuelwood and timber. Many have also experienced a severe disruption in energy supply in the early 1990s as a result of the break-up of the USSR, leading to high pressure on wood as a source of energy. In all countries, except Uzbekistan, more than 50% of rural people depend on fuelwood as their main source of energy, in Tajikistan and Georgia more than 80%. The balance of forest products trade is negative in all countries except Bosnia Herzegovina.

All countries are affected by severe corruption related problems in the society as a whole, the forest sector being no exception. In the Transparency International Corruption Perception Index, the least corrupt of the countries (Armenia and Bosnia Herzegovina) are ranked 82nd and the most corrupt (Azerbaijan) is 140th out of 145 countries surveyed. The World Bank is an important partner in forest governance development in three of the countries, Albania, Armenia and Georgia.

The concepts of illegal logging applied in these countries have a more narrow scope than most international definitions. Illegal logging is understood to mean violations that involve physical removal of trees, i.e. theft, unauthorized harvesting and non-compliance with cutting regulations. Corruption in timber harvesting as such is not recorded as illegal logging. Based on the official statistics, the volume of illegal logging in the countries varies considerably. The lowest proportions have been recorded in Serbia, Moldova and Bosnia-Herzegovina, where illegal logging volumes equal 0.3–2.2 per cent of the legal timber supply. At the other

end of the scale are Azerbaijan and Tajikistan where official estimates of illegal logging amount to 20-30 per cent of legal supply.

The picture emerging from calculations done by the experts involved in this study based on estimated consumption is less encouraging. In all countries actual production is estimated to be larger than legal supply, and in many of them of different order of magnitude. The difference is somewhat larger for fuelwood than for industrial timber i.e. five to eight times the legal supply for industrial timber and up to 10 times for fuelwood. Only in Serbia and Bosnia Herzegovina the share of illegal timber is estimated to be relatively modest, 5-20% of the legal supply.

Illegal logging can be characterized by being poverty-driven or commercially motivated. Poverty-driven is understood to mean illegal logging that is carried out to meet subsistence needs (i.e. fuelwood use or limited cash sales) whereas the motivation for commercial illegal logging is to earn cash income beyond what is needed for meeting subsistence needs. Poverty-driven illegal logging usually targets fuelwood but some industrial timber may also be logged to construct houses and shelters. Commercial illegal logging may involve both industrial timber and fuelwood. However, in most cases industrial timber is the predominant assortment.

Poverty-driven illegal logging emerges where poor people have little choice but to resort to illegal logging. The harvested quantities are typically small, sufficient for subsistence consumption. Illegal fuelwood procurement is highly sensitive to changes in the supply and cost of alternative energy sources as well as changes in income levels. Illegal logging for commercial purposes arises from the opportunity to obtain large financial gains and a limited risk of sanctions. Commercial interests come into play where timber supply is sufficient to make illegal logging economically “viable”. Two types of illegal commercial logging can be distinguished depending on whether it is an “outside” or an “inside job”. Theft and unauthorized harvesting are typically “outside jobs” carried out by non-state parties; private individuals, forest owners, enterprises etc. Often, however, illegal logging is an “inside job” that is facilitated by corruption of public officials.

Illegally logged timber commands substantial market value compared to officially recorded timber revenue. In countries, for which data was available, the estimates for the market value of illegally logged timber range from USD 4.8 million (Moldova) to USD 48.2 million (higher estimate in Azerbaijan). In Albania, Bosnia-Herzegovina, and Georgia, the estimates are between USD 10-20 million. These estimates are based on the definition of illegal logging used in the countries (excluding e.g. corruption-related illegal logging) but it should be noted that they are theoretical and do not imply that elimination of illegal logging would result in a similar increase in official timber revenue. Unless legal timber supply is increased, which is often difficult because of legal and environmental constraints, future timber revenues will not markedly expand.

Elimination of corruption related to logging and timber sales would directly benefit government finances and the result would immediately show in higher government revenue. Unfortunately, there are no estimates on this potential, although in several countries the view was expressed that this may be equal or higher than the losses by theft.

Illegal logging has the most damaging environmental impact in situations where it makes the total harvesting volume exceed the maximum level considered sustainable. This is the case in

all countries involved in the study, with the exception of Bosnia Herzegovina and Serbia. Apart from its impact on overall sustainability of forest management, illegal logging can also have very detrimental local impacts on the environment. Operations are typically done without any concern for environmental protection, and sensitive areas such as steep slopes, riparian stands, special ecosystems and stream courses can be exposed to serious damage.

Institutional Framework for Controlling Illegal Logging

The policy environment in the countries is characterised by a breakdown of old command and control type structures with state dominance on productive activities. Effective structures based on a model separating government (normative) functions and private-sector (productive) functions have not yet been established. New forest related policies and similar government directives have been developed in the 1990s and first years of the 21st century. Most of these do not, however, seem to sufficiently recognize the importance of fuelwood in rural energy consumption, and focus on conservation and timber production. The forest policies do not explicitly mention illegal logging, if at all it is covered under forest protection.

All of the countries have had their legal framework for the forest sector revised in the 1990s with a varying degree of indications towards a market economy. Armenia, Azerbaijan, Georgia, Tajikistan, Uzbekistan and the Kyrgyz Republic define the forest resources exclusively as state property. The management responsibility may be divided between different central-level state agencies, and in some cases local government and/or state enterprises. Bosnia Herzegovina and Serbia have both state and private ownership of forestlands on a major scale, and Albania is taking initial steps in transferring responsibility for degraded forest to communities. In Tajikistan, degraded pasture lands (with potential for tree planting) are being transferred to non-state parties. In the Kyrgyz Republic and Uzbekistan community forestry is experimented to a very limited extent through long-term leases of state forestlands.

In most cases the legal framework is considered fairly adequate in the sense that more severe and comprehensive laws would not markedly improve the situation. Instead, the problems are more in the low capacity in the implementation of the legal and regulatory framework. Even more importantly, the legal framework often sets such strict limits and procedural rules for timber harvesting that enforcement becomes difficult no matter how much resources are devoted to it. In particular, where legal timber supply is not sufficient to satisfy poor people's basic needs, law enforcement staff often chooses to condone illegal logging.

An effective monitoring and control mechanism consists of several components including institutional structure, availability of resources, and efficiency of implementation. Not all components have the same importance in every country but for the entire system to be effective most of the components should work at least satisfactorily. Overall, the monitoring and control systems appear weak in the countries involved in the study. Nearly all identified elements of functioning monitoring systems are underdeveloped or non-existent. Some notable efforts to improve the system can be observed in Albania, Bosnia Herzegovina, Georgia and Serbia.

Effective separation of control and operative functions has been implemented only in few countries. Control procedures are largely available but their usefulness is limited in a

situation where the impact of any technical arrangement is diluted by corruption. The available information on forest management and timber trade is fragmentary and inconsistent, and third parties and even other government agencies have limited access to available data. The law enforcement staff generally has limited resources (e.g. means of transport and communication, operational budgets) and their salaries are low. Court system, suffering from overload, inconsistent penalty codes and corruption, is a major bottleneck for law enforcement.

Conclusions

A national **definition** of illegal logging should not limit its focus to only theft and circumvention of regulations, but should also include corruption related to logging concessions, contracts and sales. It should not, however, be broadened to such extent that it becomes operationally meaningless.

The **conceptual separation of poverty driven illegal logging of (mainly) fuelwood and commercial illegal logging is necessary**. Commercial illegal logging can be further broken down into theft and corruption-related illegal logging. Although in practice these distinctions may become partly blurred, they are needed to focus the discussion on potential responses appropriately.

Creating the basic conditions for legality in the forest sector requires better and more transparent information as a short-term measure. In the longer term it requires the resolution of forestland tenure in a way that creates responsible managers with a long-term interest in the forest resources and capacity for management and control. Increasing rural incomes and decreasing dependence on fuelwood also needs to be tackled to make legality in the forest sector a realistic goal. In many countries improved governance in the society as a whole is needed, especially weaknesses in the judicial system must be addressed before legality in the forest sector can be achieved. The forest sector should be an active voice in promoting these broader changes.

The **chronic imbalance in the (legal) supply and demand of timber, especially fuelwood**, is often the key underlying factor fostering illegal logging. To reduce the gap following actions may be considered:

Subsistence use

- In the short term, temporary increase of legal extraction of fuelwood – even beyond the levels estimated as sustainable (“illegality” often arises out of lack of alternatives).
- In the longer term the aim should be increase supply by ensuring natural regeneration of forest and bush land and intensification of farm and community level plantations; these efforts should be linked to land tenure arrangements and their security
- Gasification of rural areas, provision of solar and wind energy, and rural electrification with links to efforts made in the forest sector.

Commercial use

- Increasing the legal allowable cut accompanied with measures for improved governance, especially to curb high-level corruption
- Lowering import duties to reduce profitability of illegal logging (in selected cases)

Stronger forest sector governance requires:

- Improved information through forest inventories and comprehensive information management systems
- Transparent procedures enabling data access for third parties
- Clear separation of monitoring and commercial functions, preferably into different Ministries
- Independent monitoring by creating strong and independent government institutions and by involving civil society organizations in monitoring activities.
- Reduced bureaucracy for legal fuelwood cutting.
- Increased transparency in timber sales
- Better-equipped and better-paid law enforcement staff
- More efficient trial courts and more consistent penalty codes
- Multi-stakeholder forums for dialogue on key issues of forest policy and policy implementation
- Introduction of forest certification

International governance and partners may have a role in

- Encouraging the countries to become signatories to international conventions and agreements (e.g. the Aarhus convention promoting transparency and freedom of information).
- Increasing awareness and developing common approaches through regional processes and international networking
- Local-foreign partnerships in the private sector enhancing capacity for control and sustainable management and support to rural development programs

Where to Start

Priority measures depend on the type of illegal logging that is prevalent and the existing governance situation. Regarding commercial illegal logging, the most effective responses in countries with the most difficult overall governance situation are likely to focus on tackling high-level corruption that allows the perpetrators to circumvent lower level actions for control. Most of the other potential measures will be fully effective only if corruption can be brought under control.

Currently, the strategies regarding poverty-driven illegal logging are less dependent on the institutional structure than they are of policies and legal norms. The institutional setup has little relevance in a situation where policies and laws are flawed to the extent that they cannot be implemented. The fundamental conflict is between environmental protection and satisfaction of social needs; in many cases it is difficult to achieve both. The existing legal frameworks are founded on strict principles of environmental protection but, as a result, the legal supply of fuelwood is often grossly inadequate to satisfy people's basic needs. The starting point for actions to combat poverty driven illegal logging of fuelwood is to adopt an approach that is feasible and allows law enforcement to fight a battle that can be won. This approach must be able to effectively close the huge gap between supply and demand that exists in many countries.

1. INTRODUCTION

1.1 Background, Objective and Conduct of the Assessment

Illegal logging is a significant problem in all European and Central Asian (ECA) countries in transition, but its impact depends on the nature of illicit activities. Commercially motivated activities often receive most attention because of the large economic interests involved, but illegal procurement of fuel-wood is also a major concern in many countries. Illegal logging gives rise to numerous financial, environmental and social impacts, which are often intertwined. Undoubtedly, the impacts are predominantly negative but the issue is made complex because local people may consider illegal logging a necessity supplementing their meager incomes and enabling them to meet their basic needs.

To assess the situation regarding illegal logging and related governance issues, and to identify possible reform strategies, the World Bank commissioned a study from Savcor Indufor Oy¹ covering the following countries: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina², Georgia, the Kyrgyz Republic, Moldova, Serbia³, Tajikistan, and Uzbekistan. The study is focused on low-income (IDA), relatively forest-poor countries of ECA where studies on illegal logging are lacking and where illegal logging has different connotations than in more affluent and forest-rich countries. In the countries analyzed in this study, illegal logging has a strong link to rural development and livelihoods.

The study was carried out by a team of national consultants (Annex 1) in the countries involved in the study, supervised and assisted by two international consultants, Mr. Tapani Oksanen, and Mr. Esa Puustjärvi of Savcor Indufor Oy, who produced this summary report. The study was conducted between January and May 2005.

The study process combined elements of analytic work, dialogue and discussion with a broad group of stakeholders in each of the countries involved in the study (see list of stakeholders consulted in Annex 2). Capacity building of the team of national consultants and personnel of key national institutions on illegal logging and related forest governance was also carried out to contribute towards and informed dialogue on these issues in preparation for the Europe and North Asia Forest, Law Enforcement and Governance (ENA FLEG) Ministerial Process. The study was carried out in four phases:

- (i) Identification and contracting of the national consultants, desk study of existing reports, and preparing the assessment framework and methodology including the outline for the country-level assessments. Formulation of draft work plans by the national consultants (January-February 2005).
- (ii) Workshop to discuss and finalize the assessment framework and methodology, and the work plans for the country-level assessments together with the national consultants. The workshop was conducted in Moscow in collaboration with the World Bank Russia Country Office (February 2005).

¹ In June 2004, Indufor Oy became part of Savcor Forest Group. In this connection, the Company name was changed to Savcor Indufor Oy in January 2005.

² Owing to the complex institutional set up in Bosnia Herzegovina and limited resources, the study was confined to one of the two entities of the countries, the Federation of Bosnia Herzegovina. Unless indicated otherwise, the analysis does not cover the situation in Republika Srpska.

³ The other member of the country, Montenegro was excluded from the scope of the study. Similarly, the situation in Kosovo, which presently has a special administrative status, was not analyzed in this study.

- (iii) Country assessment phase, consisting of analytic work by the local consultants, country level stakeholder consultations, and supporting missions by the international consultants in critical phases of the work (February-April 2005).
- (iv) Preparation of the country assessment reports and the summary study report (April-May 2005).

1.2 Role of the Forest Sector in the Countries Involved in the Study

Forestry is not a major sector of the national economy in any of the countries involved in the study, but employment and fuelwood supply have (local) importance in rural areas. The contribution of the forest sector to the GDP ranges from a high of 2-2.5% in countries like Serbia and Bosnia and Herzegovina to a low of 0.5 in Armenia. In a number of countries (e.g. in Central Asia) only aggregate figures for forestry and agriculture are available. However, these figures do not include the non-timber forest products and the environment services of forests, which are either not attributed to the forest sector or not captured in the national accounts, and which in most countries can be higher than the contribution of timber.

The countries involved in this study can be grouped according to forest use into three distinct categories, (i) countries where commercial forestry is being practiced in significant amounts but where forest also have a major role in providing fuelwood and other products to the rural poor (Bosnia and Herzegovina, Serbia), (ii) countries where forests serve primarily a social and environmental function but also some commercial forestry is practiced (Albania, Armenia, Azerbaijan, Moldova, Georgia), and (iii) countries where almost all commercial forest products are imported and the forests serve only social and environmental function (Uzbekistan, Tajikistan, the Kyrgyz Republic).

The study region also includes conflict timber areas in Armenia/Azerbaijan (Mountain Karabagh), Moldova (Trans Nistria) and Georgia (South Ossetia, Abkhasia). Although no reliable information is available regarding these areas, there is evidence of massive destruction due to almost complete lack of control.

The main characteristics of the forest resources in the study region are summarised in Table 1.1.

Most of the countries suffer from a chronic imbalance in the legal domestic supply and demand for fuelwood and timber. Many have also experienced a severe disruption in energy supply in the early 1990s as a result of the break-up of the USSR, leading to high pressure on wood as a source of energy (e.g. Moldova, Georgia, Azerbaijan, Armenia, Uzbekistan, Tajikistan and the Kyrgyz Republic). The peak of logging for fuelwood took place in the early to mid 1990s, but in many countries a severe unbalance in the legal supply and demand for fuelwood has continued to present day. The dependence of the rural people on fuelwood as a primary source of energy continues to be one of the main unresolved issues impacting on the forest sector (Table 1.2) It is further aggravated by the reduction on subsidies on other possible sources of rural energy, such as natural gas and electricity, in those countries implementing adjustment programmes (e.g. Azerbaijan). The distribution networks for gas and electricity are expanding but slowly.

Table 1.1 Characteristics of the Forest Resources in the Countries Involved in the Study

Country	Current area covered by forests (ha)	% land area	Forest types	Ownership	Allowed forest use categories
Albania	1 057 640	36	60% mountain forests, 40% on the plains	73% forests are owned and managed by the state, 26% in community management and 1% restituted to private owners	Both commercial and protection
Armenia	245 000	8	70% broadleaved high forests, 22% coppice forests and 7% shrub forests	All forests are owned by the state	Only improvement and sanitary felling, commercial logging forbidden (Group 1 forests)
Azerbaijan	989 500	11	Mainly mountain forests.	All forests are owned by the state	Only improvement and sanitary felling, commercial logging forbidden (Group 1 forests)
Bosnia and Herzegovina	2 273 000	44.6	Mainly mountain forests, of which 47% high forests and 22% coppice forests.	80% of forests are owned by state, 20% by a large number of private individuals	60% classified as production forests, 40% as not available for wood supply
Georgia	2 760 000	40	Mainly mountain forests, 80% broadleaved, 20% conifers	All forests are owned by the state	Industrial logging: final cut, and thinning. Fuelwood for local use: special cut
The Kyrgyz Republic	864 900	4	Mainly mountain forests	All forests are owned by the state	All forests have a nature protection status prohibiting industrial logging.
Moldova	362 700	11	98 % broadleaved	90% of forests are owned and managed by the state, the rest is managed mainly by local governments, some 400 ha are private property	All forests are included in Group 1, having exclusively environmental protection functions
Serbia	2 654 577	27	91% deciduous forests, 6% mixed forests and 3% coniferous forests	56% of forests are owned by the state, 44% are in private smallholder ownership	Predominantly commercial
Uzbekistan	2 200 000	5	Mountain forests and desert /steppe shrub lands	Mainly central government, some forest allocated to regional government and agricultural enterprises	All forests are classified as protection forests (Group 1), industrial logging is forbidden.
Tajikistan	410 000	3	Mainly mountain forests	All forests are owned by the state. About 50 000 ha are managed by collective farms	All forests are classified as protection forests (Group 1) allowing only sanitary felling.

Table 1.2 Fuelwood Dependence in the Countries Involved in the Study

Country	% of rural people who depend on fuelwood as principal source of energy
Albania	50-80
Armenia	50-80
Azerbaijan	50-80
Bosnia and Herzegovina	50-80
Georgia	Over 80
The Kyrgyz Republic	50-80
Moldova	50 - 80
Serbia	50- 80
Uzbekistan	Less than 50
Tajikistan	Over 80

Source: Local consultant estimates

The disruption of supplies from Russia has also impacted the supply of timber for construction and other commercial uses, and the cost of imported timber products has increased substantially as transport costs are included in full and import duties of up to 20% of border prices are applied. The balance of forest products' trade is negative in all of the countries involved in the study except Bosnia Herzegovina. For example, in Georgia the deficit is around USD 16 million and in Azerbaijan USD 38 million.

1.3 Governance Context for Forest Sector Development

All the study countries rank low in the Transparency International (TI) Corruption Perception Index (Table 1.3), and governments have recognized corruption as a problem. Forestry is sometimes mentioned among sectors where action needs to be taken (e.g. in Moldova, see Box 1.1). However, in general these broader efforts to improve governance have limited impact on peripheral sectors such as forestry.

Most countries are signatories to major international conventions related to forest sector (e.g. CBD, CCD, UNFCCC, etc.), as well as international forest related processes (e.g. Ministerial Conference on the Protection of Forests in Europe) but illegal logging is not discussed in the context of their implementation (i.e. illegal logging is not seen to have a (direct) impact on their implementation). Consequently these conventions provide limited support to the efforts to combat illegal logging.

An important international agreement referred to in discussions with forest sector stakeholders, is the Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (the Aarhus Convention), obliging governments to provide access to environment-related information. Reference is often made to this convention in the context of discussions on illegal logging. Except Bosnia Herzegovina, Serbia and Uzbekistan, the countries involved in the study have ratified or accepted the convention.

Table 1.3 Ranking of the study countries in the TI Corruption Perception Index for 2004

Country	Ranking (out of 145 countries with one indicating least corrupt country)	Score (out of a maximum of ten for least corrupt)
Albania	108	2.5
Armenia	82	3.1
Azerbaijan	140	1.9
Bosnia and Herzegovina	82	3.1
Georgia	133	2.0
The Kyrgyz Republic	122	2.2
Moldova	122	2.3
Serbia Montenegro	97	2.7
Uzbekistan	122	2.3
Tajikistan	133	2.0

Source: <http://www.transparency.org/cpi/2004/cpi2004.en.html>

Box 1.1 Forest Governance in the Broader Context: Case of Moldova

Moldova inherited weak institutions and has not yet succeeded in building a modern state. As a consequence, opportunities for corruption abound. The civil service is politicized, the management of public funds has improved but still lacks transparency and efficiency, local governments have limited capacity to carry out their extensive mandates, the judicial system is not trusted, and civil society has yet to emerge as a significant voice in the country. Not surprisingly, corruption in Moldova is perceived as being very high. The Business Environment and Enterprise Performance Survey II (BEEPS) reports that nearly 60 percent of respondents consider corruption to be a “moderate” or “major” constraint to business, the highest in the region. Agenda 21 of Moldova identified forestry sector as one of those where corruption is rife and measures to eradicate needs to be undertaken. However, this proposal was not adopted in subsequent sector plans prepared by the forest administration.

Source: *Savcor Indufor Oy 2005a*

1.4 Support from the World Bank and Other Major International Organizations and Donors

The World Bank is an important external partner in forest sector development and the development of good governance practices and structures in the society in general (e.g. Albania Armenia, Georgia and Bosnia Herzegovina). The most important projects by country are listed in Annex 3. Relevant projects are not confined to forest sector but include those supporting broader governance reforms (Box 1.2) Other important external supporters include the EU (the Kyrgyz Republic) SIDA (Armenia. GTZ (Uzbekistan), Swiss Government (the Kyrgyz Republic), Austria (Serbia). Also UNDP and USAID are supporting forest or agroforestry related activities in the region (e.g. Uzbekistan, Bosnia Herzegovina) through agriculture development, environmental and/or conservation related projects and programmes. The FAO NFP Facility is initiating support to national forest programme processes in several countries (e.g. Armenia and Georgia).

Box 1.2 WB-supported Projects in Albania Relevant to Forest Governance

The following World Bank projects addressing governance weakness in forestry-related sectors are underway in Albania:

- **Legal and Judicial Reform Project** (active) aims to contribute to the legal and justice system reforms, thereby contributing to the strengthening of the rule of law in Albania. The activities include, among others, improvement of the court and case management systems, provides judicial training, strengthens the enforcement of judicial decisions, and reinforces inspection services in the justice system.
- **Public Administration Project** (active) aims to strengthen Albania's weak institutional and governance capacity. The project supports, among others, project management and implementation, including supporting all the required project administration capacities (accounting, audit, procurement, disbursement management, monitoring and evaluation) and supports several specific initiatives for monitoring and publicizing the intermediate impacts of the government's institutional and public administrative reform program.
- **Natural Resources Development Project** (proposed) aims to establish or maintain sustainable, community-based natural resource management in about 218 communes in upland and mountainous erosion-prone lands. One of the two components is focused on forests and pastures. The project builds on the Albania Forestry Project and Albania Private Forestry Development Program.

Source: Savcor Indufor Oy 2005b

2. DEFINITIONS OF ILLEGAL LOGGING

There are usually no explicit definitions for illegal logging. In practice, the definition can be derived from the legal violations that are reported on in the national statistics concerning illegal logging. This does not necessarily mean that other types of violations would be ignored; they may simply be recorded under different headings.

In broad terms, the various legal violations associated with illegal logging can be divided into eight groups: (i) theft, (ii) unauthorized harvesting, (iii) non-compliance with regulations related to timber harvesting, (iv) non-compliance with the procedure of timber sales/concession award, (v) manipulation of timber data, (vi) evasion of taxes and fees, (vii) non-compliance with regulations concerning transport or export of timber, and (viii) non-compliance with labor laws

Typically, the statistics on illegal logging in the countries involved in the study refer to violations which involve physical removal of trees i.e. theft, unauthorized harvesting and non-compliance with cutting regulations (Table 2.1). Corruption in connection with timber harvesting is not recorded under illegal logging unless it involves physical removal of trees. All types of violations in the above list except theft could involve corruption.

Based on interviews with various stakeholders in the countries involved in the study, non-compliance with labor laws is perceived to be only weakly linked to illegal logging. Sector-specific records are not maintained and forest administration is not involved in enforcement activities.

Table 2.1 Concept of Illegal Logging in Countries Involved in the Study^a

Types of illegal logging	ALB	ARM	AZE	BIH	GEO	KGZ	MDA	SER	UZB	TJK
Theft	X	X	X	X	X	X	X	X	X	X
Unauthorized harvesting by forest owner/concession holder	X	X	X	X	X	X	X	(x) ^b	X	X
Non-compliance with regulations related to timber harvesting	X	X	X	X	X	X	X	(x) ^b	X	X
Non-compliance with procedures of timber sale/concession award										
Manipulation of timber data										
Evasion of taxes, fees										
Non-compliance with regulations concerning transport or export of timber										
Non-compliance with labour laws										

a. Limited resources prevented a detailed analysis of all forest-related legislation; therefore, the assessment is to some extent a subjective interpretation by the authors of this report.

b. In Serbia, illegal logging is associated with “forest devastation”. However, according to current legislation unauthorized harvesting that does not result in “forest devastation” is not a criminal act. Competent authorities can also authorize an act resulting in “forest devastation”. In practice, such authorizations are issued rarely and explicit justification for them is required.

3. ILLEGAL LOGGING

3.1 Volume of Illegal Logging

The volume of illegal logging in this assessment refers to amounts that involve physical removal of trees. As indicated in Ch. 2, national statistics are based on definitions that exclude other types of illegal logging. Also, the various indirect estimation methods used in this study are able to capture only acts where trees are removed illegally.

Based on the official statistics, the volume of illegal logging in the countries involved in the study varies considerably depending on the country. The lowest proportions have been recorded in Serbia, Moldova and Bosnia-Herzegovina, where illegal logging volumes equals 0.3–2.2 per cent of the legal timber supply. At the other end of the scale are Azerbaijan and Tajikistan where official illegal logging amounts to 20-30 per cent of legal supply. In absolute terms the highest volume has been recorded in Georgia where the official volume of illegal logging in 2004 was 61 000 m³. The absolute volume in Bosnia Herzegovina would probably be higher, if data for the whole country were available.

To assess the reliability of official statistics, the recorded, legal supply from forest areas was compared to estimates on actual consumption of commercial timber and fuelwood⁴. The amount exceeding legal supply is likely to be illegal timber. It should be kept in mind that

⁴ The estimates on industrial timber production are based either on existing investigations or they were derived taking advantage of existing statistical data on consumption. It was assumed that the share of commercial timber coming from outside the forest areas is negligible. The starting point for assessing fuelwood production was the available estimates on fuelwood consumption. To ensure comparability with legal supply, an attempt was made to exclude the amounts harvested outside forest areas (for details, see country studies). It is stressed that owing to shortcomings in basic data, the estimates are indicative. Exports and imports were considered where relevant (Bosnia Herzegovina).

official figures on legal supply of commercial timber may be underestimates because of data manipulation; industrial timber may be recorded as fuelwood.

The picture emerging from this comparison is less encouraging than the indications given by official statistics. In all countries actual production is estimated to be larger than legal supply, and in many of them of different order of magnitude. The difference is somewhat larger for fuelwood than for industrial timber.

Regarding industrial timber, the gap between actual production and legal supply was estimated to be widest in Georgia, Armenia and Albania. In these countries the harvested volumes are 5-8 times larger than the officially recorded supply. In Azerbaijan, the available estimates on actual production vary widely but it is clear that the true harvesting volumes are much larger than the negligible legal production.

In Serbia and Bosnia-Herzegovina the share of illegal timber is estimated to be modest compared to other countries, perhaps some 5-30 per cent of the legal supply. In other countries, where domestic production is small and imports constitute the bulk of the supply, no reliable estimates could be derived.

In several countries, the production of fuelwood exceeds the legal supply by a large margin. In the Kyrgyz Republic, Tajikistan, Albania and Armenia fuelwood harvest is estimated to be more than ten times larger than the amount indicated by official data. In Georgia, the official supply would have to be multiplied by a factor of seven.

In Azerbaijan, fuelwood consumption is also large, 1.7-2.5 million m³/a, but a large portion probably comes from outside forest areas. On the other hand, considering that in 2004 the legal supply of fuelwood from forest areas was only 10 000 m³/a, it is apparent that they are not spared from illegal logging.

The estimates for Serbia and Moldova are at the lower end of the scale for the countries involved in this study; actual harvesting of fuelwood is about twice as large as the official production. In Bosnia Herzegovina, no reliable estimate could be provided but it is likely to be of similar order of magnitude. Lack of data prevented presenting an estimate for Uzbekistan.

Table 3.1 Official Data on Illegal Logging

Country	Year	Official volume of illegal logging (m ³ /a)	Legal logging m ³ /a	Illegal logging of legal logging (%)
Albania	2002	28 400	304 800	9.3
Armenia	2003	n/a	63 000	n/a
Azerbaijan	1988-2005	20 600 ^a	65 000 ^a	32
Bosnia-Herzegovina	2003 ^b	41 159	1 850 938	2.2
Georgia	2004	60 846	640 957	9.5
Kyrgyz Republic	2002-2004	2 500 ^a	33 000 ^a	7.5
Moldova	2004	3 479	422 000	0.8
Serbia	2004	9 136	3 250 000	0.3
Uzbekistan	2004	n/a	26 800	n/a
Tajikistan	n/a	1 340-2 010	6 700	20-30

a. Annual averages for the period.

b. Data available only on four cantons of Federation of Bosnia and Herzegovina: West Herzegovina, Central Bosnia, Kupres, and Zen-Doboj.

Table 3.2 Estimated Production and Legal Supply of Industrial Timber and Fuelwood

Country	Year	Industrial timber			Fuelwood		
		Estimated production from forest areas	Legal supply from forest areas	Ratio estimated production/legal supply	Estimated production from forest areas	Legal supply from forest areas	Ratio estimated production/legal supply
		1 000 m ³					
Albania	2002	444	83	5.3	2 302	222	10.4
Armenia	2003	150	20	7.5	587 ^a	50	11.7
Azerbaijan	2004	11 - 456	0.6	n/a	n/a	10	n/a
Bosnia-Herzegovina	2003	3 106	2 714	1.1	n/a	-	-
Georgia	2004	550	70	7.9	2 000	300	6.7
Kyrgyz Republic	2002-2004	n/a	11 ^b	-	330	22 ^b	15.0
Moldova	2004	n/a	44	-	~750	359	2.1
Serbia	2004	95+	1900	1.05+ ^c	2 150	1 350	1.6
Uzbekistan	2004	n/a	8	-	n/a	18	-
Tajikistan	n/a	n/a	-		90	7	12.9

a. May include a minor portion originating from outside forest areas.

b. Annual averages for the period.

c. Stakeholder opinion, the majority estimated that illegal logging is 5 per cent or more of legal supply.

3.2 Types of Illegal Logging

Illegal logging can be characterized by being poverty-driven or commercially motivated (Figure 3.1). Poverty-driven is understood to mean illegal logging that is carried out to meet subsistence needs (i.e. fuelwood use or limited cash sales) and the motivation for commercial illegal logging is to earn cash income beyond what is needed for meeting subsistence needs. Poverty-driven illegal logging usually targets fuelwood but some industrial timber may also be logged to construct houses and shelters. Commercial illegal logging may involve both industrial timber and fuelwood. However, in most cases industrial timber is the predominant assortment.

Illegal logging for commercial purposes arises from the opportunity to obtain large financial gains and a limited risk of sanctions. Commercial interests come into play where timber supply is sufficient to make illegal logging economically “viable”. The sector does not necessarily have to be large in absolute terms, commercially motivated illegal logging can be found in countries with a modest resource base (e.g. in Albania, Azerbaijan, Armenia and Moldova). Both industrial timber and fuelwood can be harvested illegally for commercial purposes. For fuelwood, the main commercial markets are in poor urban areas.

Poverty-driven illegal logging emerges where poor people have little choice but to resort to illegal logging. The harvested quantities are typically small, sufficient for subsistence consumption. In the countries that belonged to the former Soviet Union as well as in Albania, the fall of the communist regime led to abolishment of energy subsidies and an abrupt rise in the cost of alternative energy sources which rapidly increased the demand for fuelwood. Because legal supply of fuelwood was insufficient, illegal procurement expanded as people scrambled to meet their basic needs. In Bosnia-Herzegovina and Serbia, the current situation

is less clear. People are probably less dependent on fuelwood than in other countries involved in the study, but it still is the main source energy for a large part of the population.

Figure 3.1 Types of Illegal Logging

Commercial	Theft / unauthorized	Corruption-related	Commercial
Poverty-driven	Theft / unauthorized		

Illegal fuelwood procurement is highly sensitive to changes in the supply and cost of alternative energy sources as well as changes in income levels. Improved supply of alternative fuels, their lower cost or higher standards of living can bring about a rapid reduction in fuelwood consumption and, consequently, illegal logging. On the other hand, higher prices for alternative fuels will quickly increase the demand for fuelwood (Box 3.1). The poorest people are likely to be the last ones to be dependent on illegal logging for meeting their energy needs.

Box 3.1 Impact of Energy Tariffs on Illegal Logging in Azerbaijan

Based on IMF recommendations, the Government has revised and increased tariffs for natural gas up to USD 0.05 per m³. Also the tariffs for electricity consumption will be increased. Unless social protection measures are undertaken these changes will affect the poverty level in the regions and especially in the mountainous and upper mountainous territories with high levels of unemployment and low income. Deterioration of living conditions and decrease in the paying capacity of even those people that currently use energy supplied by Government will considerably increase man-caused impact on the region’s forest resource, and subsequently result in their intensive degradation. Twofold increase of illegal logging volumes can be expected.

Source: Savcor Indufor Oy 2005c

Similarly, illegal logging for commercial purposes may respond to changes in timber markets. In Albania, abolishment of import tariffs may have reduced illegal logging of industrial timber by making the activity unprofitable. On the other hand, the overall benefit for the forest sector is doubtful; reduced value of forests may encourage conversion to other land uses (especially grazing).

Types of illegal logging can also be distinguished depending on whether it is an “outside” or an “inside job”. Theft and unauthorized harvesting are typically “outside jobs” carried out by non-state parties; private individuals, forest owners, enterprises etc. Often, however, illegal logging is an “inside job” that is facilitated by corruption of public officials (Figure 3.1). The distinction is important in the sense that in the official language, illegal logging often refers only to the former type. The reason may be that it is less sensitive than corruption because the perpetrators are outside the public administration.

The existence of corruption-related activities and the involvement of public officials are not necessarily denied by the government but the problem is usually treated separately from illegal logging. Corruption can occur at the local level and be “petty” or it may involve high-level officials inside or outside the forest administration facilitating the supply of major quantities of illegal timber. Common practices include undergrading, underpricing and manipulation of timber data (e.g. to mask industrial timber harvesting as “sanitary cuttings”) (Box 3.2). Anecdotal evidence and stakeholder interviews suggest that in state forests the value of logging facilitated by corruption is often as high or higher than that of stolen timber.

Box 3.2 Sales of oak to the Yerevan Brandy Company in Armenia

In 1998 the Yerevan Brandy Company (YBC) agreed with Armenian government to buy annually 2 000 m³ of high-quality oak from Armenian forests for a period of five years in order to produce new barrels for the ageing of the brandy produced in Yerevan. YBC originally explored various alternatives for purchasing the quantities of oak wood required for the production. However, as part of the policy to produce Armenian brandy, YBC decided that purchasing mainly Armenian oaks through the Armenian forest administration (Hayantar) would be the best choice. Another alternative would have been to import oak wood from neighboring countries. According to Armenian Forest code from 1994 (still in force), only sanitary and improvement cuttings are allowed in Armenian forests (i.e. removal of dead, infected and very old trees), and cutting down healthy oak trees is prohibited under any circumstances. It is evident that the agreement with YBC was against this legislation as it is impossible to provide high-quality oak timber for barrel preparation based on wood from sanitary and improvement cuttings.

The country’s forestry service will supply this wood to the distillery at an agreed price of USD 120 per m³. Experts estimate that the market value of timber of this quality oak is USD 200 per m³. Within the fifteen years of the agreement, 30 000 cubic meters of high quality, often centuries-old oak, will be felled because the government has favored a private company.

Source: Savcor Indufor Oy 2005d

In practice, these distinctions become blurred. The same perpetrators may be responsible for outright theft or corruption-related illegal logging depending on the local situation. Commercial operators and poor people may have common interests where illegal logging generates jobs (e.g. in Albania, Armenia). While largest profits are captured by the contractors, the wages they pay may still be an important source of income for rural areas with limited employment opportunities.

In addition, legislation may be such that it allows government officials unfairly but legally take advantage of their position e.g. to channel harvesting rights to favored persons or enterprises. However, it could not be established to what extent such opportunities exist in the forest sector, and it is unclear whether such activities could be termed illegal. The assessment of something being “unfair” but still legal is a delicate matter. Sometimes it may be obvious

and recognized by all parties as such but there are bound to be situations where perceptions differ.

With respect to ownership, it appears that forests managed by former kolkhozes and sovkhozes (e.g. in Georgia and Tajikistan) or by municipalities (e.g. in Moldova, the Kyrgyz Republic) are more vulnerable to illegal logging than state forests, despite the problems state forests are experiencing. On one hand, the municipal and kolkhoze/sovkhoze forests lack staff to protect the forest against theft and, on the other, they seldom benefit from responsible managers interested to manage the forests on a sustainable basis. Lack of transparency and accountability in the management structure does not allow the communities to control their activities.

Privately owned forests exist only in Serbia and Bosnia Herzegovina. In Serbia, no reliable data is available but local experts assume that the largest volumes of illegal timber come from private forests. To some extent, this is due to the fact that private woodlots are small (on average less than 0.5 ha) and the owners have limited interest and resources to protect them against theft. Another possible reason is that private forest owners circumvent regulations to avoid excessive bureaucracy. Harvesting itself may not necessarily violate regulations but the transaction cost of obtaining harvesting permits is regarded as excessive considering the limited value of harvested timber.

In Albania the government experimenting with a model where degraded forest lands are transferred to be managed by local communities. In Tajikistan, degraded pasture lands with tree growing potential are being transferred to non-state parties. There are indications that these forest areas are protected better against theft than state forest areas. The difference to private ownership (e.g. in Serbia) is probably the fact that the community forest areas have significant development potential which inspires the communities to protect them.

On the other hand, it is probably too early to definitively tell whether the communities will continue to manage them responsibly. Currently, the incentives for protection come from the potential benefit to be gained in a few years time when marketable timber becomes available as well as from the external support these experiments benefit from. The main incentive may even be the opportunity to gain control of land areas which in itself can be a step towards sustainable resource management. The model will be truly tested only when the communities will manage forests independently based on benefits derived from them and they have to make critical choices to ensure that the resources will be managed sustainably for the long term.

3.3 Exports of Illegal Timber

There is very little information available on illegal exports of wood products from the countries involved in the study. However, legal exports are non-existent or insignificant except in three countries: Bosnia Herzegovina, Georgia and possibly Serbia (Table 3.3). In other countries, the resource base is so limited and domestic consumption so large that the volume of illegal exports is likely to be minimal. However, they may include some high value products (e.g. walnut burls (wood-knobs) are exported illegally from the Kyrgyz Republic).

Bosnia Herzegovina is a major exporter of wood products. In 2003, roundwood and sawnwood exports amounted approximately to 221 000 m³ and 927 000 m³, respectively. The volume of illegally removed timber has been estimated roughly at 14 per cent of legal timber but it is not known whether illegal timber is destined for domestic or export markets. If illegal roundwood is exported, it is probably shipped to Serbia or Croatia where price levels are reportedly significantly higher than in Bosnia.

In Georgia, exports of roundwood are banned but exports of sawnwood are on the increase. In 2004, the officially recorded exports of sawnwood/processed goods was 132 000 m³. A major part of this must be produced from illegal timber because roundwood imports are limited and the legal harvesting of industrial timber is only 70 000 m³ corresponding to about 35 000 m³ of sawnwood production. It is reported that a significant volume of sawn wood from illegal sawmills would have been exported to Turkey.

In Serbia, volume data is available only for roundwood exports, which consist mostly of plantation poplar. In 2003, the value of sawnwood exports was EUR 47 million (USD 60 million) which in volume terms corresponds to 200 000–500 000 m³ of sawnwood. It is not possible to reliably estimate what portion of sawnwood exports is produced from illegal timber but local experts assume that it is very small, possibly about 1% of total export value.

Controlling illegal exports is difficult for the same reasons as controlling illegal logging is. In addition, only limited share of exports are destined to environmentally sensitive markets reducing the relevance of the option to introduce demand-based incentives for legal logging, such as independent forest certification. The main exceptions are Serbia, and possibly, Bosnia Herzegovina. The value of Serbian wood exports shipped to Italy and Germany was nearly USD 40 million in 2004. Data from Bosnia Herzegovina is not available but the value is likely to be substantial. Certification may, however, play a role also in the other countries in gaining access to new markets, and in establishing a benchmark for sustainable forest management.

Table 3.3 Exports of Wood Products

Country	Year	Legal exports			Illegal exports
		Roundwood	Sawnwood	Firewood/Charcoal	
		1 000 m ³			
Albania	2002	-	95	12 000 tons	
Armenia	2002	5	5		
Azerbaijan		-	-	-	
Bosnia-Herzegovina	2003	221	927		
Georgia	2004/1999	-	132		30-35 000 m ³
Kyrgyz Republic		-	-	-	
Moldova	1998-2004	2 ^a			
Serbia		33	N/A	1 500 m ³	< 1%
Uzbekistan		3			
Tajikistan		-	-	-	

a. Annual average for the period

3.4 Impact on Government Finances

Owing to the large volume involved, illegally logged timber commands substantial market value compared to legal timber. In countries, for which data was available, the estimates range from USD 4.8 million (Moldova) to USD 48.2 million (higher estimate in Azerbaijan). In Albania, Bosnia-Herzegovina, and Georgia, the estimates are between USD 10-20 million. In Azerbaijan, the lower estimate puts the value at USD 14.2 million. The volume of illegally logged industrial timber is usually smaller than that of fuelwood (see Ch. 3.1) but due to higher unit prices market value tends to be higher.

Table 3.4 Market Value of Illegal Logging

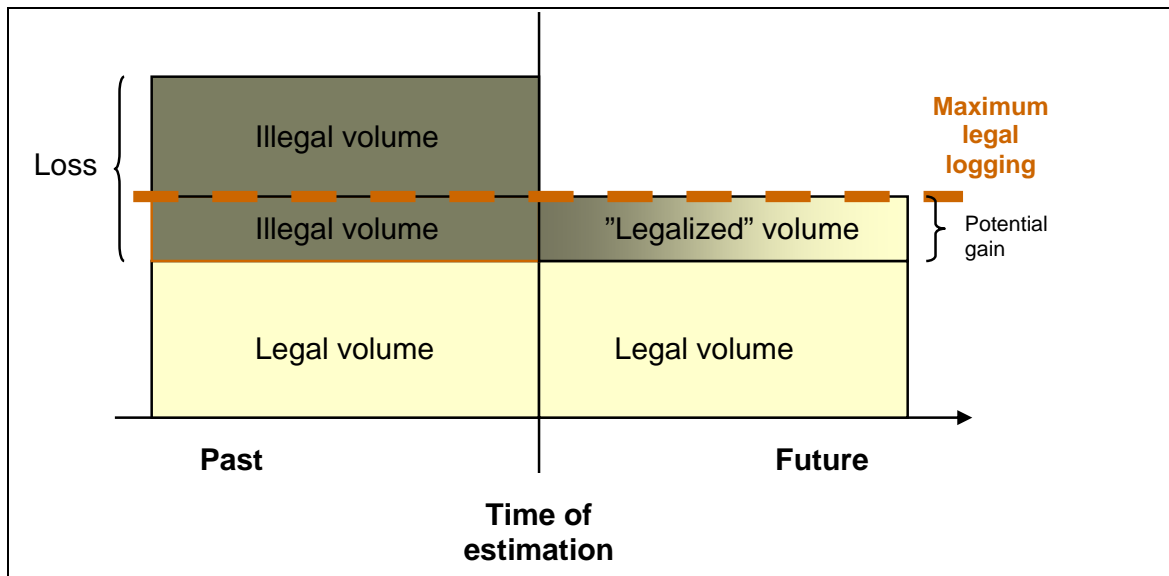
Country	Market value of illegal logging (USD mill.)			
	Industrial	Fuelwood	Charcoal	Total
Albania	7.9	3.5		11.4
Armenia				1.1-3.6
Azerbaijan	9.4-14.2	2.4-31.4	2.6-2.6	14.4-48.2
Bosnia-Herzegovina				19
Georgia	8-11	5		13-16
Kyrgyz Republic				n/a
Moldova				4.8
Serbia				n/a
Uzbekistan				n/a
Tajikistan				n/a

However, it should be noted that the market value of illegally logged timber is not the same as the potential benefit gained by the government from eliminating illegal logging. The benefit would equal the market value only if future legal harvesting could be raised by an amount that equals past illegal harvesting. Usually this is not the case; instead, all or part of illegal timber should not have been harvested at all. Often, with illegal logging the total harvesting volume goes beyond the maximum that could be harvested legally. The theoretical loss in the past can be calculated as the market value of illegal logging but the potential gain in the future is limited to the value of "additional" legal logging (Figure 3.2).

From this follows that improved law enforcement can be expected to yield financial benefits for the government, only if future limits for legal harvesting are set higher than they are today. Among the countries involved in the study, only Bosnia Herzegovina and Serbia harvest (legally + illegally) at a level that is substantially below the maximum level considered sustainable (see Ch. 3.5). In this case, the legally harvestable volume could probably be increased without jeopardizing sustainability of forest management. Thus, the portion of harvesting that in the past was illegal could be "legalized". In other countries, elimination of illegal logging would not substantially increase government revenue.

If the extra, "legalized" amount were extracted from state forests, the benefit from improved law enforcement would equal the stumpage value of illegal timber. If, on the other hand, the additional legal timber would originate from non-state forests, the benefit for state finances would be the amount of taxes, fees etc. that non-state owners are obliged to pay on harvested timber.

Figure 3.2 Potential Financial Gain from Improved Control over Illegal Logging



Elimination of corruption in public administration would directly benefit government finances. If corrupt practices (e.g. undergrading or underpricing) could be eliminated, the result would immediately show in higher government revenue. Unfortunately, there are no estimates available on the financial losses caused by corruption in any of the countries involved in the study. However, in several countries the stakeholders expressed the view that the impact of corruption probably equals or is higher than the losses caused by theft.

3.5 Threats to Environment

Illegal logging has the most damaging environmental impact in situations where it makes the total harvesting volume exceed the maximum level considered sustainable. In most countries this limit has been set by defining Annual Allowable Cut (AAC). In Azerbaijan, Georgia and Uzbekistan, the methodology to determine the AAC is still under development and in Serbia the main reference point is Annual Increment (AI)⁵.

As Table 3.5 shows, in the majority of countries involved in the study, the total annual logging volume exceeds the AAC. In Armenia, the Kyrgyz Republic, Tajikistan and probably in Azerbaijan, the sustainable level is surpassed by a large margin. In Moldova, the margin is not a wide one but still significant.

In Georgia, the estimate for the AAC is not yet available but it is likely to be placed much below the current harvesting level because of inaccessibility and the importance of forest protection. Therefore, the current harvesting volumes can be considered highly unsustainable.

⁵ In Serbia the majority of forest area has been classified as production forest and they can be reasonably well be accessed from the road network. Thus, the maximum sustainable harvesting level is considered to be close to the Annual Increment. The situation is similar in Bosnia Herzegovina where the difference between AAC and AI is not very large.

In Albania, the AAC does not take into account limitations in road access. In reality, only 24 per cent of the AAC is in accessible forest areas. In this perspective, even in Albania the current logging volumes go much beyond sustainable levels.

The only countries where the actual harvesting levels are well below sustainable levels are Bosnia Herzegovina and Serbia. It can be estimated that current harvesting in Bosnia Herzegovina is about half of the AAC, and less than 70 per cent of the AI in Serbia.

In most countries involved in the study, the relevance and appropriateness of current AACs is uncertain, because they have been determined based on outdated inventory data, often collected in the 1980s. Proper inventories are lacking except in selected areas of Georgia and Armenia; in Serbia a national forest inventory is underway.

Table 3.5 Total Logging Volume of Allowable Cut or Annual Increment

Country	Year	Estimated annual volume of illegal logging from forest areas	Annual volume of legal logging m ³ from forest areas	Total annual logging volume m ³ from forest areas	Annual allowable cut (AAC) or Annual Increment (AI) m ³ /a	Total production of allowable cut/annual increment (%)
Albania	2002	2 441	305	2 746	1 152 (AAC) 1 363 (AI)	2.4 2.0
Armenia	2003	667	70	737	30 (AAC) 450 (AI)	24.6 1.6
Azerbaijan	1988-2005	-	61	-	1 300 (AI)	-
Bosnia-Herzegovina	2003	392	2 714	3 106	6 873 (AAC) 7 942 (AI)	0.5
Georgia	2004	2 180	370	2550	3 900 (AI)	0.7
Kyrgyz Republic	2002-2004	297	33	330	40 (AAC) 449 (AI)	8.4 0.7
Moldova	2004	347	403	750	450 (AAC) 1 200 (AI)	1.7 0.6
Serbia	2004	895+	3 300	4 195+	6 650 (AI)	0.6+
Uzbekistan	2004	-	26	-		
Tajikistan	N/A	83	7	90	7 (AAC) 12-16 (AI)	12.9 5.6-7.5

Apart from its impact on overall sustainability of forest management, illegal logging can also have very detrimental local impacts on the environment. Operations are typically done without any concern for environmental protection, and sensitive areas such as steep slopes, riparian stands, special ecosystems (e.g. Tugai forests in Uzbekistan, see Box 3.3) and stream courses can be exposed to serious damage. Illegal logging can also degrade stand value by extracting the most valuable tree species (e.g. beech, oak, walnut, cherry etc.) leaving behind stands with low density, coppice forests or stands regenerating with low-value species (e.g. hornbeam in Albania and Armenia).

Poverty-related illegal logging typically takes place near settlements or urbanized areas resulting in gradual opening of the tree canopy and retreat of tree line (e.g. in Georgia and Bosnia Herzegovina). Illegal logging for commercial purposes often concentrates in the most

accessible areas along roads (e.g. in Albania, Bosnia Herzegovina). Sometimes, more remote locations with limited law enforcement are targeted (e.g. in Georgia).

Box 3.3 Environmental Damage of Illegal Logging in Uzbekistan

The methods used for illegal logging take sometimes forms that cause major environmental damage. In one occasion the experts observed that a long rope was fastened from one end to the biggest saxaul tree in the stand, and the other end was tied to a tractor. After this the tractor is driven around, and the big tree in the literal sense of the word “sweeps” the forest. Thus, not only mature trees are damaged but also young seedlings of natural restoration are affected.

Source: Savcor Indufor Oy 2005e

4. GOVERNANCE

4.1 Policy Framework

The policy environment in the countries is characterised by a breakdown of old command and control type structures with state dominance on productive activities. Effective structures based on a model separating government (normative) functions and private-sector (productive) functions have not yet been established. This, combined with the overall economic situation in the countries, has led into a general decline in investment in the sector combined with a breakdown of forest management and control.

New forest related policies and similar government directives have been developed in the 1990s and first years of the 21st century to replace the policies that were in place during the old system based on a socialist model (Table 4.1). Most of these policies still exist mainly on paper, with limited implementation in the field due to lack of resources and institutional resistance to change. More efforts at implementation are seen in those countries where the forest sector has external support in policy development and implementation.

The forest policies seem to be more based on a traditional conservation and timber production approach than a comprehensive analysis and stakeholder agreement on what is expected from the sector. For example, although the provision of fuelwood for local consumption is, at least by volume, by far the most important function of the forest sector in most of the countries, this issue is rarely, if at all, addressed. The forest policies do not seem to recognize the key role of fuelwood in energy consumption especially in the rural areas, or the fact that in the near future there is no alternative source of energy in sight in sufficient quantities. Nor are there explicit social objectives stated in most of the policies. Paradoxically, illegal logging often makes a significant contribution to social objectives (supply of fuelwood, generation of employment), indicating that at least from the rural populations’ standpoint the provision of fuelwood at an affordable price should be one of the key objectives of a forest policy reflecting the needs of the people. Perhaps even to the extent that harvesting would temporarily be allowed to exceed sustainable supply to fulfil the demand for fuelwood with legal production.

The role of the government as the owner and manager of forests prevails in most of the policies, although steps are taken in some countries (e.g. Albania, Tajikistan) to transfer management responsibility of limited areas of degraded forest/pasture lands to local communities and the private sectors. Other countries (e.g. Georgia) have created the legal

basis for this, but no concrete steps have yet been taken. There seems to be a general belief in the governmental agencies and among forest experts that the communities and private sector are not yet in a condition to assume this responsibility in a way that would improve the sustainability of resource management. Forest governance is still very much seen as the business of the government. The notion of multi-stakeholder governance is not yet widely understood or accepted in the sector.

Table 4.1 Characteristics of Forest Policies

Country	Key forest policy goals	Explicit mention of illegal logging as a problem
Albania	<p>Macro-goals influencing the sector:</p> <ul style="list-style-type: none"> • Reorientation towards a market-economic system • Privatisation and restitution of forest lands • Redefinition of the role of state agencies, devolution of management and control rights to non-state actors <p>2004 Strategy for the Development of the Forestry and Pasture Sector:</p> <ul style="list-style-type: none"> • Clarifying the government’s position on the privatisation of forest land • SMF by improving management planning” • Transition to market driven economy in the forest sector, promoting small-scale entrepreneurship • Transfer of management responsibility to rural communities • Improved state management of production forests and summer pastures • Development of nature based tourism and recreation <p>Energy strategy deals with fuelwood issues but not coordinated with forest strategy, no specific policy on fuelwood</p>	<p>Specific measures suggested through the Illegal Logging Action Plan, including an inter-ministerial task force, and improvement of law enforcement (including third party assessment)</p>
Armenia	<p>Declared strategy goals of Forest Policy 2004 are:</p> <ul style="list-style-type: none"> • Reforestation, development of beneficial features of forests and sustainable forest management; • Institutional strengthening and capacity building for sustainable forest utilization, as well as establishment of forest conservation and protection services, seed, nursery and hunting farms, education and training centers and network; • Creation of scientifically proved, sustainable forest management plans (short and long term); • Provision of non-wood forest products on a sustainable basis; • Improvement of legal basis for sustainable forest management, including scientifically proved mechanisms (methodology, criteria, etc.) taking into account international experience. 	<p>Illegal logging is analyzed and policy recommendations are made.</p> <p>Specific measures suggested through the Illegal Logging Action Plan intended to address rural poverty, public awareness, community consumption, commercial demand and monitoring and control. Interministerial Task Force has been created to supervise implementation. (see also Box 4.1)</p>
Azerbaijan	<p>Main objectives (defined in various policy documents) focus on:</p> <ul style="list-style-type: none"> • Implementation of state control, and organisation of state registry of the forest fund • Provision of the rational use of forest resources through planning and implementation of forest management and rehabilitation activities • Conservation and protection of forest resources including watersheds, recreation and other functions of the forests • Implementing international cooperation in the area of forest use, protection and conservation 	<p>Not specifically addressed, but implementation of improved control by the government emphasized</p>

Country	Key forest policy goals	Explicit mention of illegal logging as a problem
Bosnia and Herzegovina	<p>No officially formulated forest policy exists, PRSP provides some policy guidance to the sector:</p> <ul style="list-style-type: none"> • Sustainable use of the forest resource for employment and the development of rural areas • Reforestation, forest rehabilitation, identification of protected areas, promoting the use of non-timber forest products • Privatisation of forestry activities • National forest inventory, monitoring, forestry information system • Civil society participation 	<p>Not specifically addressed, guidance relates to information management and transparency</p> <p>Several inter-ministerial action plans have been adopted to combat illegal logging</p>
Georgia	<p>2002 Main Principles of Government Policy for Georgia's Forest Sector Development:</p> <ul style="list-style-type: none"> • Conservation of forest biodiversity, and improvement of forest productivity • Ensuring conservation of the virgin forests and endemic, relic and other valuable species • Increasing soil productivity and protection against erosion • Ensuring sustainable utilisation of natural resources • Developing ecotourism and hunting to solve social problems through economic effects <p>Commitment to develop a comprehensive forest policy and strategy (NFP – with support from FAO)</p>	<p>Not specifically addressed but moratoriums have been declared on logging and wood exports several times</p>
The Kyrgyz Republic	<p>1999 Forest Code of the Kyrgyz Republic gives protection status to all forests and prohibits industrial logging. The 1998 Presidential Decree and the 2004 Forest Sector Development Conception give following strategic directions:</p> <ul style="list-style-type: none"> • Forest and biodiversity conservation • Technical norms for SFM • Delegation of part of production functions to the private sector • Rationalizing forest service structure • Fiscal reform and increased effectiveness of the forest financing system • Promotion of status of forest sector workers • Forest science and education • Increased awareness on the forestry sector 	<p>Illegal logging not specifically addressed</p>
Moldova	<p>1996 Forest Code:</p> <ul style="list-style-type: none"> • Protection of water security, sanitary and hygienic, climate regulative and other functions of forests in the interest of public health care and environmental protection • Maintenance of forests conditions necessary for the ecological, social and economic functions • Continuity of functional efficiency of forests and rational use of forest resources <p>A number of other Parliament and Government decisions exist with focus on</p> <ul style="list-style-type: none"> • Conservation and protection • Afforestation and expansion of forested surface • Contribution of forestry sector in the solution of socio-economic problems (increasing mature forests, integral processing of wood, rational use of non-wood products) 	<p>Number of specific government decisions exist on illegal logging focusing on preventing unauthorized logging and theft, illegal hunting and illegal grazing; mainly in the context of forest protection.</p>

Country	Key forest policy goals	Explicit mention of illegal logging as a problem
Serbia	<p>No clearly defined forest policy document exists. Some elements of forest policy are addressed in the forest law, others in the 1996 Spatial Plan of the Republic of Serbia, which defines the sectoral objectives as:</p> <ul style="list-style-type: none"> • Improvement of the forest condition • Increase of the forest cover percentage <p>There is a on-going process to develop a new forest policy, legislation and a national forest program</p>	No specific policy measures or programs exist regarding illegal logging
Uzbekistan	<p>1999 Law About Forests and consequent Cabinet of Ministers' decisions define that the Forest Department has the normative responsibility for the sector, and productive functions are carried out by the forestry enterprises together with local authorities.</p> <p>Logging for industrial purposes is prohibited in all natural forests</p> <p>A need to develop a coherent strategic framework in the form of a national forest program is recognized, and FAO has been approached for support.</p>	No specific policy measures or programs exist regarding illegal logging
Tajikistan	<ul style="list-style-type: none"> • The 2002 Document on the Strategy of Poverty Reduction – State Ecological Program 1998 – 2008 is the main policy document for the sector: • Development of a national strategy on preservation of biodiversity • Ensure sustainable use of natural resources • Development of a legal base and monitoring system for environmental protection • Pilot projects on reforestation within the framework of UNCCD • Forest conservation and soil protection • Ecotourism and hunting development to contribute to solving social problems in the forest areas • Development of unconventional sources of energy to decrease use of fuelwood • FAO has been approached to assist in the development of a national forest programme. 	No specific policy measures or programs exist regarding illegal logging

The expressions in most of the forest policies indicate that they are not sufficiently linked with macro-level social and economic policies nor based on sufficient consultations with the rural populations, and primarily reflect the views of the (sectoral) experts and government officials. To a certain degree they also indicate a reluctance of the sector to accept the significance of fuelwood issue, and to acknowledge the limited capacity of the state forest authorities to manage the forest resources and control their use. Both facts demonstrated by the current levels of illegal logging.

The forest policies usually do not explicitly mention illegal logging. If at all, it is covered under “forest protection”. Strategies or actions plans specific to illegal logging are focused on theft, and circumvention of regulations by persons operating in state forests without appropriate permits, or in some countries by private forest owners. Joint strategies and actions by several ministries are proposed in some countries (Albania and Bosnia Herzegovina), but in most countries this issue is mainly perceived as a sectoral issue handled by the responsible forest authorities (i.e. forest guards).

Strategies to combat corruption-related illegal logging (e.g. obtaining logging permits through corrupt means) exist but they are not as clearly recognized as part of the efforts to halt illegal logging as those related to the physical theft of trees. Little difference is also made as regards

poverty driven illegal cutting of fuelwood and other products for subsistence consumption and local sale and commercial illegal logging.

Efforts to improve demand-supply balance of forest products are advocated in some policies, but these programmes are not linked to combating illegal logging or provision of fuelwood. Most often they remain rather abstract (in terms of the final objective of the efforts) proposals to establish forest plantations for the expansion of forest cover done by government agencies.

A number of the countries have recognized the need to develop comprehensive multi-stakeholder approaches to forest sector development, based on internationally agreed principles, in the form of national forest programmes. For the time- being, however, such processes are not in place in any of the countries.

The Illegal Logging Action Plan (ILAP) in Armenia is one of the few attempts to address all issues related to illegal logging in a comprehensive manner (Box 4.1). The broad scope illustrates well the complexity of issues underlying illegal logging. The proposed activities range from institutional reform and improving monitoring systems to providing alternative energy sources and alleviation of poverty.

Box 4.1 Illegal Logging Action Plan in Armenia.

The Illegal Logging Action Plan adopted a phased approach where the activities are started with implementation of pilot projects the most successful of which will be used for replication. It was considered essential that any programmes are adaptable and can change according to circumstances and can build on experience obtained. A total time frame of seven years is proposed for implementation. The first year will be used to undertake detailed project design, technical analysis, environmental and social assessments, and to finalise funding arrangements. Following these preparatory activities the plan will be implemented over a six year period.

The activities included in the plan will be linked with other initiatives such as institutional reform, the restructuring of “Hayantar” (which will also receive support from FISP) and increasing natural gas supply to more towns and homes. Any single project may have a positive impact but for the success to be replicable it must be co-ordinated across the sectors. Links will be set up with the international processes to combat illegal logging such as the Forest Law Enforcement and Governance initiative.

As with any initiative it is important to build consensus and involve a cross-section of stakeholders in the solutions. Possible solutions have been developed to address the issue from the supply side (i.e. what can be done to reduce illegal but increase legal supplies) and the demand side (i.e. reduce demand for illegal wood products). The solutions presented here have followed the same basic order as the problems highlighted above: overall, community consumption, commercial demand and monitoring and control. Recommended components of the action plan include:

1. Increasing public awareness;
2. Alleviating rural poverty;
3. Community forestry programmes;
4. Alternative fuel supplies;
5. Increasing supply of legitimate wood products;
6. Restructuring forest institutions and capacity building;
7. Improved monitoring and control; and,
8. Forest Certification.

An Interministerial Task Force has been set up to supervise the implementation of ILAP.

Source: Mitchell 2004

A potential weakness is that ILAP seems not to be linked to broader efforts to reduce high-level corruption. Unless major progress on this matter is achieved first, there is a risk that the impact of all other measures proposed in the Action Plan remains limited. Any formal

arrangement can be circumvented by corruption if high ranking government officials are involved.

4.2 Legal Framework

The legislation of Armenia, Azerbaijan, Georgia, Tajikistan, Uzbekistan and the Kyrgyz Republic defines the forest resources exclusively as state property. The management responsibility may be divided between different central-level state agencies, and in some cases local government and/or state enterprises. Bosnia Herzegovina and Serbia have both state and private ownership of forestlands on a major scale, and Albania and Tajikistan are taking initial steps in transferring responsibility for land management to non-state parties, mainly communities. In Albania, degraded forest lands are transferred, in Tajikistan degraded pasture lands used possibly to plant trees. In the Kyrgyz Republic and Uzbekistan community forestry is experimented to a very limited extent through long-term leases of state forestlands. This applies especially to degraded lands given to communities for rehabilitation and protection. In Georgia this concept is recognized in the law, but in practice it has not been applied. In Armenia the concept of ten-year forest agreements with local communities is also recognized in the Forest Code, and there is an incipient process to implement such agreements.

All of the countries have had their legal and regulatory framework for the forest sector revised in the 1990s with a varying degree of indications towards a market economy (Table 4.2)

Table 4.2 Year of Approval for Main Forest Laws

Country	Forest law	Year approved
Albania	Forest law	2005
Armenia	Forest Code (new law in preparation)	1994
Azerbaijan	Forestry Code	1997
Bosnia and Herzegovina	Forest Law	2002
Georgia	Forest Code	1999
The Kyrgyz Republic	Forest Code	1999
Moldova	Forest Code	1996
Serbia	Law on forests	1996
Uzbekistan	Law about forests	1999
Tajikistan	Forest code	1993

In addition to these laws, illegal logging offences are regulated through other legislation, such as laws on protected areas, criminal offences, administrative offences, environmental offences, corruption, social protection, and local government organization and functioning. Which ones of these laws apply to illegal logging depends to some extent on the definition of illegal logging that is used.

In most cases the legal framework is fairly adequate in the sense that more comprehensive legal frameworks would not markedly improve the situation. In this respect the problems are more in the low capacity in the implementation of the legal and regulatory framework, than in the laws and regulations themselves. However, there are also countries (e.g. the Kyrgyz Republic, Tajikistan) where the transition towards a market economy in the forest sector is

considered impossible without major changes in the forest legislation; for example the organizational separation of the control and commercial/management functions (Box 4.2).

Box 4.2 Shortcomings in the Legal Framework in Tajikistan

The main shortcoming in the legal framework is that responsibilities for controlling forest use, selling use rights and monitoring illegal activity are in the hands of one organization – the State Committee of Environmental Protection and Forestry (SCEPF). This is due to the merging of the Ministry of Environmental Protection with the Tajik Forestry Production Association into SCEPF. Now all forest functions are carried out within one organization. In effect, SCEPF controls the supply of timber, is able to determine the outcome of tenders, and has the power to decide which entrepreneurs will be considered legal and which ones will be considered illegal.

Source: Savcor Indufor Oy 2005f

On the other hand, in many countries the legal framework cannot be implemented because it does not enable people to satisfy their basic needs. The procedures for allowing harvesting in private forests involves excessive bureaucracy inviting people to circumvent or ignore them.

On the broader social and institutional factors influencing illegality, problems are reported especially concerning the capacity of the judges and prosecutors to effectively handle forest sector crime. Although in most countries there seems to be an external ombudsman or other independent mechanism to respond to public complaints, in some cases it is indicated that in practice these instances are not responsive to complaints related to logging. This weakness is especially critical when addressing illegal logging related to corruption.

Regarding fuelwood, the legal procedures on subsistence consumption are often cumbersome, in some countries outright restrictive. In Azerbaijan the production of charcoal and firewood by companies and individuals is totally prohibited. The collection of dead wood and cutting of branches for fuelwood is normally allowed, and in some cases legally cut fuelwood is provided by the government authorities for local use (in Albania). However, as indicated earlier, these legal quantities are totally inadequate to satisfy the needs of the rural people.

Moratoriums on logging have been implemented in several countries (i.e. Albania, Georgia) but their effectiveness is being questioned. In several cases the continuation of industrial forest operations are reported even after the moratoriums have declared (Box 4.3).

Box 4.3 Stakeholder Views on 2004 Logging Moratorium in Georgia

“Although moratorium required sawing workshops to be shut down, two of those continued operating. They said they were implementing government’s orders. Having seen that, other sawing workshops renewed unlicensed operations.” (A Borjomi Democratic Institute employee)

“About 50 cases were filed with the court against sawing workshops. A deputy governor’s truck was detained on several occasions. But some people with mini-buses still manage to pass through the border with impunity...” (A Ministry of Environment Protection staff)

“Under the moratorium, officers that had to be on duty day and night at the checkpoint were paid 20 lari a month. Under such conditions it’s hard to sacrifice oneself.” (A Borjomi Public Opinion Council member)

“The moratorium never worked. Every night at least five trucks without license plates passed through the checkpoint. We followed one truck with hidden camera. Nobody even tried to stop it...” (A Media Development Association member)

“Yes, they collect fines, but they may fine just one truck out of ten.” (A forester from Akhaldaba)

“The moratorium hit the most vulnerable ones. A three-month break can do no harm to major industries.” (A Forest Researchers staff)

“The moratorium can not stop illegal cuts. Healthy trees are still being cut down, diseased ones stay upright and the State Budget gets nothing.” (A Biosphere NGO staff)

Source: Savcor Indufor Oy 2005g

4.3 Monitoring and Control System

An effective monitoring and control mechanism consists of several components including institutional structure, availability of resources, and efficiency of implementation. Not all components have the same importance in every country but for the entire system to be effective most of the components should work at least satisfactorily. It is also important to keep in mind that any monitoring and control system can be effective only if the overall situation with respect to governance is adequate (e.g. high-level corruption eliminated)

Overall, the monitoring and control systems appear weak in the countries involved in the study. Nearly all identified elements of functioning monitoring systems are underdeveloped or non-existent. The only area element available in most countries is control procedures but unfortunately their effectiveness is doubtful (Table 4.3).

Regarding other measures, some notable efforts have been made in Bosnia Herzegovina to improve the financial control mechanisms. The Albanian government has attempted to introduce high-level, inter-sectoral cooperation mechanisms. Georgia has recently joined the Forest Integrity Network, a partnership of national and international advocacy organizations, promoting independent forest monitoring. Positive signs can be observed in Serbia, where several of the other necessary components are in place and work at least satisfactorily.

Table 4.3 Quality of Monitoring and Control Systems^a

	Link to broader or higher level efforts to improve governance	Elimination of conflicts of interest within forest-related administration	Availability of control procedures for ^b				Quality of information management in public forest sector	Availability of resources for law enforcement	Transparency/involvement of civil society in monitoring	Efficiency of court system
			Timber sales from state forests/award of	Timber sales from private forests	Timber transport, processing and export	Financial management				
Albania	yes	poor	fair	fair	fair	fair	poor	limited	limited	low
Armenia	no	good	poor	poor	good	good	n/a	limited	limited	low
Azerbaijan	no	fair	n/a	n/a	fair	n/a	poor	limited	limited	n/a
Bosnia-Herzegovina	no	fair	n/a	good	fair	fair	poor	fair	limited	low
Georgia	yes	poor	good	fair	fair	fair	poor	limited	limited	low
Kyrgyz Republic	yes	poor	fair	fair	fair	fair	poor	limited	limited	low
Moldova	no	poor	fair	fair	fair	fair	poor	limited	limited	low
Serbia	no	fair	fair	good	fair	fair	fair	fair	fair	low
Uzbekistan	no	poor	fair	good	good	fair	poor	limited	limited	n/a
Tajikistan	no	poor	good	fair	fair	fair	poor	limited	limited	low

a. The assessment is based on qualitative information available in the country reports which was subjectively interpreted by the authors of this report. On some issues no basic information was available and no assessment could be made.

b. Availability was estimated based on data provided in Annex 4 which was collected in conjunction with country studies. It should be noted that availability is not necessarily correlated with effectiveness.

The following observations were made regarding the various elements of monitoring and control systems:

Link to broader or higher level efforts to improve governance. Initiating an effective combat against illegal logging is often difficult within a single sector such as forestry without strong support from higher levels of administration. Illegal logging is a sensitive issue and possible involvement of own staff in illicit activities may prevent serious efforts to address the problem.

In Albania, the government has established a high level task force involving representatives from several government agencies to supervise the combat against illegal logging. In the Kyrgyz Republic a special commission of the Parliament was established to investigate illegal logging of walnut trees, the most valuable wood product in the country.

While the establishment of such bodies is a positive sign, the monitoring and control systems in these countries as a whole remain ineffective. Many other vital elements of an appropriate system are missing and the experience serves to show that the impact of isolated efforts is often limited.

Elimination of conflicts of interest within forest-related administration. Under the former communist governments, all forest functions including forest management and control were in the same administrative body. Following the fall of communist regimes, the idea of establishing independent control functions took hold and all forestry administrations in the region have moved in this direction. The most effective arrangement is in Armenia, where the inspection body is in a different ministry than the state forest enterprise, the body responsible for forest management.

An intermediate solution is one where the inspection function is outside the state forest enterprise but under the same ministry. This arrangement is in place in Azerbaijan and it is being introduced in Bosnia Herzegovina. In the latter country, the Federation of Bosnia Herzegovina (one of the two administrative entities in the country) has decentralized the system to the cantonal level where the inspectors work side by side with staff of state forest enterprises. The downside of this arrangement is that the tight social networks in the cantons may erode the neutrality and effectiveness of the system.

The approach where the same person plans, implements and controls timber harvesting is likely to encourage petty corruption. This arrangement is in place in nearly all other countries involved in the study. There is usually an inspection body at the ministerial level charged with controlling the state forest enterprise but their capacity is typically quite limited. In Serbia, this structure is complemented with an internal control system within the state forest enterprises. In principle, this is an improved arrangement but in practice its effectiveness is unclear.

Effectiveness of control procedures. Control procedures are a basic element of the regulatory framework in the forest sector. They alone can do little to eliminate illegal logging but appropriate procedures are a pre-requisite and necessary foundation for other efforts. The following observations were made.

- ***Timber sales from state forest.*** It is evident that there are rather big differences between the countries in the procedures and transparency for timber sales. The main weaknesses of the systems of awarding concessions and selling timber from public lands seem to be in ensuring that there is more than one bidder when timber is sold, in making the bids public after the bidding, and in having the sales procedure supervised by an independent entity.

Regarding timber harvesting and sales from valid concessions, the main issues center around the publicity of concession contracts, inventories and plans. Especially the concession contracts seem to be kept away from public scrutiny. It is also noted that although citizens in most countries may bring lawsuits or file administrative complaints to enforce concession requirements, both the time required and cost of this action is prohibitive.

- ***Controlling harvesting in private forests.*** The transparency of timber sales from private forests is only relevant to two of the countries (Bosnia Herzegovina and Serbia). In Moldova and Albania the amount of private forest is negligible (Moldova about 400 ha, and Albania about 10 000 ha). In these countries the procedures would seem to be in place, but the actual implementation of these cannot be verified.

- *Controlling timber transport, processing and export.* Most countries seem to have procedures in place for controlling the transport of timber. Despite of this, massive amounts of illegal timber are being transported each day, which would indicate that the paper based systems used for control and verification of legality are not tamper proof, and that there is outside interference in the system on a sufficiently high level to make it non-operational at least in part. Regarding the processing of timber, all countries require the licensing of such facilities and most perform regular inspections of the processing plans. In about half of the countries customs officials are trained to recognize restricted or prohibited timber species.
- *Financial management.* Procedures for financial audits as well as special government bodies responsible for financial audit exist in all countries but their effectiveness is hampered by the fact that audits do not necessarily verify that revenue collected matches with logging volumes/ areas under production. In a majority of the countries forest revenue systems do not seem to establish a clear basis for monitoring of revenue collection. In some countries it is also reported that both record keeping and audits are not carried out systematically although this is required by the law. Lack of proper financial control is a major shortcoming of the monitoring system, and one that is likely to encourage corruption both at local and higher levels.

Bosnia Herzegovina is the only country where intensive, well-resourced financial audits have been carried out. They were confined to the state forest enterprise in Republika Srpska and the results are not publicly available. However, the available information suggests that the method of auditing was effective even though in this particular case auditors' lack of technical competence in forestry may have reduced the validity of findings.

The availability of control procedures is not a major limiting factor for the effectiveness of monitoring and control action but inappropriate implementation is. Refinement of procedures can do little in a situation where the impact of any technical improvement is effectively diluted by corruption (Box 4.4).

Quality of information management in the public forest sector. The available information on forest management and timber trade is fragmentary, inconsistent and much of the basic data remains unprocessed. The information management systems are outdated; use of computerized system is expanding but is still limited.

Lack of adequate data is a major hindrance for law enforcement, especially with respect to corruption-related illegal logging. The main exception is Serbia where the forest administration maintains a reasonably well functioning information system including some technical innovations (Box 4.5).

Box 4.4 Typical Ways to Circumvent Control Procedures

According to Mostovi-online, a Bosnian web-magazine, common ways to go about illegal logging in Bosnia Herzegovina include:

- The police are unable to cross check the validity of forged documents and stamps;
- Forestry guards do not report new forest roads, clear-cutting and areas that have been illegally harvested;
- Forestry officials and loggers falsely classify quality timber as cheap low quality timber;
- Forestry officials do not fill in dispatch notes correctly, allowing loggers to use them repeatedly;
- Forestry inspectors, guards and police allow loads up to double what is declared on the dispatch note;
- Forestry inspectors allow dealers to cut up to twice as many trees as they have paid for from one area;
- Cantonal Forestry Companies issue false documents to logging companies and dealers to cover up illegal activities.
- Politicians take bribes from forest management companies and use their influence to enable illegal activities

Source: Modified from Mostovi-online (2004)

Box 4.5 Example of Successful Control System in Serbia

The National Park Fruska Gora, Forest administration Vrdnik has introduced a system which can be considered an example of successful control of illegal logging.

A pilot project to supervise forest warehouses and roads was started by one of the park employees. The system is based on electronic devices, including sensors for movement and temperature that are placed on the approach to the ramp of forest roads and warehouse.

With this system, the administration is able to monitor day and night, from one center, 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 Oy 2005h

Availability of resources for law enforcement. The law enforcement staff generally has limited resources (e.g. means of transport and communication, operational budgets) and their salaries are low. In Serbia and Bosnia Herzegovina, the availability of resources is better than in other countries involved in the study but even there they are still far from being fully adequate.

Lack of resources is a major hindrance for effective law enforcement, especially against theft and unauthorized harvesting by non-state forest owners. Increasing resources for transportation and communication would have less impact against corruption-related illegal logging which often relies on data manipulation and abuse of authority (Box 4.6). In this case, the main issue is to assess whether the available funds are spent on appropriate activities i.e. whether financial audits should be favored over field monitoring, or whether the institutional setup for the monitoring system should be changed.

Higher salaries for enforcement staff could reduce the incentive for petty corruption but they would not be effective in a fight against corruption involving high level officials. For them, the potential gains from illegal activities are often much larger than from any reasonable salary in public administration.

To the extent that illegal logging is poverty-related, full implementation of existing laws is often next to impossible, even if resources were substantially increased. Where illegal logging is carried out to meet basic human needs, little can be done to stop it. Law enforcement staff often condone illegal logging if they consider it to be caused by poverty (e.g. in Moldova and the Kyrgyz Republic).

The resources needed for adequate law enforcement may be high compared to the direct financial benefits from forest management. For instance, in Armenia the cost of an improved monitoring system was tentatively estimated at USD 5 million (Mitchell 2004); in 2003 the value of timber sales from state forests was USD 1-1.5 million (Savcor Indufor Oy 2005d). Much of the justification for increasing resources for law enforcement would have to come from improved protection and supply of non-market benefits such as environmental protection.

Box 4.6 Example of Corruption-related Illegal Logging

During a raid conducted on June 12 2004, inspectors of Jalalabad forest service and the Ministry of Internal Affairs arrested two trucks transporting nine walnut burls (wood-knobs) in Beshik-Jon village of Bazarkorgon district in the southern region of the Kyrgyz republic. Shortly after the arrest the district head of the government's auto inspection service arrived on the scene preventing the arrest and allowing the truck to continue its journey.

At this moment, one of the forest inspectors called the chief of Jalalabad forest administration and the Jalalabad chief of the Ministry of Internal Affairs and informed them of the situation. They decided to intervene and managed to stop the truck in another village, Besh-Kepe, of the Bazarkorgon district. The driver was arrested and taken to the militia office.

Surprisingly, in the following developments the Department of Internal Affairs in the Bazarkorgon district pressed charges against the staff of the forest district and militia in Jalalabad who provided assistance in stopping the truck and arresting the suspect. The charge was based on article 341 of the clause 2 of the Criminal Code of Kyrgyz Republic. The case was passed on to the Special Office of the Public Prosecutor in Osh, Jalalabad and Batken oblasts for further consideration. The charges were in the end dropped, but the suspect driver was never prosecuted.

Source: Savcor Indufor Oy 2005i

Transparency/involvement of civil society in monitoring. The forest administrations generally provide poor access to information; even other government agencies have trouble accessing relevant data. However, in Serbia the interviewed parties outside forest administration indicated that data access is reasonable, even though information is often provided on an informal basis. Lack of formal procedures may prove a stumbling block in conflict situations.

National legislations do not usually require that public institution provide access to information but the Aarhus convention will provide a legal basis for it. Civil society does not directly participate in forest sector monitoring in any of the countries. On the other hand, their interest to become involved is also highly varied. In countries, where illegal logging is

considered a major threat to the environment they have an interest (e.g. in Moldova) but where it is not regarded as a priority issue, civil society is not actively seeking a role in monitoring activities (e.g. in Serbia).

Efficiency of court system. Ineffective courts are a major bottleneck for law enforcement. Problems include lengthy processing of criminal cases in overburdened courts, inconsistent penalty codes and corruption. Poor preparation of cases by forestry officials is also a contributing factor. As a result, a major portion of those guilty of illegal logging go unpunished.

For example, in 2000 in Albania there were 370 criminal cases related to illegal forest acts. In 208 cases the perpetrator was identified, 40 perpetrators were found guilty but none of the verdicts were implemented. Less serious administrative violations are punishable with fines and the perpetrators are required to pay compensation for damage but in 1999-2001 only 1-2 per cent of the payments due was collected. The situation is not quite as grim in all countries but in general the deterrent effect of the judicial system is limited.

In Bosnia Herzegovina, the effectiveness of the penalty system was improved by establishing a special council, a ministerial body, charged with processing administrative violations. The handling of cases is faster than through the court system. Criminal cases are still referred to the courts.

The penalty codes may allow rather serious punishments for illegal logging but the courts reportedly apply the penalty scales from their milder end. There are also several examples of illogical penalty codes where the fine is not related to the value of benefit (e.g. in Moldova) or the fine, as a rule, is much less than the benefit (e.g. in Serbia). In some cases the reason for the leniency of the verdicts is the poverty of the perpetrator; the courts may take the view that people did not have any choice but to commit illegal acts to meet their basic needs (e.g. in Armenia and Moldova).

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 General

5.1.1 Concept of Illegal Logging

The following conclusions can be drawn regarding the concept of illegal logging based on the assessment of the national definitions and discussions with stakeholders in the countries:

- National definitions have a more narrow scope than most international definitions, they usually comprise theft and circumvention of regulations by forest owners/managers and focus on the physical removal of trees.
- Other types of illegal activities are covered under different laws and they are not reported as illegal logging but as other types of crime.
- Based on the findings of this study it seems evident that (i) corruption-related activities should also be covered when discussing and formulating responses to illegal logging, and (ii) too broad a definition of illegal logging (i.e. including all possible violations of laws

that can take place during timber harvesting and transport) can create confusion among stakeholders, weaken the commitment of some, and make operational control difficult.

As a rule two types of illegal logging (according to the national definition) can be found in these countries: (i) poverty driven illegal cutting, mainly of fuelwood (which in most countries is by far the most significant type in terms of volume and perhaps also in terms of the environmental impact, and (ii) commercial illegal logging, mainly to satisfy the domestic demand, but also in some countries for export. The export usually focuses on a limited number of high value species (e.g. walnut).

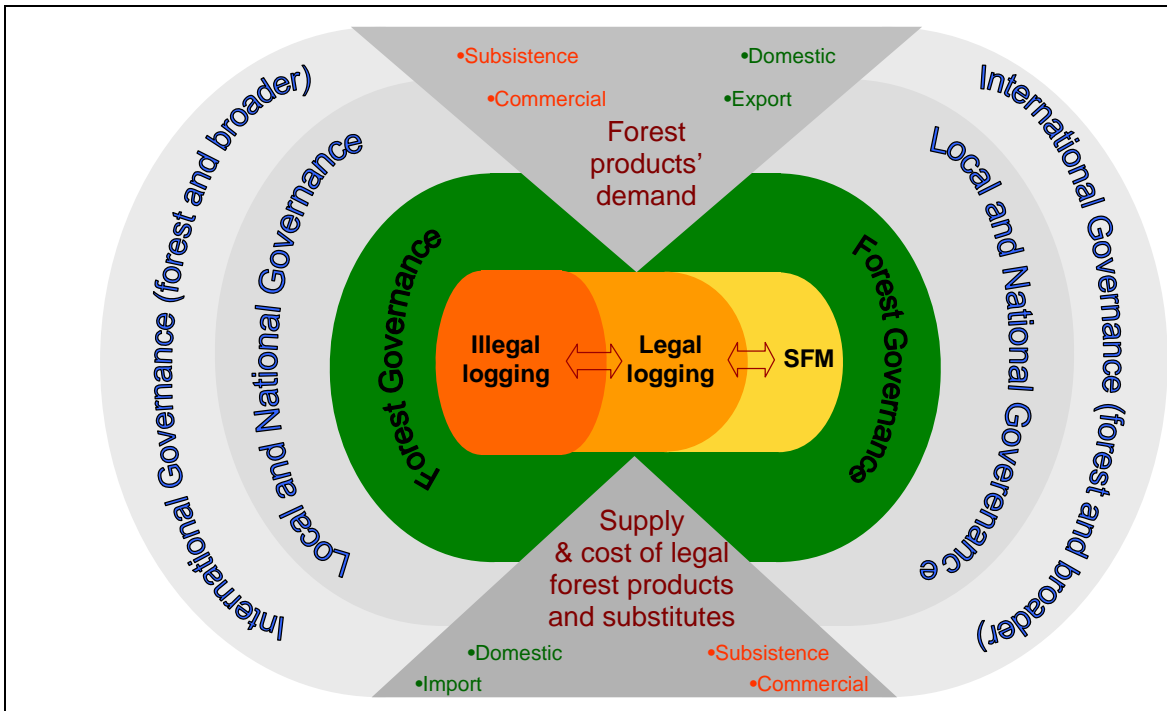
Regarding commercial illegal logging, two further types can be distinguished, theft and corruption-related illegal logging. Corruption-related illegal logging can then be broken down into petty corruption (e.g. at district level) and involvement of high-level officials in trade of large quantities of illegal timber. Even though these distinctions may become blurred in practice, a conceptual separation of the various types of illegal logging is needed to focus the discussion on potential responses appropriately.

As an example of a situation where the basic distinction can be useful is the policy regarding legal harvesting volumes. With respect to poverty-driven subsistence use, the legal volumes should be set so that the subsistence needs can be satisfied. In some countries, this may have to be done at the cost of temporarily sacrificing environmental sustainability. However, controlled excess is probably better than uncontrolled. With respect to commercial illegal logging, the legal supply can be set at a level where environmental sustainability is not in jeopardy, not even temporarily. Commercial illegal logging is not about meeting basic needs, and even though some relatively poor people are involved in it, it is justifiable to try to stop it; “low” income is usually not a justification for illegal activities. In practice, the policies would have to be more nuanced to accommodate different variations of poverty-driven or commercial illegal logging but the basic differentiation between the two main types would still be valid.

5.1.2 Factors Influencing Illegal Logging and Sustainability of Forest Management

The main factors influencing the legality of forest products harvesting and sustainability of forest management are: (i) forest products supply and demand balance for both commercially traded products and subsistence products, including the possibility of substitution (e.g. energy, but also construction materials), (ii) the forest governance framework, including forest related laws and regulations and institutional structures in place for their implementation as well as civil society and community based governance structures (e.g. certification, traditional community-based structures), (iii) the broader governance structures in the society, including law enforcement, the judiciary system, transparency of information, people’s involvement in decision-making (i.e. all those elements labelled as “good governance”), and (iv) international forest related governance, including the implementation of forest related international conventions and other “soft law” – type international agreements, trade and environment related international agreements (e.g. the WTO discussions), and conventions and agreements regarding freedom of information (Figure 5.1).

Figure 5.1 Factors Influencing Legality of Forest Products and Sustainability of Forest Management



The importance of the different factors varies from country to country, and also depending on whether poverty driven or commercial illegal logging is discussed. In all cases a combination of factors can be identified.

5.2 Specific Conclusions and Recommendations

5.2.1 Creating the Basic Conditions for Legality in the Forest Sector

In the short term

Access to information is a precondition for the involvement of civil society both as a partner and as an independent watchdog in the forest sector. It will help to make the actions of the decision makers transparent, and facilitate other types of governance reforms by making informed dialogue and stakeholder participation possible, including the establishment of civil society networks and lobby-groups to influence governance reforms.

In the longer term

Resolving key issues related to forestland tenure is necessary to create responsible managers for the forest resources with a long-term interest in the sustainability of the resource base, and a capacity to effectively control and manage these resources. Lack of effective enforcement creates a situation where state forests are *defacto* open access areas, where illegal logging can be practiced almost with impunity. Privatisation and community ownership of forests can be

one solution, possibly also involvement of responsible private sector with long-term contracts (leases) for forest management and utilization. Clearly defined and secure tenure arrangements are necessary not only for sustainable management of natural forests but also to create sufficient security for investment in tree planting and management of tree plantations (whether small-scale or larger scale).

Development in the rural areas and increasing rural incomes, and/or urban development resulting in migration from the rural areas to urban centers for better paying jobs, are critical factors in reducing the demand for fuelwood and other forest products used for subsistence consumption. Building rural infrastructure, supporting agricultural development and small-scale enterprise development can be as or more effective means to improve the fuelwood demand – supply balance as investing in tree plantations or other actions within the forest sector.

Moving towards improved governance in the society as a whole is a precondition for good governance also in the forest sector. Weaknesses of the judicial system are often crucial as they permit even detected illegal loggers to go unpunished, but this is beyond the forest sector and needs to be addressed through broader programs. Most countries have on-going programmes to address governance related issues in the society, however, these efforts often seem to have limited impact on peripheral sectors such as forestry. Measures to develop forest sector governance should be closely linked to these boarder reform processes, and also make full use of the conditions created by such reforms. The forest sector is seldom able to initiate necessary reforms as the top management is often among beneficiaries of corrupt practices.

5.2.2 Improving the Demand – Supply Balance of Essential Forest Products

Subsistence Use

The chronic imbalance in the (legal) supply and demand of fuelwood, and lack of affordable alternative sources of energy, is forcing the rural poor in most of the countries involved in the study into “illegality” out of lack of alternatives. In the short term i.e. in the absence of major development of the rural areas or possibilities for urban migration, the temporary increase of legal extraction of fuelwood – even beyond the levels estimated as sustainable – should be considered. This may be a better option than the current massive illegal fuelwood extraction. With the improvement of the economic conditions in the rural areas, and economic development in general, the demand for fuelwood is likely to decline in a relatively short time to levels that are sustainable.

Revision of the policies regarding subsidised prices for energy can have a major impact on illegal fuelwood consumption, and this issue needs consideration together with other environmental impacts when adjustment policies are designed and put in place by Ministries of Finance together with the international financing institutions.

In the longer term the options include (i) ensuring the natural regeneration of forest and bush lands, and (ii) intensification of farm and community level plantations. However, successful actions in these areas are linked to the land tenure arrangements and their security. It is unlikely that any significant results are achieved in the absence of supporting measures in land policy and legislation. Most actions of this type need fairly broad based efforts combing

the provision of inputs (seedlings, nursery materials etc.) free or at subsidised prices, awareness campaigns etc., and it is not evident that most of the countries involved in the study will be able to carry these out without external support. In addition, it is not clear whether plantations would increase fuelwood supply. As examples in other countries show, communities may opt for more valuable species and products that yield higher returns.

Actions outside the forest sector can also contribute directly to improving the demand – supply balance of fuelwood. These include gasification of rural areas, provision of solar and wind energy, and rural electrification. Establishing linkages between the forest policy and the energy policy is crucial to achieve a balanced and realistic approach to future supply of rural energy. The national forest programmes initiated or planned in most of the countries offer a good opportunity for this.

Commercial Use

Growing imbalance in the legal supply and demand for commercial timber, combined with high cost of imported timber is increasing the attractiveness of illegal logging in many of the countries involved in the study. Increasing the legal allowable cut may function in some countries better than the current system by providing increased revenue, and by creating through this improved capacity for law enforcement. To be effective, this strategy needs to be accompanied with measures for improved governance, especially to curb the high-level corruption related illegalities which can effectively block any improvements at the lower levels for controlling illegal activities in the forest areas.

Lowering import duties may also play a role in increasing supply of wood and reducing the demand for illegal domestic logs. However, this strategy may also result in moving illegality from one country to other.

5.2.3 Measures for Improved Governance in the Forest Sector

Forest Monitoring and Information Systems

There is little systematically updated information on the forest resources. In most of the Caucasian and Central Asian countries the last comprehensive forest inventories were carried out in the 1980s before the break-up of the USSR. This lack of baseline information on the resource impeded the systematic monitoring of the resource base. To provide more than patchy and fragmentary information regarding timber harvesting and trade, it is necessary to develop comprehensive information systems. Transparent procedures enabling data access for third parties need to be established.

Independent monitoring of forest concessions and logging/transport of timber is necessary, with focus on corruption. The options include (i) strong and independent government institution with capacity to conduct intensive financial and field audits, and (ii) civil society organizations. The former is effective if high-level corruption is not pervasive, the latter may be the only feasible approach in the most difficult situations.

Forest Administration

Role of the forest authorities both in the production and monitoring of forest activities is a major weakness in many countries. A clear separation of these functions, preferably into different Ministries, is a precondition for any effective system for monitoring and preventing illegal logging. Periodic external audits, including financial audits, are also needed.

The administrative procedures used in granting licenses for logging have to match the economic value of the products. Excessive amount of bureaucracy is one way to encourage illegal activities, as is the legal prohibition of the fulfillment of basic human needs. This is especially important regarding fuelwood cutting and other subsistence use of forests where the capacity of the people involved with these activities to comply with bureaucratic requirements is extremely low, if not non-existent. Laws and regulations need to be assessed in this regard based on experience from implementation, and adjusted as needed to reduce the cost of compliance.

The systems used for the sales of timber from the forests belonging to the government are not yet fully transparent. The same applies to the concession and/or logging contracts given to private companies in these forests. Moving to a system of competitive bidding with clearly specified criteria which is publicly available, as well as making the contracts public and allowing interested parties to challenge the award of such contracts, can be a powerful tool to combat corrupt practices.

Due to the poor financial condition of most of the ministries responsible for the forest sector there is little systematic monitoring of logging and the poorly paid field staff are prone to corruption out of necessity. In this sense, any actions improving the financial status of these institutions (e.g. establishment of revenue retention schemes) can contribute to improved forest governance. More effective detection is the starting point for improved control of illegal logging. Actions in this regard include better equipment, institutional incentives for improved detection (e.g. bonuses), and substantial penalties for involvement in corrupt and/or otherwise illegal practices. Compliance with regulations and codes of conduct need to be built into the contracts and performance criteria and assessments of the forest control and enforcement staff.

Commercial theft and unauthorized cuttings can be fought with improved organization and increased resources, but corruption requires approaches where improved institutional arrangements and transparency play a key role. The most damaging form of corruption is one where high-level officials are involved. The financial losses are significant and it also encourages petty corruption. The fight against high-level corruption should be prioritized because it catalyzes a chain reaction; eliminating high-level corruption will also reduce opportunities for petty corruption. Working in the opposite direction does not have the same catalytic effect.

Actions outside forest sector

The enforcement system is only as strong as its weakest link. Each link in the chain from detection of illegal activities to prosecution, conviction and enforcement of penalties must be effective for the whole chain to be effective; one weak link may offset the impact of all other links. In many countries, the court system is the weak element in attempts to contain illegal

logging through enforcement. The system suffers from overburdened courts, inconsistent penalty codes and corruption. As a result, a major portion of those guilty of illegal logging go unpunished.

Multi-stakeholder governance structures

The establishment of multi-stakeholder forums for dialogue on key issues of forest policy and policy implementation, such as illegal logging could provide a major tool to improve the governance of the sector and open it up to a wider set of views and values. The national forest programmes can offer such forums, and provide a focus for their discussions. In the absence of such comprehensive planning processes, also thematic and more ad hoc type forums could be set up, e.g. to discuss and find solutions to the problem of illegal logging. In addition to the Inter- Ministerial Task Forces and/or Committees set up in some of the countries, also Parliamentary Committees could be made use of to increase the political profile and status given to forest governance issues.

Independent certification can be a powerful tool for improved forest governance and control of illegal logging in those countries that are, or could be, exporting wood products to the European market. However, most of the countries may not be in a position to make full use of this market-based tool due to limited and/or non-existing exports, or exports being directed to markets that are not sensitive to environmental and social issues.

5.2.4 Role of International Governance and Partners

International conventions and agreements give leverage and something to refer to in presenting demands to government by providing international legal backing. The most important are not necessarily those directly related to the forest sector, for example the Aarhus convention is a key international agreement referred to when demanding transparency and freedom of information.

Regional processes can increase awareness and help develop common approaches to forest governance issues. Also, networking with international organizations and NGOs can contribute to this goal.

Partnerships with external actors in the private sector (e.g. local – foreign partnerships for forest concessions) may offer a way of strengthening the capacity for control and sustainable management in the forest areas, especially if supported by such instruments as forest certification. Supporting broader rural development programs may in some of the countries be a more effective means for addressing illegal logging than strictly sectoral measures.

5.3 Where to Start

Priority measures depend on the type of illegal logging that is prevalent and the existing governance situation. Commercial illegal logging tends to concentrate in forest-rich countries whereas in countries with limited forest resources poverty-driven illegal logging is often the predominant or only type.

Regarding commercial illegal logging, the most effective responses in countries with the most difficult overall governance situation are likely to focus on tackling high-level corruption that allows the perpetrators to circumvent lower level actions for control. The tools include increasing the transparency of what is taking place in the forest sector through the provision of independent information, strengthening civil-society participation and promoting elements of good governance in general. Most of the other potential measures will be fully effective only if corruption can be brought under control. The proper mix of these other measures depends on the country but improving monitoring and information systems, elimination of conflicts of interest in the structure of forest administration and strengthening law enforcement are often necessary.

The strategies regarding poverty-driven illegal logging are less dependent on the institutional structure than they are of policies and legal norms. The institutional setup has little relevance in a situation where policies are flawed to the extent that they cannot be implemented. The fundamental conflict is between environmental protection and satisfaction of social needs; in many cases it is difficult to achieve both. The existing legal frameworks are founded on strict principles of environmental protection but, as a result, the legal supply of fuelwood is often grossly inadequate to satisfy people's basic needs.

The starting point is to adopt an approach that is feasible and allows law enforcement to fight a battle than can be won. This approach must be able to effectively close the huge gap between supply and demand that exists in many countries. The activities need to be part of all broader policies, strategies and plans for rural development and energy provision. There are two basic options: (i) to decrease demand by providing alternative sources of energy at no or low cost for the rural poor, and (ii) to increase supply by legalizing currently illegal fuelwood cutting, by amending the legislation and/or considerably increasing the allowable cut from current levels.

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Serbia	<ul style="list-style-type: none"> - Aleksandar Vasiljević, Serbian Ministry of Agriculture, Forestry and Water Management - Directorate of Forests – Director - Predrag Aleksić, Ph. D., PE “Srbijašume”, Belgrade, Sector for Forest Tending and Protection - Executive director - Vojislav Janković, PE “Srbijašume”, Belgrade, Sector for Forest Utilization - Executive director - Novica Milojković, Serbian Ministry of Agriculture, Forestry and Water Management Directorate of Forests, Department for Strategic Planning - Chief - Stevo Sekulić, Serbian Ministry of Agriculture, Forestry and Water Management, Directorate of Forests, Sector Private Forests - Radivoje Kaurin, Serbian Ministry of Agriculture, Forestry and Water Management - Coordinator for management survey - Živko Radosavljević, Serbian Ministry of Agriculture, Forestry and Water Management, Directorate of Forests – Advisor for forestry and hunting - Nenad Radaković, PE “National Park Djerdap” - General Director - Tomislav Kuljanin, PE “National Park Djerdap” - Assistant General Director - Maksimović Milanko, PE “National Park Djerdap”, Office for Forest Management - Chief - Milorad Đaković, PE “National Park Djerdap”, Forest Management Unit “Dobra” – Chief - Pero Zeljković, Forestry Estate “Kučevo” - Director - Ninoslav Jovanović, Serbian Ministry of Agriculture, Forestry and Water Management Directorate of Forests - Republic forestry inspector - Nenad Petrović, Serbian Ministry of Agriculture, Forestry and Water Management Directorate of Forests - Republic forestry inspector - Paraskeva Petrović, Serbian Ministry of Agriculture, Forestry and Water Management, Directorate of Forests - Republic hunting inspector - Slobodan Božović, Serbian Ministry of Agriculture, Forestry and Water Management Directorate of Forests - Republic forestry inspector - Gordana Jančić, PE “Srbijašume”, Belgrade, Sector for Forestry, Nature and Environment Protection - Superintendent - Branko Rađenović, PE “Srbijašume”, Belgrade, Sector for Roads - Superintendent - Mile Vanić, PE “Srbijašume”, Belgrade - Toković Zoran, PE “Srbijašume”, Belgrade, Sector for Private Forests - Superintendent - Živko Injac, PE “Srbijašume”, Belgrade, Sector for Tending and Protection of the Forests - Superintendent - Petar Nećak, PE “Srbijašume”, Belgrade, Intern control and fishery - Đuro Ljubišić, PE “Srbijašume”, Belgrade - Vlado Čokeša, Forestry Institute, Belgrade - Bratislav Matović, Forestry Institute, Belgrade - Goran Vučetić, PE “Vojvodinašume”, Forestry Estate “Banat-Pančevo” – Officer for taxation and forest management - Aleksandra Petrović, Forestry Estate “Kučevo” - Officer for tending and protection of the forests - Maja Životić, Forestry Estate “Kučevo” - Jelena Ristić, Forestry Estate “Kučevo” - Veljko Đorđević, Forestry Estate “Loznica - Jörg Lohmann, Director, Programme Office for South Eastern Europe, IUCN - Blagoje Pejic, Advisor, Directorate of Forestry, Ministry of Agriculture, Forestry, and Water Management - Vlade Zarić, Faculty of Agriculture, University of Belgrade - Raso Milic, Secretary, Association of Forestry and Timber and Wood Industry, Chamber of Commerce and Industry of Serbia

Tajikistan	<ul style="list-style-type: none"> - Komil Abdukadirov, State Committee for Environmental Protection and Forestry - Naim Mukimov, Forestry and Hunting Agency - Asror Khakimov, Forestry and Hunting Agency - Iraj Khmadov, Tajik Forest Research Institute - Svetlana Shomuradova, Tajik Forest Research Institute - Kokul Kasirov, Protected Areas Department - Shodibek Kurbanov, Protected Areas Department - Ibrogim Bobokalonov, Tajik Forest Research Institute - Ada Kim, NGO - Mumin Akhunov, NGO
Uzbekistan	<ul style="list-style-type: none"> - Mr. M. Ganiev, First Deputy Head of the Main Forestry Department - Mr. M. Yakubov, Chief of Division, MFD - Mrs. G. Reshetnikova, Leading Expert, MFD - Mr. A. Sultanov, Head of Department, Republican Scientific Production Center of Decorative Horticulture and Forestry - Mr. A. Kayimov, Director of HGO "Ecoles" - Mr. S. Zagrebin, UNDP, Nuratau-Kyzylkum Project - Mr. Anstey, UNDP Office - Mr. F. Shamsiev, Deputy Head of Department on Hunting, Reserves and National Parks under the MFD - Mr. B. Sadriddinov, Europa House - Prof. A. Khanazarov, Deputy Minister of Agriculture and Water Resources, Director of Scientific Production Center on Agriculture - Mr. H. Tukhtarov, Head of Construction site

MOST IMPORTANT EXTERNALLY SUPPORTED PROJECTS BY COUNTRY

Albania	<ul style="list-style-type: none"> • Legal and Judicial Reform Project (active) by WB. • Public Administration Project (active) by WB • Natural Resources Development Project (proposed) by WB
Armenia	<ul style="list-style-type: none"> • Natural Resources Management and Poverty Reduction Project (NRMPRP) by WB. • National Forest Policy, New Forestry Code and Illegal Logging Action Plan within forestry component of WB NRMPRP. • Forest Institutional Support Project (FISP) of forestry component of WB NRMPRP granted by SIDA. • Support to implementation of poverty reduction strategy in Armenia by WB. • Poverty Reduction Support Credit (PRSC) within WB program. • PRSP program by the government. • Reforestation and Forest Development Fund (RFDF) activities established by Armenian government.
Azerbaijan	<ul style="list-style-type: none"> • National Program on Environmentally Sustainable Social and Economic Development. • National Program on Forest Rehabilitation and Development. • National Poverty Reduction and Economic Development Program for 2003-2005 supported by IMF and WB. • National Program of the Regions' Social and Economic Development for 2004-2008. • Small Matched Grants Program for the Caspian Region: implemented by the Caspian Environmental Program since 2000 with funding support of EU TACIS and GEF. • Small Grants Program of BP implemented since 2000. • Grants Program of the Critical Ecosystem Partnership Fund (CEPF), started in 2004 with funding support of WB, GEF, Conservation International, McArthur Foundation and government of Japan. • Rural Environment Program supported by GEF, WB and Government of Japan submitted to the government for approval.
Bosnia Herzegovina	<ul style="list-style-type: none"> • Forestry Development Project by the WB. • USAID's Cluster Competitiveness Activity (CCA). • Economic Management Structural Adjustment Credit (EMSAC) of the WB. • Third Electric Power Reconstruction Project (Power III) the post-conflict reconstruction program in the power sector in BH, combined with support for restructuring and reforms by the World Bank in collaboration with several funding partners. • National Forest Project funded by the World Bank.
Georgia	<ul style="list-style-type: none"> • Georgia National Environment Action Plan by the World Bank (1996-2000). • Biodiversity Country Study. First Biodiversity project in Georgia prepared with UNEP in 1996. Implementing agency NACRES. • Biodiversity Strategy and Action plan. World Bank/MEPNR alliance. • TACIS Black Sea Biodiversity Project. Implementation agency – Batumi Black Sea Biodiversity Regional Center. UK Consultancy Group Halcro provides project consultancy. • Borjomi-Kharagauli National Park. Project is funded by German Government according to Georgian-German Intergovernmental Agreement and is established on the State Forest Fund territories. Implementing agency WWF Georgia. • Integrated Coastal Zone Management Project. GEF-World Bank and Dutch Government. Managed by Local PIU. • Georgia Protected Area Development Project. GEF-World Bank. • Capacity Building and strengthening of Ministry of Environment. UNDP. • Georgia Forests Development project. World Bank (2002-2008).
Kyrgyz	<ul style="list-style-type: none"> • The Kyrgyz-Swiss Program of Support of the Forestry began in July 1995. • Since 2000 realization Central Asian Trans-boundary Project GEF/WB on conservation of biodiversity of West Tien-Shan is carried out. • The interstate project on preservation of a biodiversity West Tien-Shan (TACIS). • GTZ Project «Biosphere territory Issyk-Kul» since January 2001.
Moldova	<ul style="list-style-type: none"> • Moldova-Second Energy, World Bank • Soil conservation Project, World Bank • Public Sector Reform. World Bank • Fight Corruption and Improve Governance, Transparency International with UNDP
Serbia	<ul style="list-style-type: none"> • Restructuring of Serbian State Forests Srbijasume, Austrian Development Agency • International training and education in forest policy and economics, Finnish Government • Accountability Programme (2002-2005) by The Transparency International

Tajikistan	<ul style="list-style-type: none">• The World Bank project “Community Agriculture and watershed management programme” may soon introduce a forestry component geared towards increasing supply of fuelwood and reducing pressure on existing forests.• World Bank project “Pamir private power project ” financed by American "Focus".
Uzbekistan	<ul style="list-style-type: none">• “Assistance to the private agriculture sector of Uzbekistan and forest reclamation on the dried bottom of Aral Sea” by German Society on Technical Cooperation (GTZ).• “Protection of Environment” project, financed through Department of Agriculture of the United States within the “Foodstuffs in the Name of the Progress” program.• Project on the “Establishment of the Nuratau-Kyzylkum Biosphere Reserve as a Model for Biodiversity Conservation in Uzbekistan” by UNDP, started in 2003.

PROCEDURES AND CAPACITY FOR MONITORING ILLEGAL LOGGING

STATEMENT X = TRUE O = FALSE - = NOT APPLICABLE	ALB	ARM	AZE	BIH ^a	GEO	KGZ	MDA	SER	UZB	TJK
<i>Awarding concessions/selling timber</i>										
Concessions are awarded/timber is sold predominantly through competitive bidding	X	O	-	O	X	O	O	X	O	X
The public has notice and opportunity to bid before awards	X	O	-	O	X	O	X	X	X	X
Several bids are presented as a rule in the bidding processes	X	O	-	O	X	O	O	O	O	X
Bids are made public after awards	O	O	-	O	X	O	O	O	O	X
Award rules are publicly available	X	O	-	O	X	O	O	X	X	X
Unsuccessful bidders and other interested parties may challenge awards	X	O	-	O	X	O	X	X	X	X
An independent internal government watchdog polices the process	O	O	-	O	O	X	O	O	X	O
Forest officials must disclose financial interests in the forest sector (own and those of family members/close relatives)	O	X	-	O	X	X	X	O	X	X
<i>Timber harvesting and sales from valid concessions</i>										
Concession contracts, inventories and plans are publicly available	O	O	-	-	O	O	X	X	X	O
Rules regarding forest practices concerning concession areas are publicly available	O	O	-	-	X	X	X	X	X	X
Citizens may bring lawsuits or file administrative complaints to enforce concession requirements	O	O	-	-	X	X	O	X	X	X
<i>Timber harvesting and sales from private forests</i>										
Forest officials have a procedure for controlling in the field timber harvesting and sales from private forests	O	-	-	X	-	-	X	X	-	-
Rules regarding forest practices on private lands are publicly available and accessible to private forest owners	O	-	-	X	-	-	X	X	-	-
<i>Transport of timber</i>										
Government officials have a procedure for controlling the transport of timber	O	X	-	X	X	O	X	X	X	X
Government officials have a procedure for verifying the origin of timber being transported	O	X	-	X	X	O	X	X	X	X
<i>Sales of confiscated timber</i>										
Records are kept on volumes and assortments of illegally procured or transported wood captured by officials	X	X	X	X	X	X	X	X	X	X
Captured wood is sold in public auctions or through other kinds of public bidding	X	O	O	O	X	O	O	O	X	X
Records are kept on volumes confiscated and sold as well as on prices obtained	X	?	X	X	X	X	X	X	X	X
<i>Processing of forest products</i>										
Law requires licensing or registration of commercial processing facilities	X	X	X	X	X	X	X	X	X	X
Government performs regular inspections of processors	O	X	X	X	O	X	X	O	X	O
<i>Export or import of forest products</i>										
Customs officials trained to recognize restricted/prohibited species	O	O	X	X	O	X	X	O	?	O
<i>Concealing revenue from forest activities</i>										
Forest revenue system (royalties, taxes etc.) establish a clear basis for monitoring revenue collection (volume or area based)	O	X	-	X	O	O	X	O	?	O
Records are kept on logging volumes and revenue collection by defined geographic areas	O	X	-	X	X	X	O	X	X	X
Periodic audits are carried out to verify that revenue collected matches with logging volumes/ areas under production	X	X	-	O	O	X	X	?	X	O

STATEMENT X = TRUE O =FALSE - = NOT APPLICABLE	ALB	ARM	AZE	BIH ^a	GEO	KGZ	MDA	SER	UZB	TJK
<i>Civil services, social, and institutional factors that influence illegal activity</i>										
Forestry officials regularly trained to upgrade law enforcement skills	X	O	X	O	X	X	X	O	X	X
Judges and prosecutors trained in forest sector issues	O	O	-	X	O	O	O	O	O	O
Forest agency is subject to independent audits	X	O	-	X	X	X	X	?	X	X
Civil service has ethical code-of-conduct (e.g. regarding acceptance of gifts and benefits)	O	O	X	X	X	X	X	O	X	X
Ombudsman or other independent mechanism responds to public complaints	X	X	X	X	O	X	X	?	X	O

a. Applies only to Federation of Bosnia Herzegovina

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